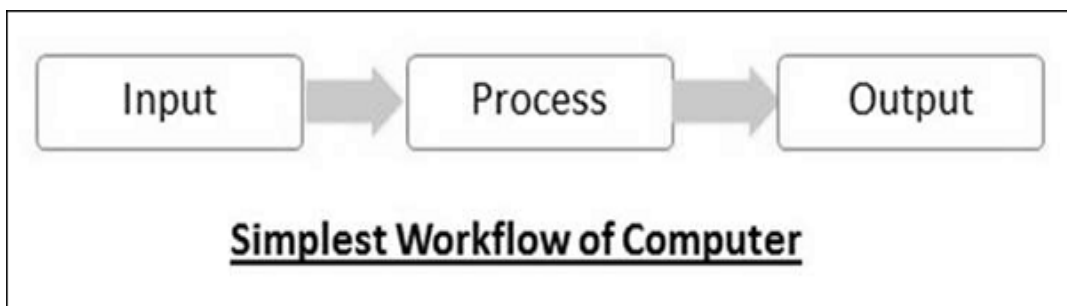


## Introduction to Computers

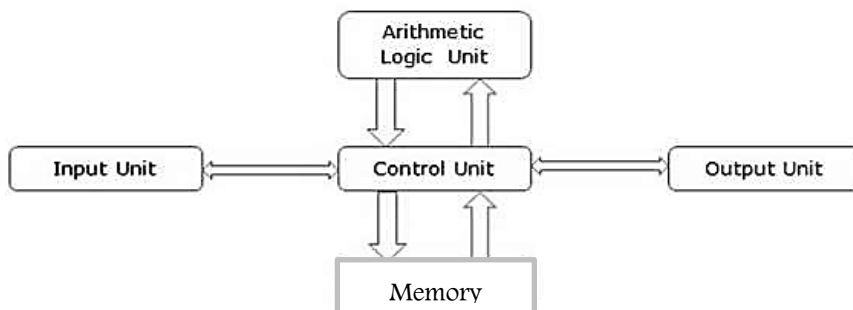
A **computer** is an electronic device that receives input, stores or processes the input as per user instructions and provides output in desired format.

Computer input is called **data** and the output obtained after processing it, based on user's instructions is called **information**. Raw facts and figures which can be processed using arithmetic and logical operations to obtain information are called **data**.



The processes that can be applied to data are of two types –

- **Arithmetic operations** – Examples include calculations like addition, subtraction, differentials, square root, etc.
- **Logical operations** – Examples include comparison operations like greater than, less than, equal to, opposite, etc.



## Basic Parts of Computer

The basic parts of a computer are:

- **Input Unit** – Devices like keyboard and mouse that are used to input data and instructions to the computer are called input units.
- **Output Unit** – Devices like printers and visual display unit that are used to provide information to the user in desired format are called output unit.
- **Control Unit** – As the name suggests, this unit controls all the functions of the computer. All devices or parts of a computer interact through the control unit.
- **Arithmetic Logic Unit** – This is the brain of the computer where all arithmetic operations and logical operations take place.
- **Memory** – All input data, instructions and data interim to the processes are stored in the memory. Memory is of two types – **primary memory** and **secondary memory**. Primary memory resides within the CPU whereas secondary memory is external to it.

Control unit, arithmetic logic unit and memory are together called the **central processing unit** or **CPU**. Computer devices like keyboard, mouse, printer, etc. that we can see, and touch are the **hardware** components of a computer. The set of instructions or programs that make the computer function using these hardware parts are called **software**. We cannot see or touch software. Both hardware and software are necessary for the working of a computer.

## Basic Concepts of Computer:

**Computer is an electronic device which is used to store the data, as per given instructions it gives results quickly and accurately.**

### Data

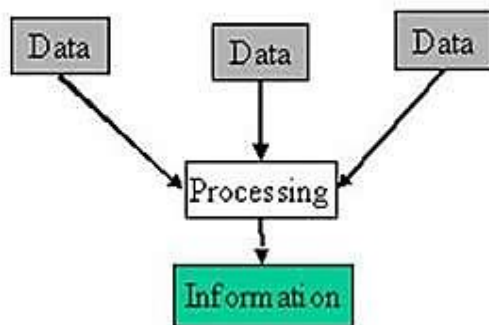
- Data are the facts and statistics collected in the raw form for reference or analysis.

### Information

- Information is processed data.



**Information is created from data**

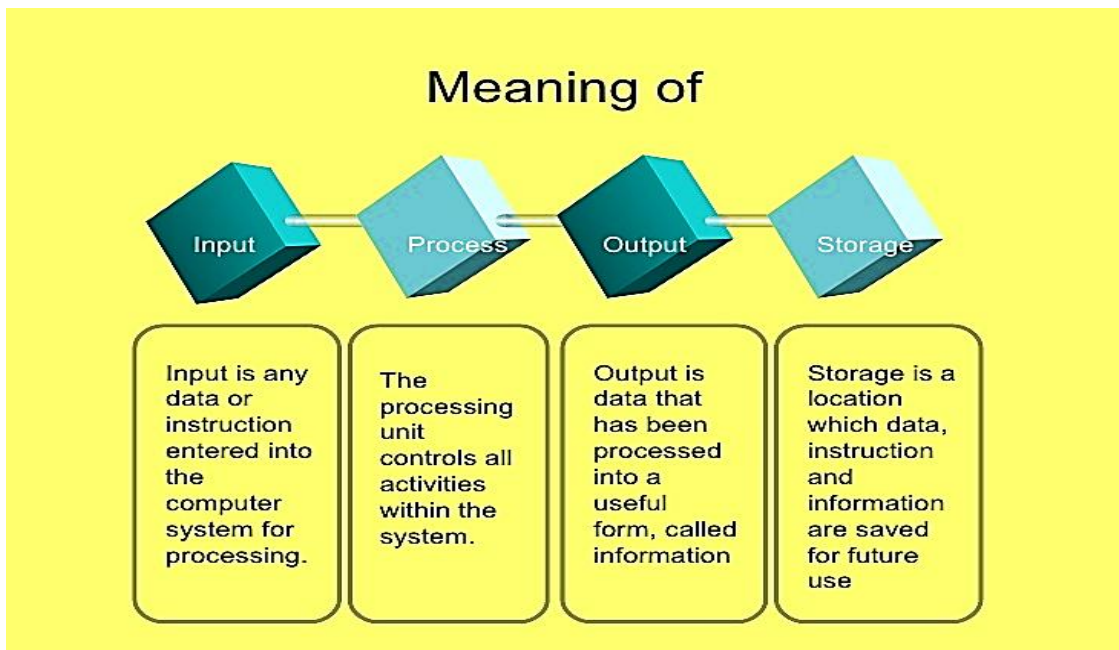


- **Data type:**

is a classification of the type of data that a variable or object can hold in computer programming. Data types are an important factor in virtually all computer programming languages, including C#, C++, JavaScript, and Visual Basic.

### Examples of data types

- **Boolean** (e.g., True or False)
- **Character** (e.g., a)
- **Date** (e.g., 03/01/2016)
- **Floating-point number** (e.g., 1.234)
- **Integer** (e.g., 1234)
- **String** (e.g., abcd)
- **Others**

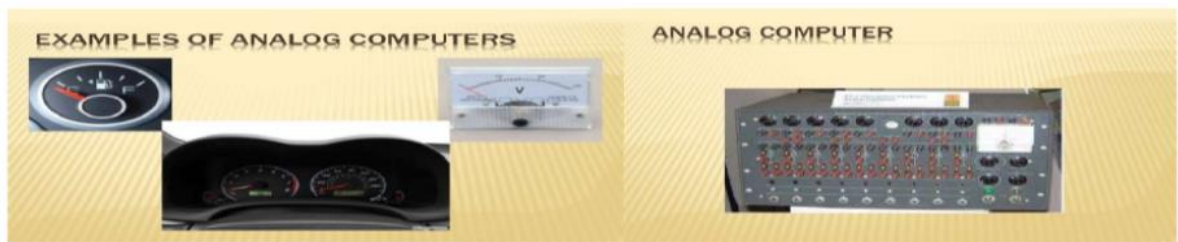




## Types of Computers

### 1. Analog Computers

***Analog computers are used to process continuous data.** Any computer which solve problem by translating physical conditions such as temperature, pressure, or voltage into related mechanical or electrical related circuits as an analog for the physical phenomenon . All the analog computers are special purpose computers.*



### 2. Digital Computers

Digital computer represents physical quantities with the help of digits or numbers. These numbers are used to perform Arithmetic calculations and make logical decision to reach a conclusion, depending on, the data they receive from the user.



### 3. Hybrid Computers

Various specifically designed computers are with both digital and analog characteristics combining the advantages of analog and digital computers when working as a system.



#### Characteristics of Computer

- **Speed** – Typically, a computer can carry out 3-4 million instructions per second.
- **Accuracy** – Computers exhibit a very high degree of accuracy. Errors that may occur are usually due to inaccurate data, wrong instructions or bug in chips – all human errors.
- **Storage Capacity** – Computers can store a very large amount of data at a fraction of the cost of traditional storage of files. Also, data is safe from normal wear and tear associated with paper.

#### Advantages of Using Computer

- Computers can do the same task repetitively with the same accuracy.
- Computers do not get tired or bored.
- Computers can take up routine tasks while releasing human resources for more intelligent functions.

## Disadvantages of Using Computer

Despite so many advantages, computers have some disadvantages of their own –

- Computers have no intelligence; they follow the instructions blindly without considering the outcome.
- Regular electric supply is necessary to make computers work, which could prove difficult everywhere, especially in developing nations.

## Computer Classification

Computers can be classified by size and power to:

1. Personal computer (PCs)
2. Workstation:
3. Minicomputer:
4. Mainframe:
5. Supercomputer

- Personal computer (PCs): a small, single-user computer based on a microprocessor. In addition to the microprocessor, a personal computer has a keyboard for entering data, a monitor for displaying information, and a storage device for saving data.
- Workstation: a powerful, single-user computer. A workstation is like a personal computer, but it has a more powerful microprocessor and a higher-quality monitor.



- **Minicomputer**: multi-user computer capable of supporting from 10 to hundreds of users at the same time.



- **Mainframe**: powerful multi-user computer capable of supporting many hundreds or thousands of users at the same time.
- **Supercomputer**: an extremely fast computer that can perform hundreds of millions of instructions per second.



### Computer Classification

Compare the previous type of computers based on

- Price
- Processing Speed
- Storage Capacity
- Powerful
- Single-user or Multi-user
- Computer Size

## Classification

### Computers are now classified based on their use or size –

**Desktop** computers are **personal computers (PCs)** designed for use by an individual at a fixed location. IBM was the first computer to introduce and popularize the use of desktops. A desktop unit typically has a CPU (Central Processing Unit), monitor, keyboard and mouse. The introduction of desktops popularized the use of computers among common people as it was compact and affordable.



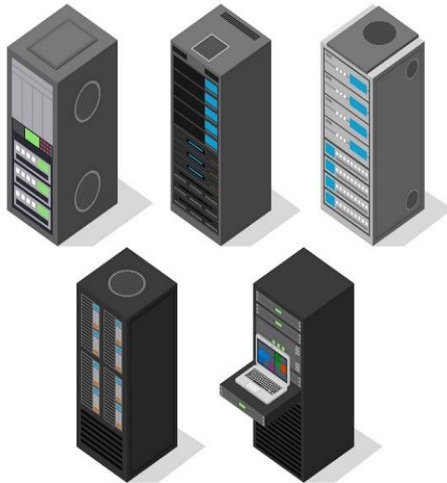
**Laptop:** Despite its huge popularity, desktops gave way to a more compact and portable personal computer called laptop in 2000s. Laptops are also called **notebook computers** or simply **notebooks**. Laptops run using batteries and connect to networks using Wi-Fi (Wireless Fidelity) chips.



**Tablet:** After laptops computers were further miniaturized to develop machines that have processing power of a desktop but are small enough to be held in one's palm. Tablets have touch sensitive screens typically 5 to 10 inches where one finger is used to touch icons and invoke applications.



**Server:** Servers are computers with high processing speeds that provide one or more services to other systems on the **network**. They may or may not have screens attached to them. A group of computers or digital devices connected to shared resources is called a **network**.



### Netbook Computer

A netbook is a type of laptop that is designed to be even more portable.

- Cheaper and less powerful than laptops or desktops.
- They are generally less powerful than other types of computers, but they provide enough power for email and internet access, which is where the name "netbook" comes from.

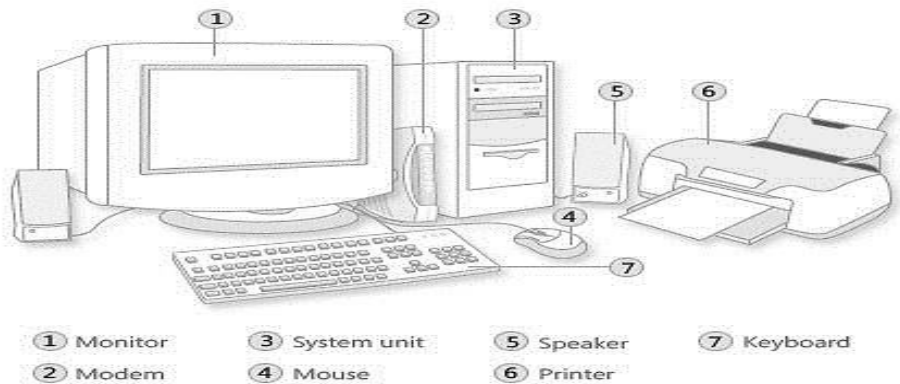




## Computer Components

### ➤ Hardware

- Computer hardware is the collection of physical elements
- That constitutes a computer system.
- The actual machinery, wires, transistors, and circuits ... etc.

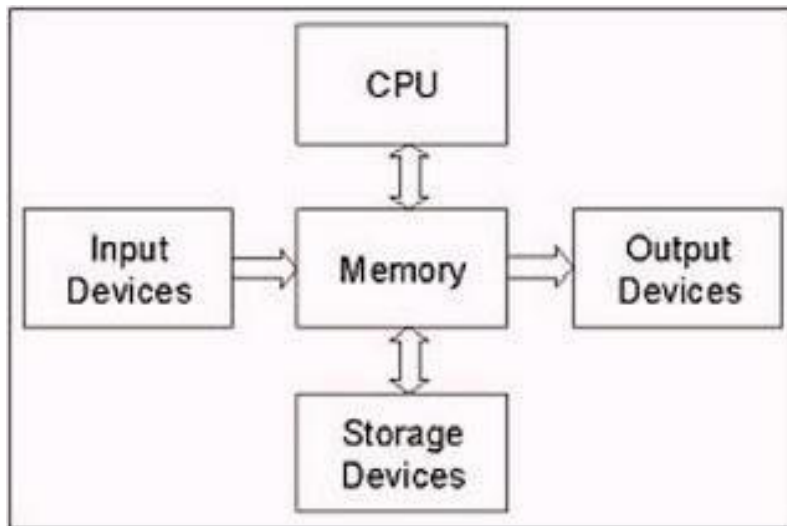


### ➤ Software Computer Programs Instructions and data



## Computer Units











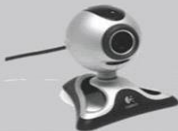

1. Input Unit
2. Output Unit
3. Central processing Unit
4. Primary Memory Unit
5. Secondary storage Unit



### Input Devices

- An input device is any piece of computer that provides data and control signals to an information processing system.
- Input device Translate data from **form** that humans understand to one that the computer can work with. Most common are keyboard and mouse



Examples of Manual Input Devices			
Keyboard 	Numeric Keypad 	Pointing Device 	Remote Control 
Joystick 	Touch Screen 	Scanner 	Graphics Tablet 
Microphone 	Digital Camera 	Webcams 	Light Pens 



??

## Output Unit

- An output device is any piece of computer hardware equipment used to communicate the results of data processing carried out by an information processing system (such as a computer)
- converts the electronically generated information into human-readable form.



### *Output devices Examples*

#### **1. A monitor**



LCD: Liquid crystal display CRT: Cathode Ray Tube most familiar these days

### Output devices Examples

#### **2. Printer:**

- Transfers data from a computer onto paper

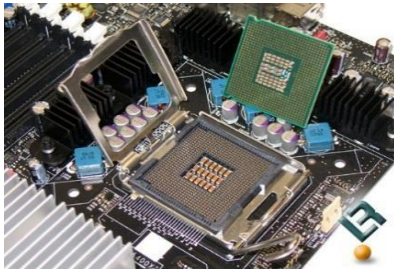
#### **Printer types:**

- 1-Laser Printer.
- 2-Ink Jet Printer.



## Central Processing Unit

- CPU
- known as microprocessor or processor
- It is responsible for all functions and processes



The CPU is comprised of three main parts

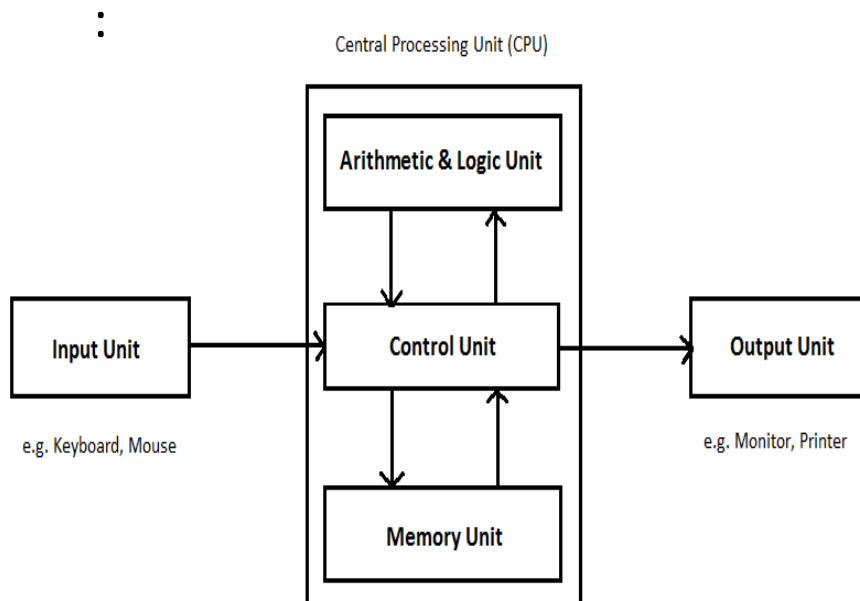
- 1. ALU (Arithmetic Logic Unit)**
- 2. Control Unit (CU)**
- 3. Registers**

### Arithmetic Logic Unit (ALU)

- Executes all arithmetic and logical operations.
- Arithmetic calculations like as addition, subtraction, multiplication and division.
- Logical operation like comparing numbers, letters, or special characters

**Control Unit (CU): controls** and co-ordinates computer components.

- Read the code for the next instruction to be executed.
- Ordinate the next instruction.
- Read whatever data the instruction requires from cells in memory.
- Provide the necessary data to an ALU or register.
- If the instruction requires an ALU or specialized hardware to complete, instruct the hardware to perform the requested operation.
- **Registers: Stores** the data that is to be executed next, "very fast storage area".



**Unit of Measurement -Speed**

- The speed of CPU measured by unit called Hertz (Hz)
- 1 Hz represent 1 cycle per second.
- The speed of CPU is known as Computer Speed.

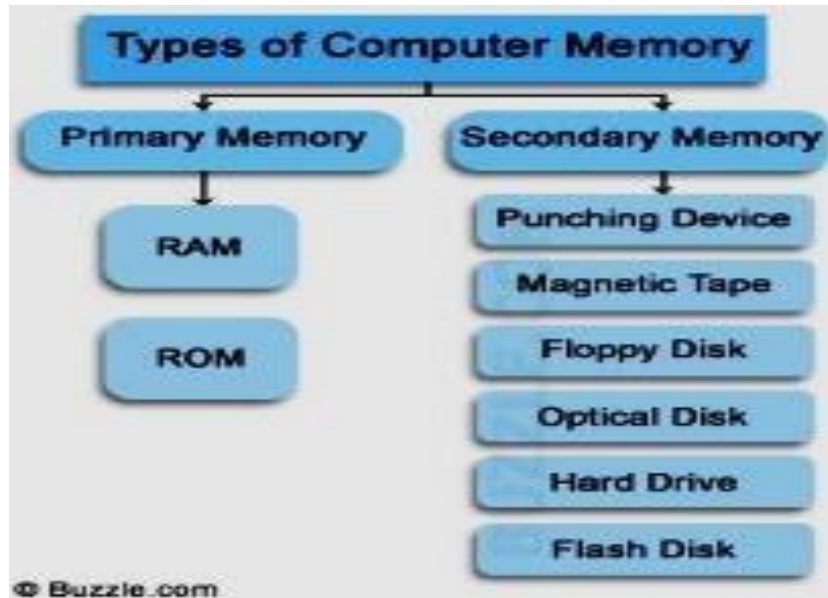
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**CPU SPEED MEASURES**

---

<b>1 hertz or Hz</b>	<b>1 cycle per second</b>
<b>1 MHz</b>	<b>1 million cycles per second or 1000000 Hz Or (10<sup>6</sup>) HZ</b>
<b>1 GHz</b>	<b>1 billion cycles per second or 1000 MHz 1,000,000,000 Hz Or (10<sup>9</sup>) HZ</b>

---



## Primary Memory

- 1. RAM.
- 2. ROM

**1. RAM Random Access Memory:** is a memory scheme within the computer system responsible for storing data on a temporary basis, so that it can be promptly accessed by the processor as and when needed. • It is volatile in nature, which means that data will be erased once supply to the storage device is turned off.

**2. ROM (Read Only Memory):** ROM is a permanent form of storage. ROM stays active regardless of whether the power supply to it is turned on or off. ROM devices do not allow data stored on them to be modified.

## Secondary Memory

- Stores data and programs permanently
- it's retained after the power is turned off
- Main Examples
  1. Hard Disk
  2. Optical Disk
  3. Flash memory

### Hard Disk

- **Called Disk drive or HDD (Hard Disk Drive)**
- **stores and provides relatively quick access to large amounts of data.**





## 2.Optical Disk & Flash

- Optical Disc Drive (ODD) is a disk drive that sees laser light to store data.
- There are three main types of optical media:  
CD, DVD, and Blu-ray disc

CD “Compact Disk” can store up to 700MB  
DVD “Digital Video Disk “can store up to  
8.4 GB  
Blu-ray disc. can store up to 50 GB



## 3. Flash Disk

- A storage module made of flash memory chips. Flash disks have no mechanical platters or access arms, but the term "disk" is used because the data are accessed as if they were on a hard drive.

- *What are the differences between RAM as a main memory and HDD as a Secondary Memory????*

## Software

- **Software is a generic term for organized collections of computer data and instructions, often broken into two major categories and two major categories:**

- 1. system software**
- 2. application software**



### *System software*

- **Known as Operating System (OS)**
- **is responsible for controlling, integrating, and managing the individual hardware components of a computer system**
- **Windows is an example of OS.**

- **Example of System Software:**
- **1) Microsoft Windows**
- **2) Linux**
- **3) Unix**
- **4) Mac OSX**
- **5) DOS**

*Application software*

- is used to accomplish specific tasks other than just running the computer system.
- It may consist of:

- Word Processing
- Spreadsheet
- Presentation Graphics
- Database
- Contact Management
- Utility Software – anti-virus, data backup, and file compression



## Units of Measurement

Basic Units of measurement all information in the computer is handled using electrical components like the integrated circuits, all of which can recognize only two states – presence or absence of an electrical signal.

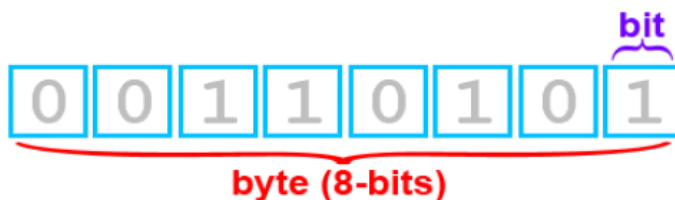
➤ Two symbols used to represent these two states are 0 and 1 and are known as BITS.

0 represents the absence of a signal, 1 represents the presence of a signal.

A BIT -- the smallest unit of data on a computer and can either store 0 or 1.

### **BYTES**

Equivalent to 8 bits put together to create a single computer alphabetical or numerical character.



**Byte (B)=8-Bit**  
**Kilobyte (KB)=1024 B**  
**Megabyte (MB)=1024 KB**  
**Gigabyte (GB)=1024 MB**  
**Terabyte (TB)=1024 GB**

**H.W**

Answer the following questions?

- 1- Byte =.....
- 2- TB=1024 .....
- 3- KB > MB ,True or False

## ASCII

American Standard Code for Information Interchange

The ASCII character code for the letter A is

**65 = 0100 0001**

The ASCII character code for the letter B is

**66 = 0100 0010**

etc.

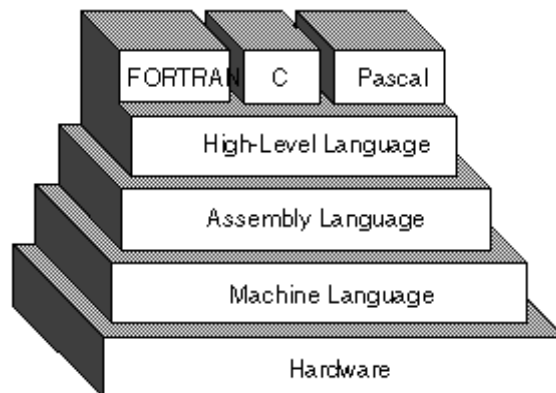
## Computer Programming

### Computer Programming Languages:

- A programming language is an artificial language that can be used to control the behavior of a machine in a computer
- Programming languages, like human languages, are defined using semantic rules, to determine structure and meaning respectively.

### Computer Programming Languages:

- Machine language
- Assembly: Low Level Language (L.L.L)
- High-level language (H.L.L)



### Machine language:

- It is the lowest-level programming language.
- Machine languages are the only languages understood by computers, machine languages are almost impossible for humans to use because they consist entirely of numbers.
- **For example**, an x86/IA-32 processor can execute the following binary instruction as expressed in machine language:

**Binary: 10110000 01100001**

### Assembly Level Language:

- An **assembly language** is a low-level language for programming computers.  
The word "**low**" does not imply that the language is inferior to high-level programming languages but rather refers to the small or nonexistent amount of abstraction between the language and machine language.

### Assembly Level Language (con.):

- A utility program called an **assembler** is used to translate assembly language statements into the target computer's machine code.

- **Example:** Assembly language representation is easier to remember (more *mnemonic*)

`mov al, 061h`

This instruction means:

Move the hexadecimal value 61 (97 decimal) into the processor register named "al".

**Example (Adds 2 numbers):**

name "add"

`mov al, 5 ; bin=00000101b`

`mov bl, 10 ; hex=0ah or bin=00001010b add bl, al ; 5 +  
10 = 15 (decimal) or hex=0fh or bin=00001111b`

**High-level language:**

- **High-level languages** are easy to learn because the programmer does not require a detailed knowledge of the internal workings of the computer.

**Examples of HLL:**

- BASIC was designed to be easily learnt by first-time programmers.
- COBOL is used to write programs solving business problems.
- FORTRAN is used for programs solving scientific and mathematical problems.



### High-level language (Con.):

- With the increasing popularity of windows-based systems, the next generation of programming languages was designed to facilitate the development of GUI (Graphical User Interfaces); for example, Visual Basic wraps the BASIC language in a graphical programming environment.
- Support for object-oriented programming has also become more common, for example C++ and Java.

Example (C program to add 2 numbers):

```
#include<stdio.h>//header files
Void main ()
{int a, b, c; // declaration of 3 variables printf(“Enter two
numbers:\n”);
Scanf(“%d”, &a); // read 1st number
Scanf(“%d”, &b); // read 2nd number c=a+b;
// compute the sum
printf(“Sum of 2 numbers is %d”, c); //print sum
}
```

## Numbering Systems

- Decimal (D) (10)
- Binary (B) (2)
- Octal (O) (8)
- Hexadecimal (H) (16)

### Decimal numbers (D)(10)

$$1439 = 1 \times 10^3 + 4 \times 10^2 + 3 \times 10^1 + 9 \times 10^0$$

↑                    ↑                    ↑                    ↑  
Thousands    Hundreds    Tens            Ones

### Binary numbers?

Most modern computer systems use binary logic. The computer represents values (0,1).

The Binary Number System *uses base 2 includes only the digits 0 and 1*

Computers work only two states On, Off

Basic memory elements hold only two states Zero / One

Thus, a number system with two elements {0,1}


Convert Decimal system to Binary system:

**Example 1:**

$$15_{10} = 1111_2$$

$$15_D = 1111_B$$

	15 ÷ 2
1	7 ÷ 2
1	3 ÷ 2
1	1 ÷ 2
1	0




Convert Binary system to Decimal system:

**Example 1:**

$$10110_B = 22_D$$

1	0	1	1	0
$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
$22 = 1*2^4 + 0*2^3 + 1*2^2 + 1*2^1 + 0*2^0$				



## (Octal System)(O)(8)

- Digits used in Octal number system – 0 to 7.

**Convert from Decimal to Octal**

1-  $(87)_{10}$

		Reminder	
8		87	7
8		10	2
8		1	1

$(127)_8$

$(87)_{10} = (127)_8$

2-  $(156)_{10}$

		Reminder	
8		156	4
8		19	3
8		2	2

$(234)_8$

$(156)_{10} = (234)_8$

## (Octal System)(O)(8)

Convert Octal to Decimal:

$$\begin{aligned} 137 &= 1 \times 8^2 + 3 \times 8^1 + 7 \times 8^0 \\ &= 1 \times 64 + 3 \times 8 + 7 \times 1 \\ &= 64 + 24 + 7 \end{aligned}$$

$$(137)_8 = (95)_{10}$$

# Hexadecimal System

✓ Base 16

✓ ten - digits run from 0 to 9 and letter A-F

The digits are:

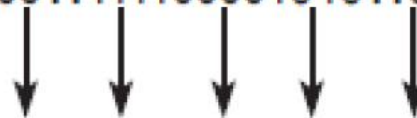
**0 1 2 3 4 5 6 7 8 9 A B C D E F**

## Hexadecimal System

Convert Hexadecimal to Decimal:

$$\begin{aligned}(2AF3)_H &= 2 \times 16^3 + A \times 16^2 + F \times 16^1 + 3 \times 16^0 \\ &= 8192 + 10 \times 16^2 + 15 \times 16^1 + 3 \\ &= 8192 + 2560 + 240 + 3 \\ &= (6899)_D\end{aligned}$$

$(00111111000010101100)_2$



**3 A 0 F C**

$$(3A0FC)_{16} = (111111000010101100)_2$$

- **Three bits** make one **octal** digit

111 010 110 101

7 2 6 5 => 7265 in octal

- **Four bits** make one **hexadecimal** digit

1110 1011 0101

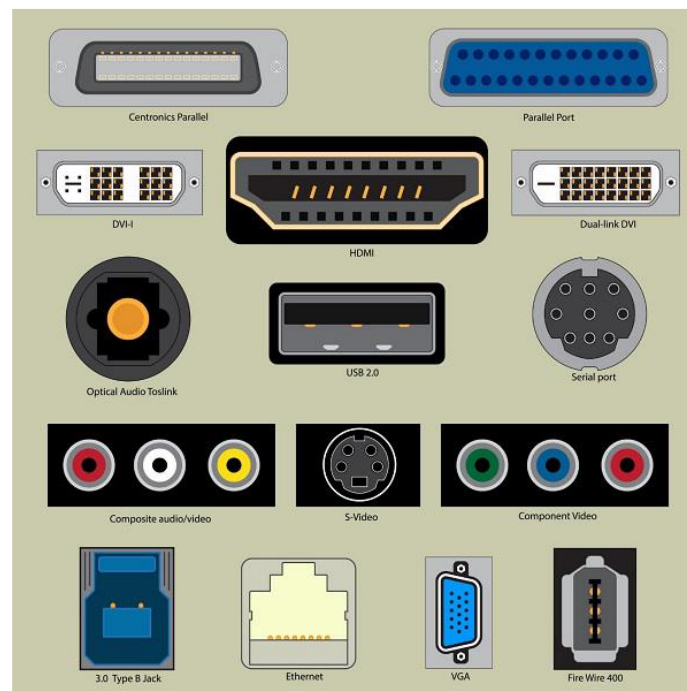
E B 5 => EB5 in hex

0 1 2 3 4 5 6 7 8 9 A B C D E F

## Input/Output Ports

A connection point that acts as an interface between the computer and external devices like mouse, printer, modem, etc. is called **port**. Ports are of two types –

- **Internal port** – It connects the motherboard to **internal devices** like hard disk drive, CD drive, internal modem, etc.
- **External port** – It connects the motherboard to **external devices** like modem, mouse, printer, flash drives, etc.



### 1- Serial Port

Serial ports **transmit data sequentially one bit at a time**. So, they need only one wire to transmit 8 bits. However, it also makes them slower. Serial ports are usually **9-pin or 25-pin** male connectors. They are also known as **COM** (communication) ports or **RS323C** ports.



## 2- Parallel Port

Parallel ports can send or receive 8 bits or 1 byte at a time. Parallel ports come in form of 25-pin female pins and are used to connect printer, scanner, external hard disk drive, etc.



## 3- USB Port

USB stands for Universal Serial Bus. It is the industry standard for short distance digital data connection. A USB port is a standardized port to connect a variety of devices like printer, camera, keyboard, speaker, etc.



## 4- PS-2 Port

PS/2 stands for Personal System/2. It is a female 6-pin port standard that connects to the male mini-DIN cable. PS/2 was introduced by IBM to connect mouse and keyboard to personal computers. This port is now mostly obsolete, though some systems compatible with IBM may have this port.



### 5- Infrared port

is a port that enables wireless exchange of data within a radius of 10m. Two devices that have infrared ports are placed facing each other so that beams of infrared lights can be used to share data.

### 6- Bluetooth Port

**Bluetooth** is a telecommunication specification that facilitates wireless connection between phones, computers and other digital devices over a short-range wireless connection. Bluetooth port enables synchronization between Bluetooth-enabled devices. There are two types of Bluetooth ports –

- **Incoming** is used to receive connections from Bluetooth devices.
- **Outgoing** – It is used to request connections to other Bluetooth devices.

### 7- FireWire Port

FireWire is Apple Computer's interface standard for enabling high speed communication using serial bus. It is also called IEEE 1394 and used mostly for audio and video devices like digital camcorders

## Information Electronics and Communication Technology

IECT stands for Information Electronics and Communication Technology. IECT is a broader term for Information Technology (IT), which includes information, data processing, information life cycle and its importance in day-to-day life, communication technologies, internet, advanced wired or wireless networks, internet, data transformation, cell phones, computers, application and software's, middleware, social networking, audio, and video conferencing and related different application areas where multimedia highly utilizes to access, retrieve, store, transmit, and manipulate data/information in a digital form. Hence, IECT encompasses the study, design, and application of electronic devices and systems for processing, transmitting, storing, and retrieving information. An IECT combines electrical engineering, computer science & engineering, and telecommunications.

IECT is a group of two different terminologies such as Information Electronics and Communication Technology.

**Information Electronics** is a standard technology encompassing computer hardware, software, and applications like operating systems, web-based information, computer networks, and telecommunications.

**Communications technology**, also known as information technology (IT), encompasses devices and applications that are used to process and transmit information. Professionals in communication technology create applications and services for the users or organizations to collect, process, and transmit the information as and when required; this information processing application includes hardware, software, computer networks, or the internet.

## Applications for IECT

The applications of IECT are as follows –

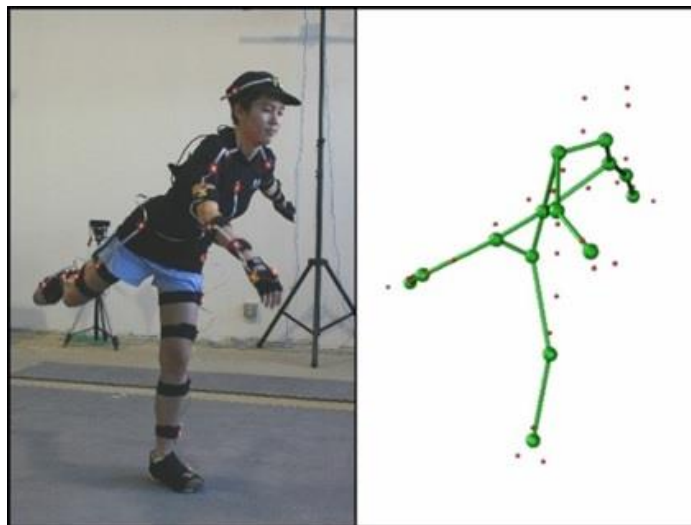
- E-governance
- Multimedia and Entertainment

### E-governance

Electronic governance or E-governance is an application of Information Electronics and Communication Technology which is especially designed for the governance system. Nowadays, different E-governance applications in India like Aadhaar, MyGov, Governance & Administration ([www.india.gov.in](http://www.india.gov.in)), Jeevan Pramaan, etc. are available and most widely used by Indian citizens to access, upload, and update their information. The main goal of Information and communication technology (ICT) tools and digital platforms is to improve government operations, service delivery, effective communication with citizens, transparency, and efficiency in government institutions. Communication refers to the sharing of information between parties like common people, government, business, etc. Almost every government sector has changed to IECT like rail reservation system, gas subsidy disbursal, etc.

### Multimedia and Entertainment

Multimedia refers to the combination of text, audio, video, graphics, animation, etc. It is one of the applications of IECT. Multimedia is used to improve the quality of presentation by incorporating information sharing, usage of graphics and animation, motion capture, etc.



## **Telecommunications**

ICT is the backbone of a telecommunications system that enables its users to do voice, video, and multimedia communication over a network. This communication includes telephone networks and internet services.

## **Internet of Things (IoT)**

ICT supports span smart homes, industrial automation, healthcare monitoring, and smart cities using IoT applications.

## **E-commerce and Digital Marketing**

ICT powers digital markets like online advertising and targeted marketing campaigns, e-commerce transactions. It enables firms to access a global customer base, manage inventory, and offer personalized purchasing experiences.

## **Education and E-learning**

ICT plays a vital role in setting up e-learning, virtual classrooms, and online content. It bridges geographical gaps to distant learning, skill development, and educational resources.

## **Healthcare and Telemedicine**

ICT also plays a vital role in the healthcare industry by providing electronic health records (EHRs), telemedicine consultations, remote patient monitoring, etc.

## **Financial Services**

ICT supports financial inclusion like online banking, electronic payments, cryptocurrency, and trading.

## **Transportation and Logistics**

ICT enhances efficiency GPS-enabled system helps to communicate live, real-time tracking of goods and shipments, vehicle telematics, traffic management systems, and optimizing routes.

### **Entertainment and Media**

IECT powers entertainment by gaming networks, and social media, sharing multimedia content.

### **Energy Management and Sustainability**

IECT facilitates real-time energy management, demand response, and grid stability.

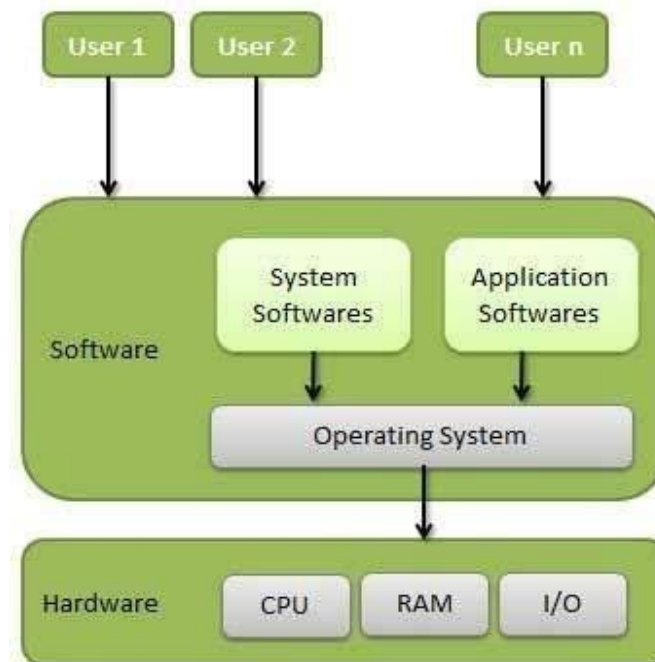
### **Public Safety and Security**

IECT improves situational awareness and disaster management by supporting surveillance, emergency response, and public safety systems.

## Introduction to Operating System

An Operating System (OS) is an interface between a computer user and computer hardware. It is software that performs all the basic tasks, such as file management, memory management, process management, input and output, and controlling devices such as disk drives and printers.

Some popular Operating Systems include Linux, Windows, VMS, OS/400, AIX, and z/OS.



Functions of OS: Following are some important functions of an operating System.

- Memory Management
- Processor Management
- Device Management
- File Management
- Security
- Control over system performance
- Coordination between other software and users

## TYPES OF OPERATING SYSTEMS

Since the very first operating system was made, operating systems have kept evolving with time to accommodate more and more sophisticated tasks. Let's look at some of the most common types of operating systems in use today.

### **Multiprogramming Operating System**

As the name suggests, a multiprogramming operating system is an operating system that can run multiple programs at the same time.

### **Time Sharing Operating System**

This is a unique type of multiprogramming operating system. Like the typical multiprogramming operating system, it allows multiple tasks to run concurrently. However, this is unique in that it has been designed for use by multiple users. This means that multiple users can use the same computer resources.

### **Distributed Operating Systems**

The feature of distributed operating systems is the fact that they have multiple central processors.

### **Network Operating System**

As the name suggests, this operating system runs on a server, and it allows computers on a network to access computing resources. The management of the users, data, applications and security is done on the server.

### **Real-Time Operating Systems**

In these operating systems, input must be received and processed in an extremely short time. As a result, the operating system has to guarantee that the events will be processed in a given time.

## CHOOSING AN OPERATING SYSTEM FOR YOUR BUSINESS

Now that we have established that each operating system has its strengths and weaknesses, let's go over how to choose the best one for your business.

- Ease of use.
- Availability of software and applications.
- Note what your customers use.
- Security.
- Cost.

### What is the User Interface (UI)?

The user interface (UI) is the point of **human-computer interaction and communication in a device**. This can include display screens, keyboards, a mouse, and the appearance of a desktop. It is also how a user interacts with an application or a website, **using visual and audio elements, such as type fonts, icons, buttons, animations, and sounds**.

### Types of User Interfaces

The various types of UI include such as:

- **Graphical User Interface (GUI)**. Web UIs and other **digital products often feature GUIs with graphical elements, such as windows, pull-down menus, buttons, scroll bars, and icons**. Multimedia is increasingly being incorporated into GUIs for many applications, including sound, voice, motion video, and virtual reality (VR).
- **Command line interface**. CLIs are meant for developers who use **programming languages, such as Python, C, C++, PowerShell, and Bash**. A command is entered, and the interface completes the task associated with that command.
- **Touch UI**. A **touch screen lets users physically interact with many elements of an interface**.
- **Voice UI**. VUIs **receive verbal commands or requests from humans and can respond accordingly**.
- **Natural language UI**. This type of user **interface understands natural language and can converse with humans, responding in a human-like manner**. **Apple's Siri and Amazon's Alexa are examples of devices featuring natural language user interfaces**.



## Computer mouse

A **mouse** typically controls the motion of a pointer in two dimensions in a graphical user interface (GUI).

A computer mouse is a hand-held pointing device that detects two-dimensional motion relative to the surface. This motion is typically translated into the motion of the pointer (called a cursor) on a display, which allows smooth control of the graphical user interface of a computer.

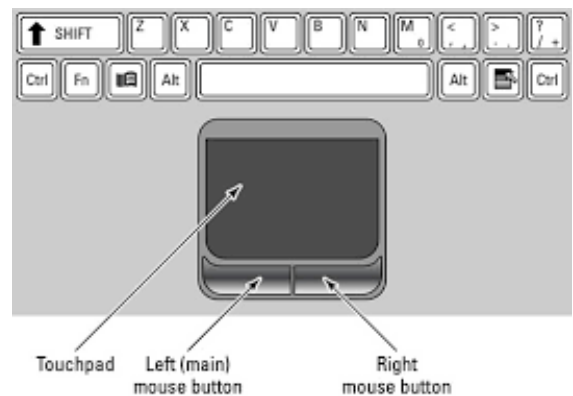


The first public demonstration of a mouse controlling a computer system was done by Doug Engelbart in 1968.

In addition to moving a cursor, computer mice have one or more buttons to allow operations such as the selection of a menu item on a display. Mice often also feature other elements, such as touch surfaces and scroll wheels, which enable additional control and dimensional input.

## What is the touchpad?

A touchpad (also called a trackpad) is a type of input device for computers that does the same things as a computer mouse. It is made up of a flat, touch-sensitive surface on which the user slides one or more fingers to move the cursor on



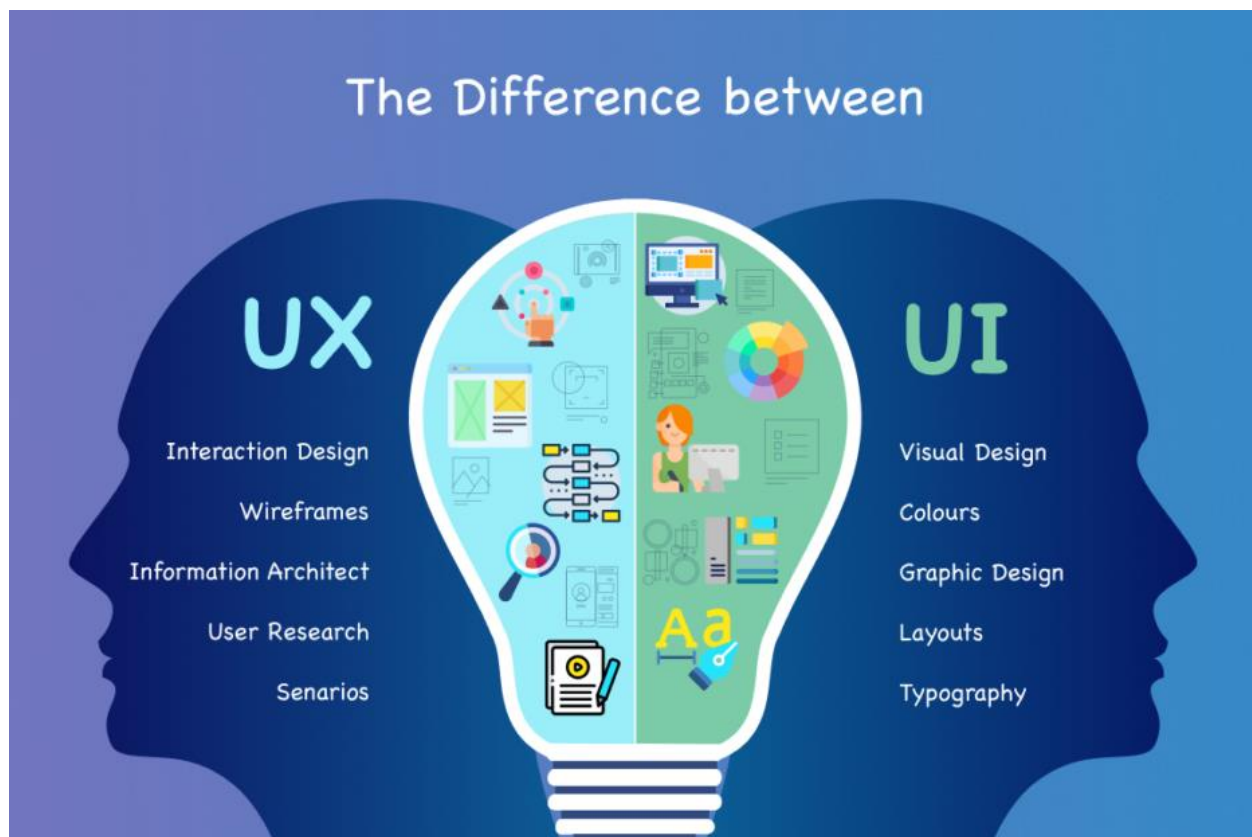
## The definition of User Experience (UX)

User experience (UX) is made of all the interactions a user has with a product or service. It is the personal, internal experience customers go through when using a product's interface.

UX design is all about creating extremely user-friendly interfaces that can enhance users' satisfaction and usability.

UX design is entirely based on users' needs: any UX designer building interfaces should, first of all, shape their work on users' needs and perceptions: what type of person will visit the website/app? What will they expect? How can I make their experience as smooth and enjoyable as possible?

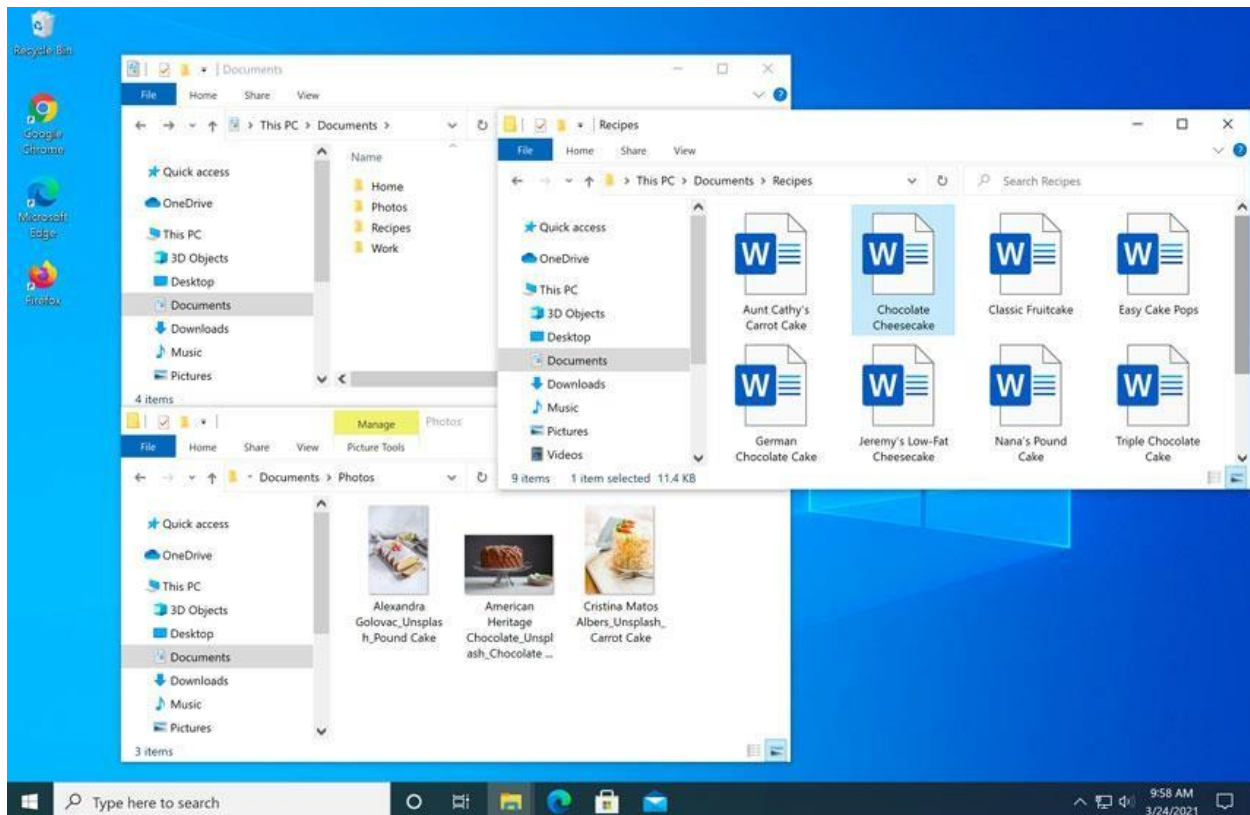
UX design is so much more than just designing for a screen.



## WINDOWS

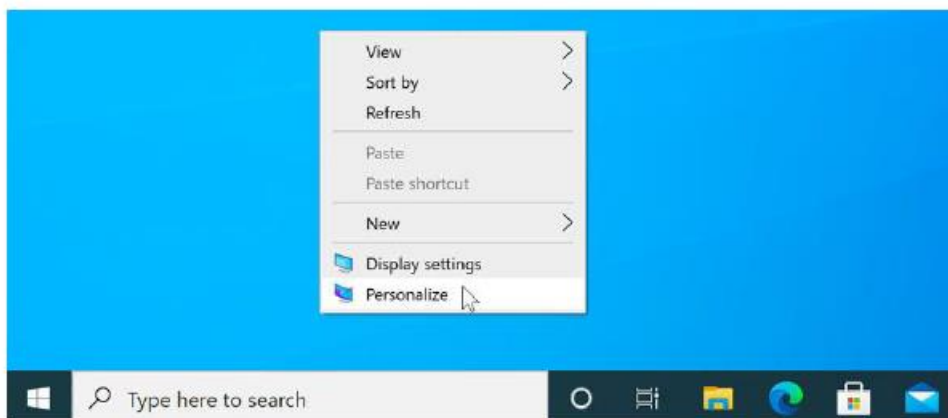
### Navigating the Desktop

Desktop is the main workspace for your computer. From here, you can view and manage your files, open applications, access the Internet, and much more.

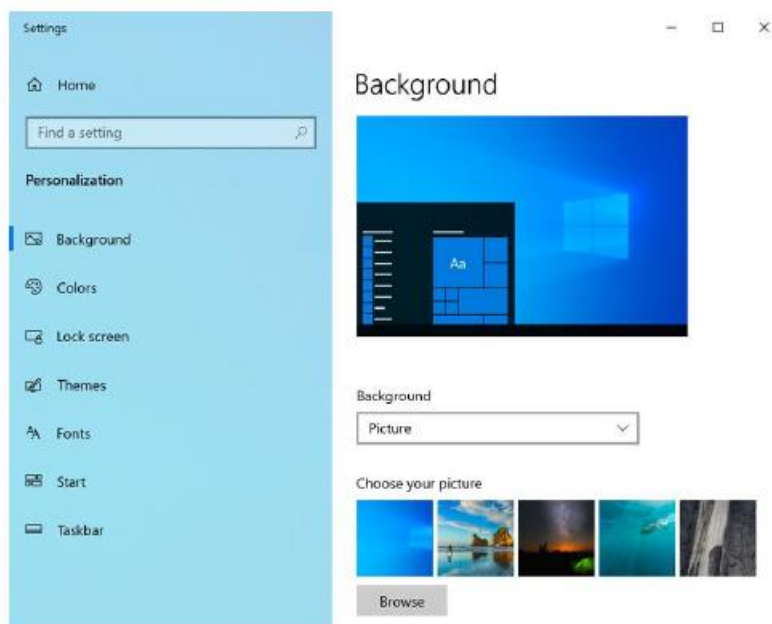


## Personalizing your desktop

Windows 10 makes it easy to customize the look and feel of your desktop. To access the **Personalization settings**, right-click anywhere on the desktop, then select **Personalize** from the drop-down menu. Personalization settings will appear.

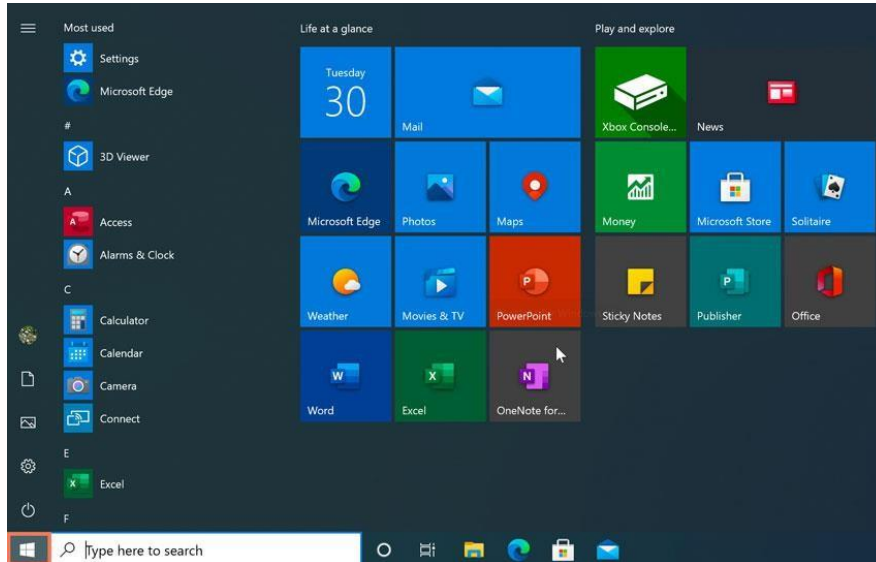


Click the buttons in the interactive below to learn more about using the Personalization settings.



## Opening applications

You'll use the **Start menu** to open programs on your computer. To do this, click the **Start** button in the bottom-left corner, then choose the desired application.



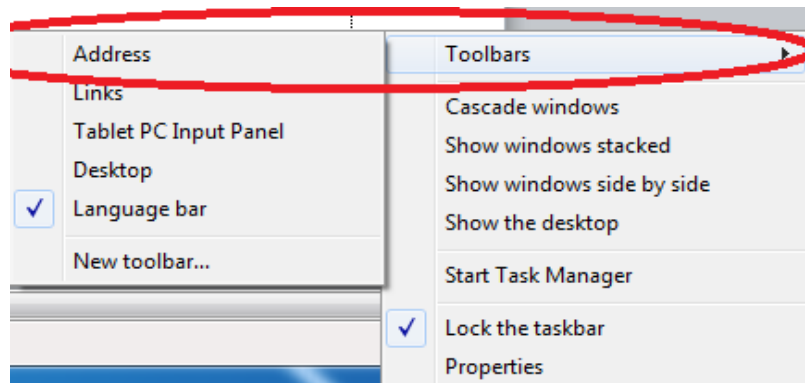
## Taskbar

The Windows interface includes a special [application desktop toolbar](#) called the *taskbar*. The user can use the taskbar for switching between open windows and starting new applications.



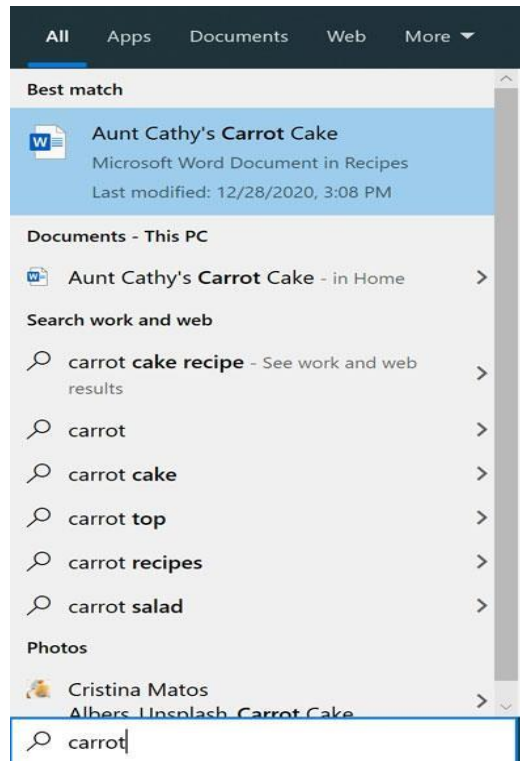
### Add Toolbars to the Taskbar

The user can add toolbars to the taskbar by right click on taskbar and select Toolbars,



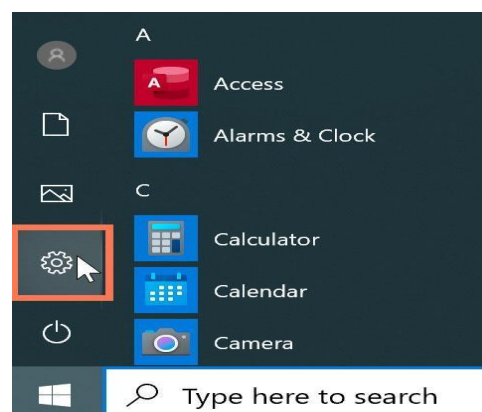
## Searching for files and apps

To search for something on your computer—like a specific file or application—click the **Search Box**, then start typing. In the example below, we're searching for a Microsoft Word document.



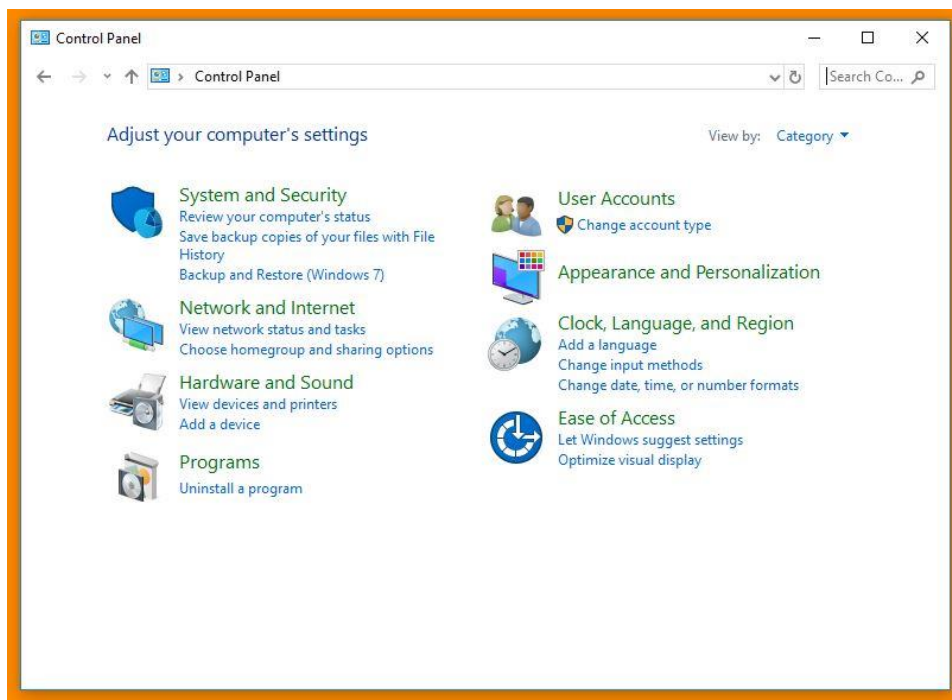
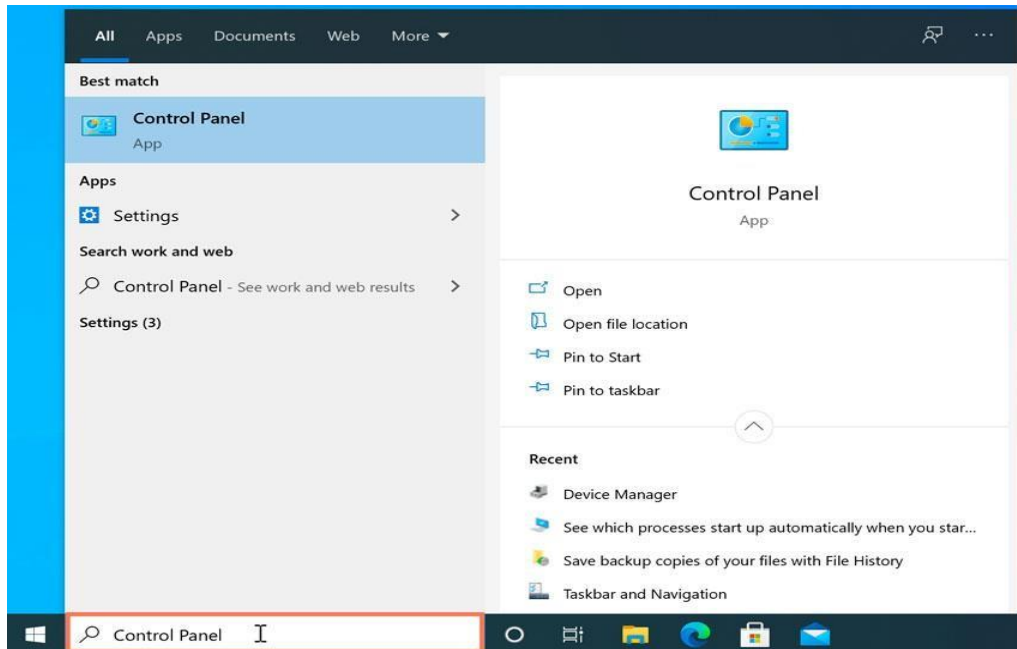
## Adjusting your settings

You'll use the Settings app to change the most important settings on your computer, like your network and display options. To open the app, click the Start menu, then select **Settings**.



### Control Panel

The Control Panel is a component of Microsoft Windows that provides the ability to view and change system settings. It consists of a set of applets that include adding or removing hardware and software, controlling user accounts, changing accessibility options, and accessing networking settings



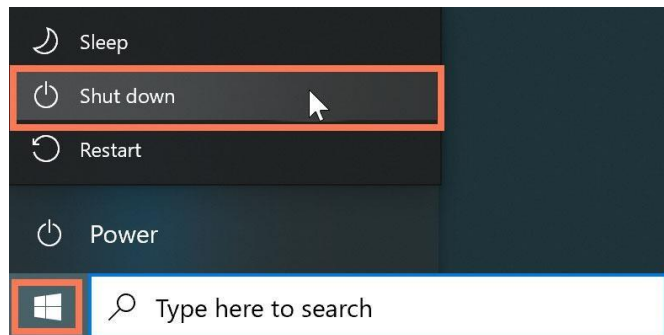


## Power in your computer

-When you're done using your computer, it's important to **shut it down properly**. To do this, click the **Start** button, then choose **Power > Shut Down**.

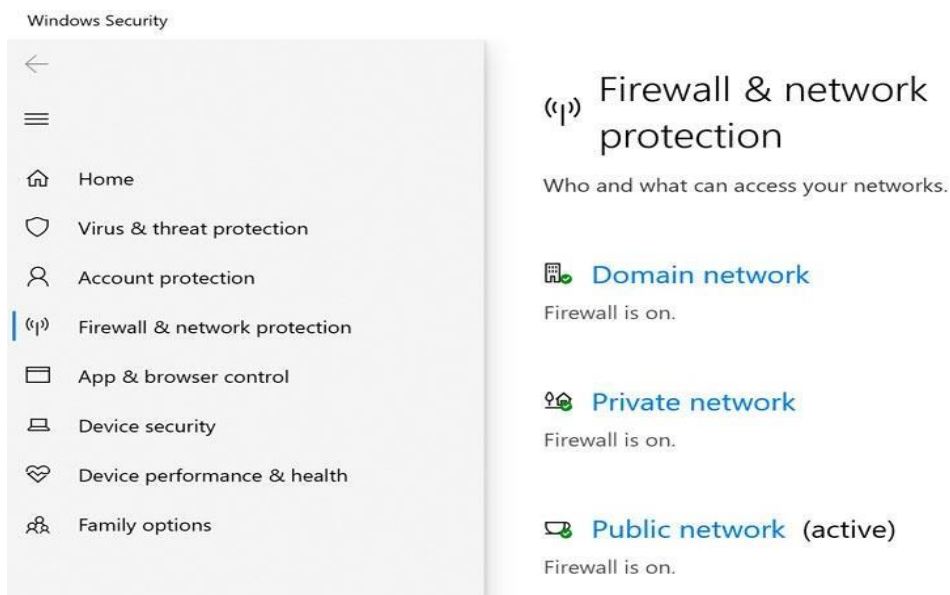
-Restart should be used when installing updates/software and to resolve any errors. If the computer has frozen or is giving off some other error, you should use Restart rather than Shut Down.

-Putting your PC to sleep saves power while preserving the state of your PC so you can resume working quickly. This comes in particularly handy with portable devices such as tablets and laptops that you might use for a while, put to sleep to preserve battery life, then wake again and resume



## Windows Firewall ✓






By default, Windows will protect your **Internet connection** with Windows Firewall. A **firewall** prevents unauthorized access from external connections and helps protect your network from threats that could harm your computer.





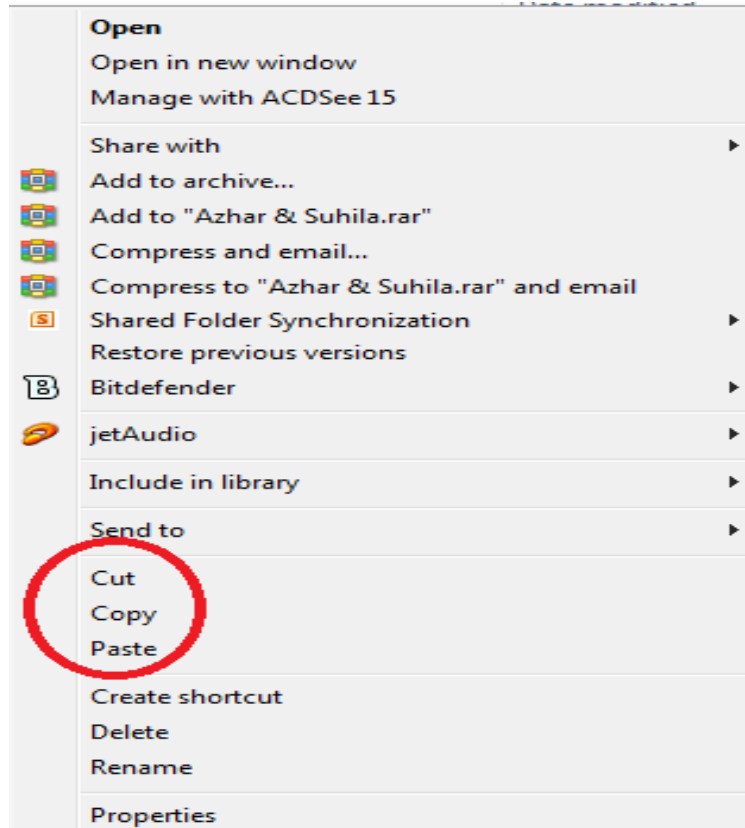
### File and Folder

All the data on the hard drive consists of files and folders.

File	Folder
<p>A file is commonly referred to as a document and usually created from within a specific program.</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: center;">Courses_Sc... Chapter 6.doc message.txt</p>	<p>A folder is a container for programs or files and a method of organizing information.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">My Documents ECDL Notes</p>
Files store data, whether text, music or film	Folders store files and other folders.
Files are represented with an icon and usually include a symbol of the associated program.	Folders are represented with a yellow icon.
Each file has its own extension.	A folder does not have any extension.
Files are taking spaces on computer memory.	Folders are not taking spaces on computer memory.
The user cannot create any folder or sub folder within a file.	The user can create different types of files or sub folders in a folder.

#### **Duplicating (Moving) Files and Folders from one folder / directory to another.**

- Select the files / folders that the user wishes to duplicate / move.
- Click Edit, Copy (to duplicate) OR Cut (to move).
- Open the folder where the user wants to paste the files / folders and click Edit, Paste.

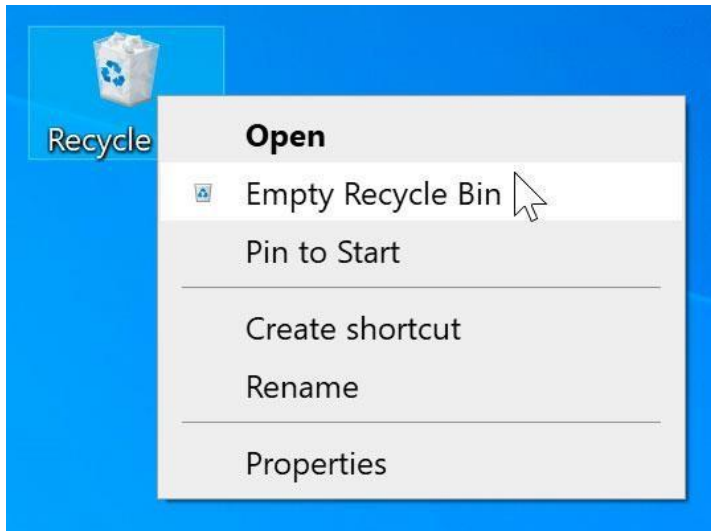


**To delete a file or folder:** ✓

If you no longer need to use a file, you can delete it. When you delete a file, it is moved to the **Recycle Bin**. If you change your mind, you can move the file from the Recycle Bin back to its original location. If you're sure you want to permanently delete the file, you will need to **empty the Recycle Bin**.

1. Click and drag the file to the **Recycle Bin** icon on the **desktop**. You can also click the file to select it and press the **Delete** key on your keyboard.

- ✓
2. To permanently delete the file, right-click the **Recycle Bin** icon and select **Empty Recycle Bin**. All files in the Recycle Bin will be permanently deleted.



Note that deleting a folder will also delete all of the files within that folder.

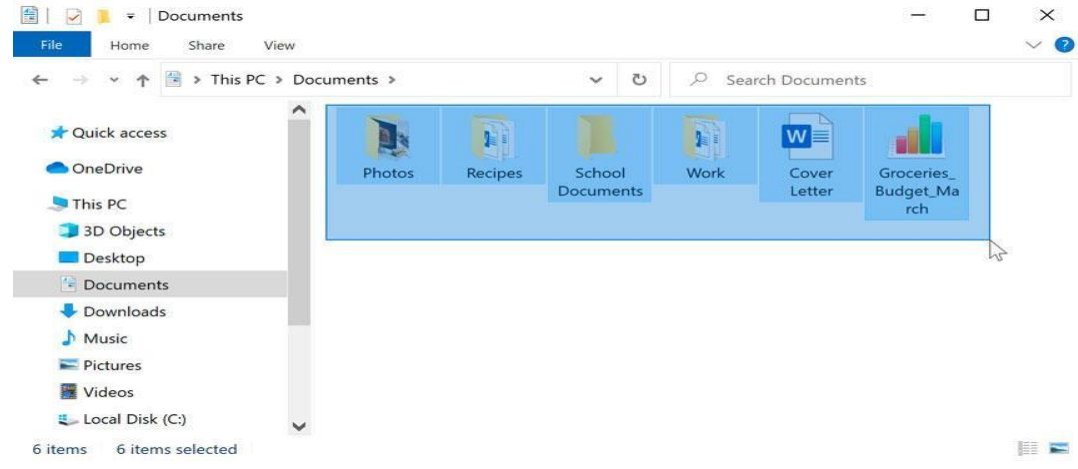
### Selecting multiple files ✓

Now that you know the basics, here are a few tips to help you move your files even faster.

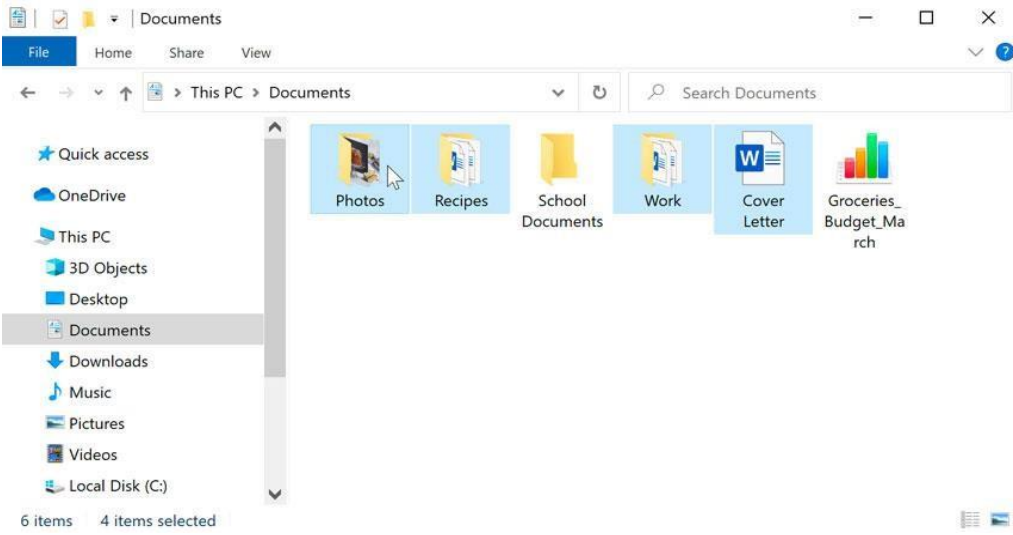
Selecting more than one file

There are a few ways to select **more than one file at a time**:

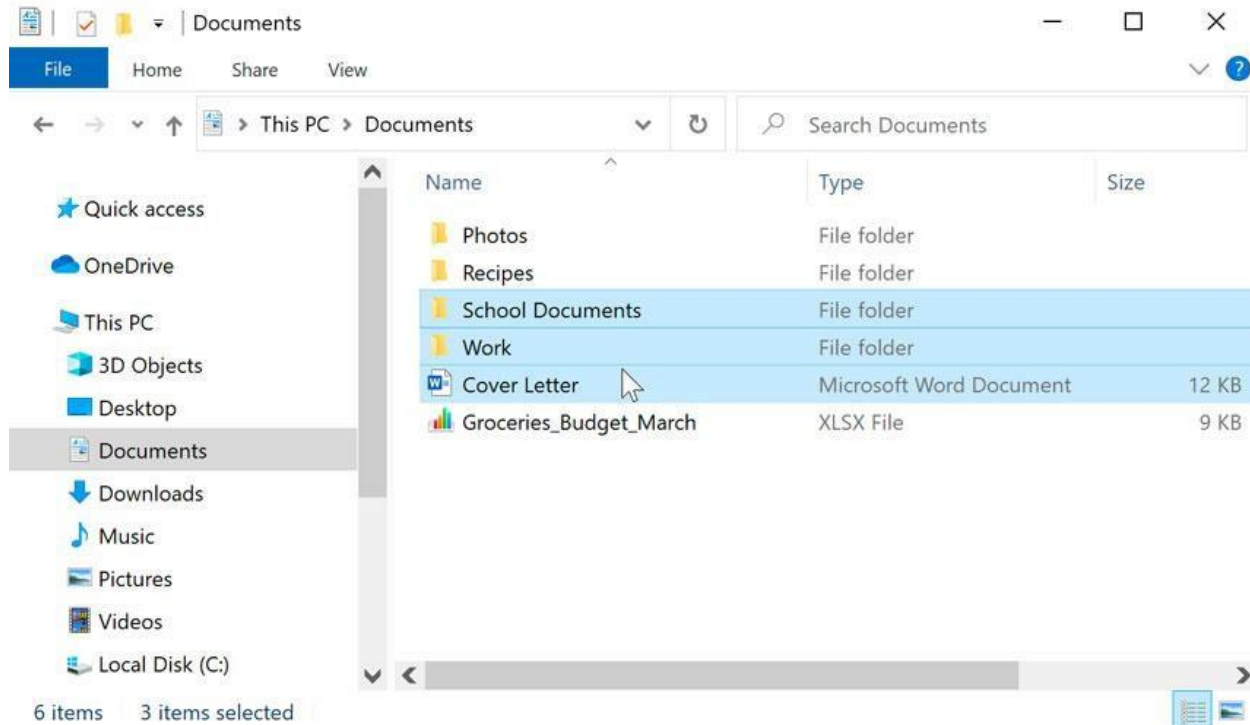
- If you're viewing your files as icons, you can **click and drag the mouse to draw a box** around the files you want to select. When you're done, release the mouse; the files will be selected. You can now move, copy, or delete all of these files at the same time.



- 
- To select **specific files** from a folder, press and hold the **Control** key on your keyboard, then click the files you want to select.

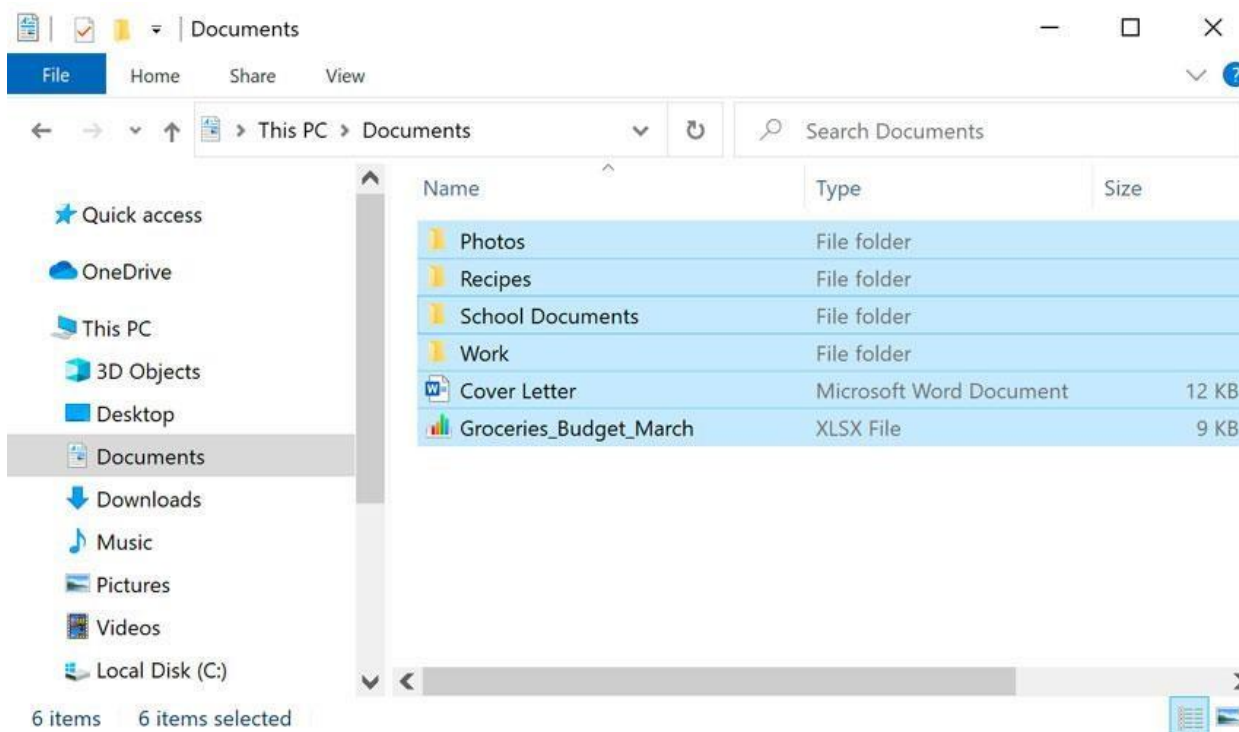


- To select a **group of files** from a folder, click the first file, press and hold the **Shift** key on your keyboard, then click the last file. All of the files between the first and last ones will be selected.



## Selecting all files

If you want to select **all files in a folder** at the same time, open the folder in File Explorer and press **Ctrl+A** (press and hold the **Control** key on your keyboard, then press **A**). All of the files in the folder will be selected.



Ctrl+A is an example of a **keyboard shortcut**. We'll talk more about these in our lesson on [Keyboard Shortcuts in Windows](#).

## Shortcuts ✓

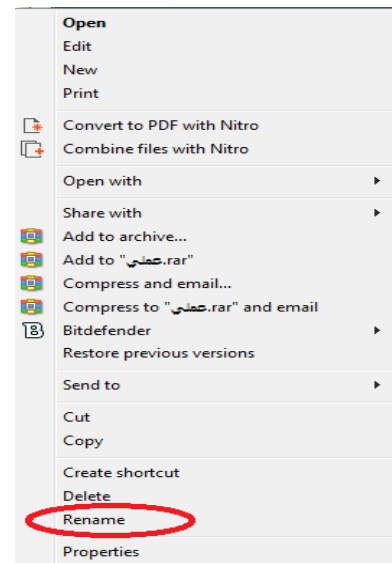
If you have a file or folder you use frequently, you can save time by creating a **shortcut** on the desktop. Instead of navigating to the file or folder each time you want to use it, you can simply double-click the shortcut to open it. A shortcut will have a small arrow in the lower-left corner of the icon.

Note that creating a shortcut does **not** create a duplicate copy of the folder; it's simply a way to access the folder more quickly. If you delete a shortcut, it will not delete the actual folder or the files it contains. Also note that copying a shortcut onto a flash drive will not work; if you want to bring a file with you, you'll need to navigate to the actual location of the file and copy it to the flash drive.



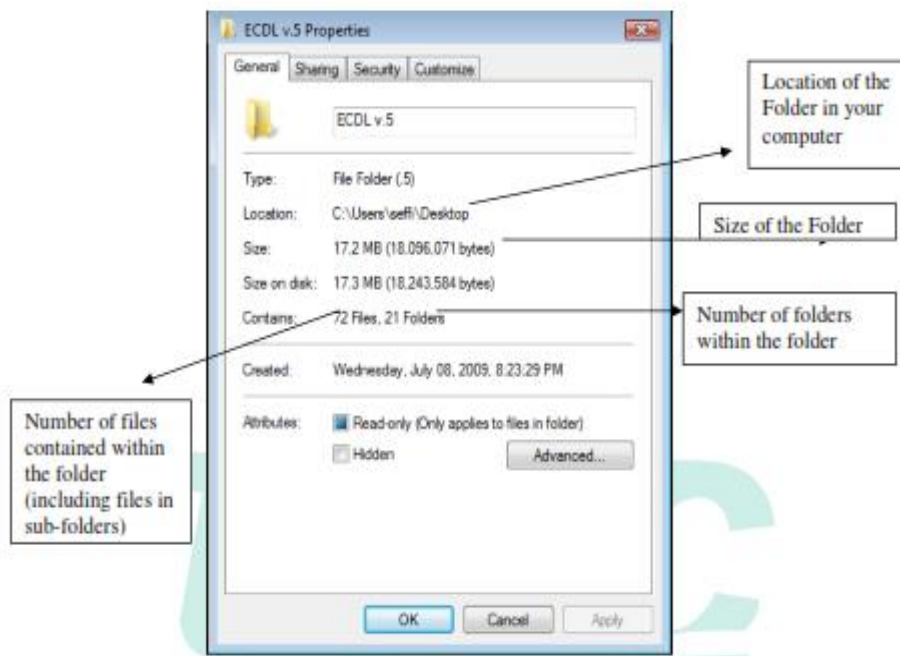
## Changing the name of a Folder / File

- Right click on the folder / file.
- Click Rename.
- Type in a new name.




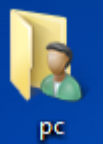

**Open a window to display folder name, size, and location on a drive.**

- Right click on the folder.
- Click Properties. The following window will appear:

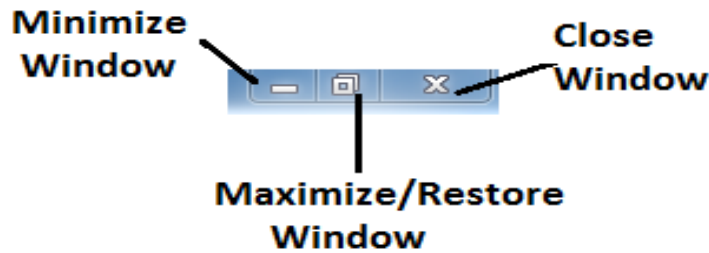


**Desktop Icons**

An **icon** is a small graphical representation of a program or file. When the user double-click an icon, the associated file or program will be opened.

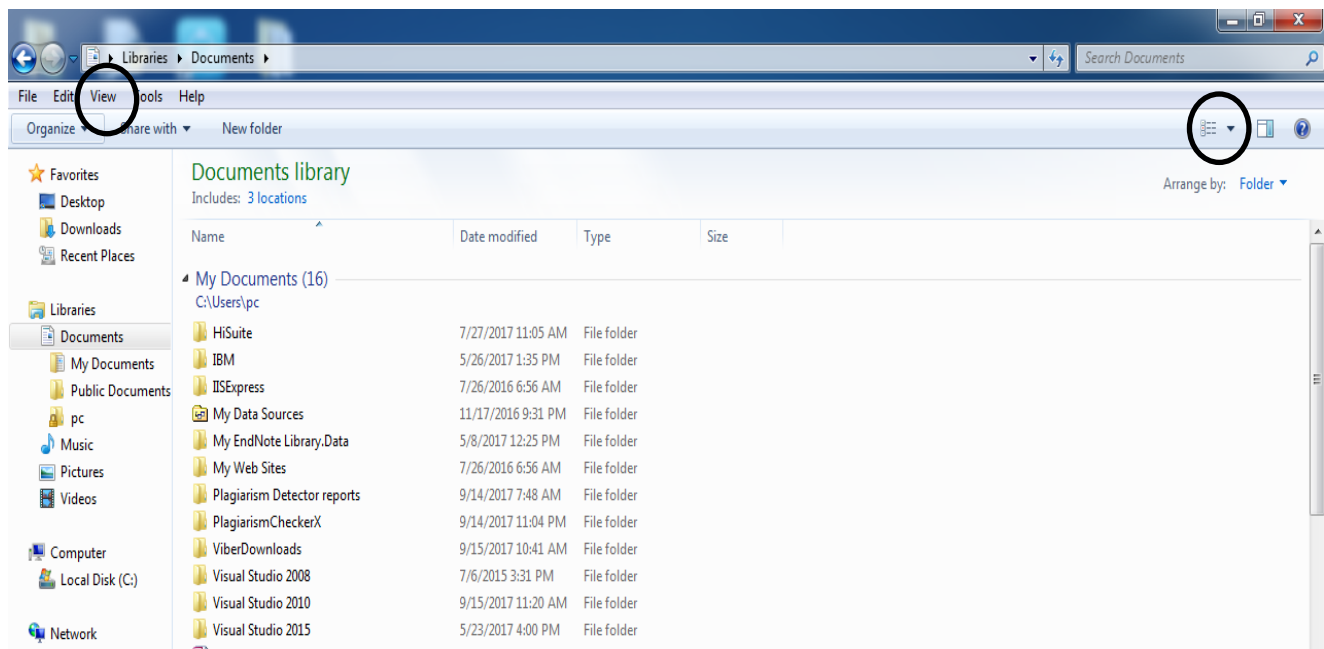
- This PC. 
- Document icon. 
- Recycle bin icon. 



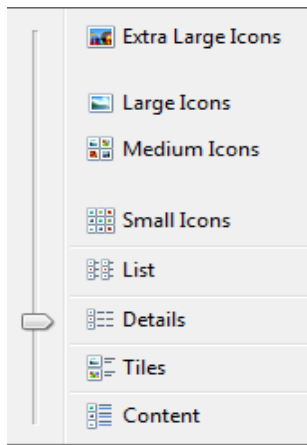


### The Windows Explorer Views

The Views icon allows the user to set the view to display files. Open document icon from desktop, select view



Or clicking on the down arrow displays the following options.

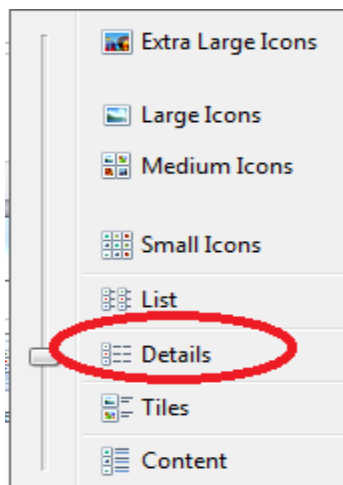


- **Medium and Large:** Displays picture files as a series of small pictures.
- **Tiles:** Displays only the file titles.
- **Small Icons:** Displays all objects as icons.
- **List:** Displays all files/folders in list format split into multiple columns.
- **Details:** Displays all files and associated file details such as name, size, type, and last accessed date in a single column.

### Sort files

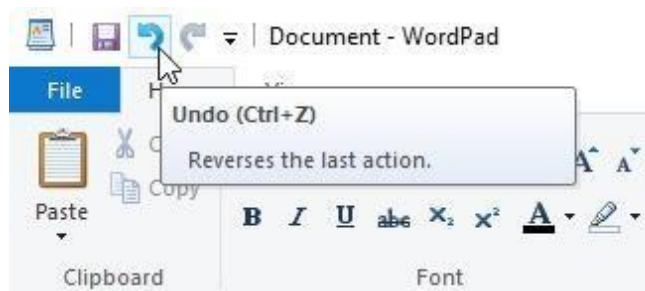
The files displayed in My Computer window can be sorted by name, size, file type and the date/time last modified:

- Click View, Details.



## Undoing changes

Let's say you're working on a text document and accidentally delete some text. Fortunately, you won't have to retype everything you just deleted! Most applications allow you to **undo your most recent action** when you make a mistake like this. Just locate and select the **Undo** command, which is usually in the upper-left corner of the window near the Menu bar. You can also press **Ctrl+Z** on your keyboard. You can continue using this command to undo multiple changes in a row.



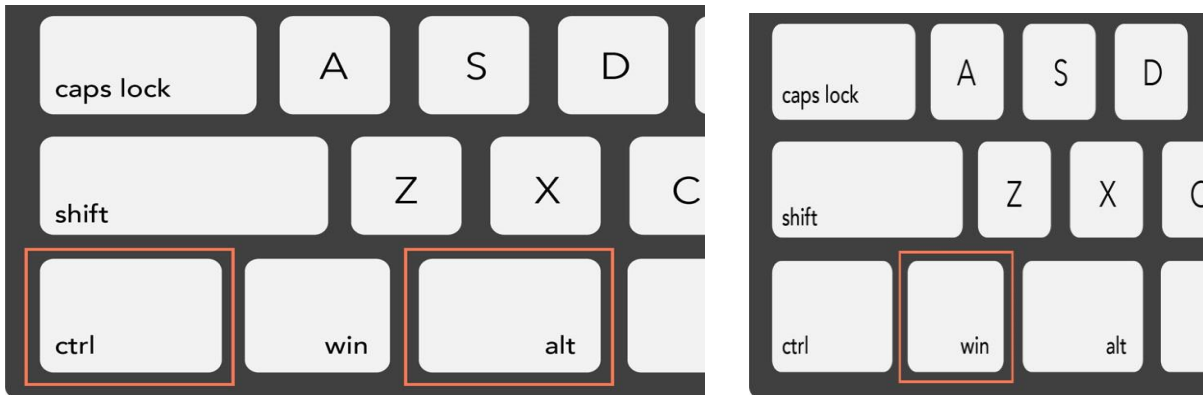
## Keyboard shortcuts in Windows ✓

Keyboard shortcuts are **keys or a combination of keys** you can press on your keyboard to perform a variety of tasks. Using keyboard shortcuts is often **faster than using a mouse** because you can keep both hands on the keyboard.

### Using shortcuts

Many keyboard shortcuts require you to **press two or more keys in a specific order**. For example, to perform the shortcut **Ctrl+X**, you would press and hold the **Ctrl** key, then press the **X** key, then release.

You'll use the **Ctrl (Control)** or **Alt** key to perform most keyboard shortcuts. You'll find these keys near the bottom-left corner of your keyboard.



### Working with text

These keyboard shortcuts are useful when working with text in word processors, email applications, and more. They can help you perform **commonly repeated tasks**, like **copying and pasting** text.

- **Ctrl+X**: Cut the selected text.
- **Ctrl+C**: Copy the selected text.
- **Ctrl+V**: Paste the copied or cut text.
- **Ctrl+A**: Select all of the text on the page or in the active window.
- **Ctrl+B**: Bold the selected text.
- **Ctrl+I**: Italicize the selected text.
- **Ctrl+U**: Underline the selected text.
- **Delete**: Send a selected file or files to the **Recycle Bin**.
- **Shift + Del**: **delete** file from recycle bin and computer
- **Enter**: Open a selected application or file.
- **Ctrl+N**: Create a new file.
- **Ctrl+O**: Open an existing file.
- **Ctrl+S**: Save the current file.
- **Ctrl+Z**: Undo the previous action. If you want to redo the action, press **Ctrl+Y**.
- **Windows key**: Open the Start menu (or the Start screen in Windows 8).

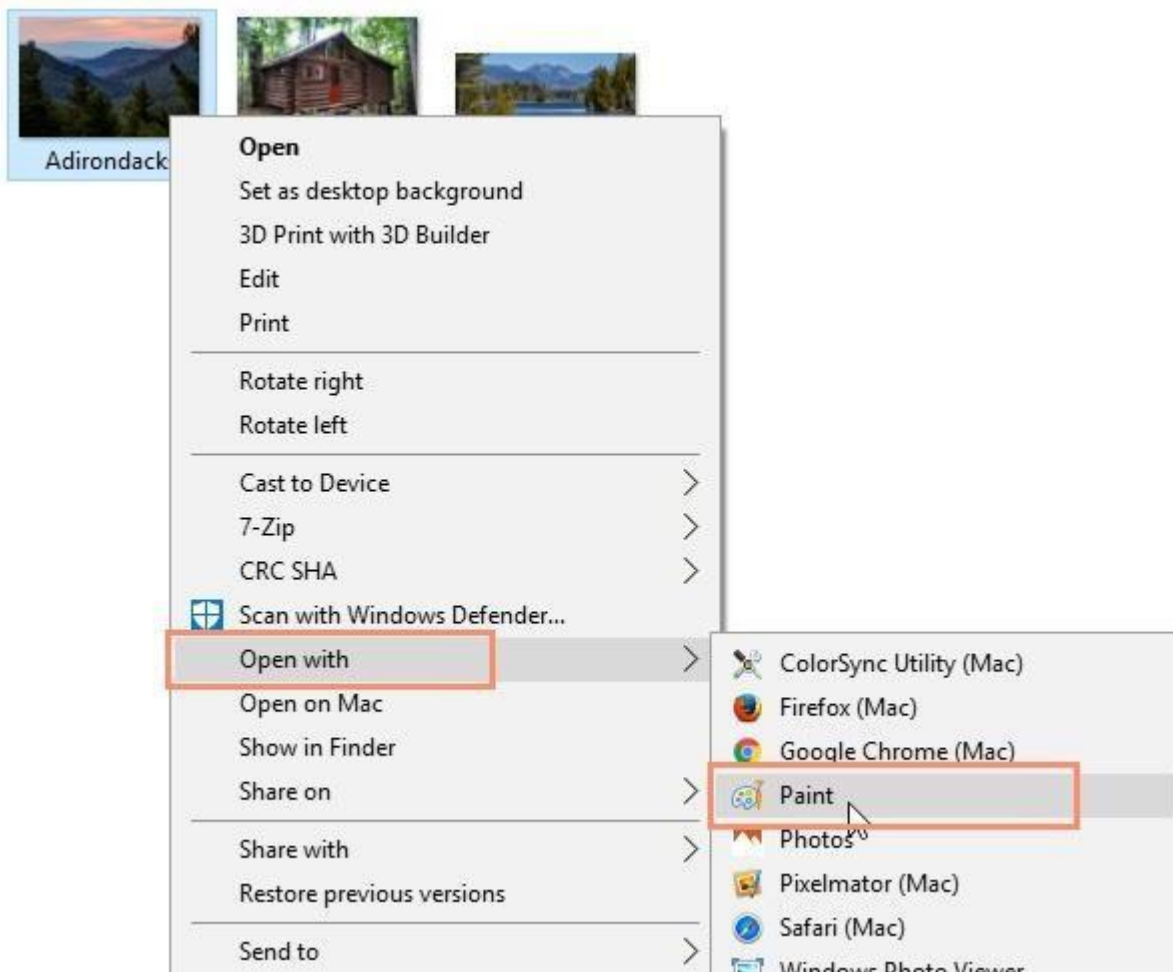
### Opening a file in the default application

As you learned in our lesson on [Working with Files](#), you can locate and **double-click** a file to open it. It will open in the **default application** for that type of file.

To open a file in a different application:

Sometimes you may want to open a file in a different application **without changing the default**. For example, you may want to open a photo with **Microsoft Paint** to crop or resize it.

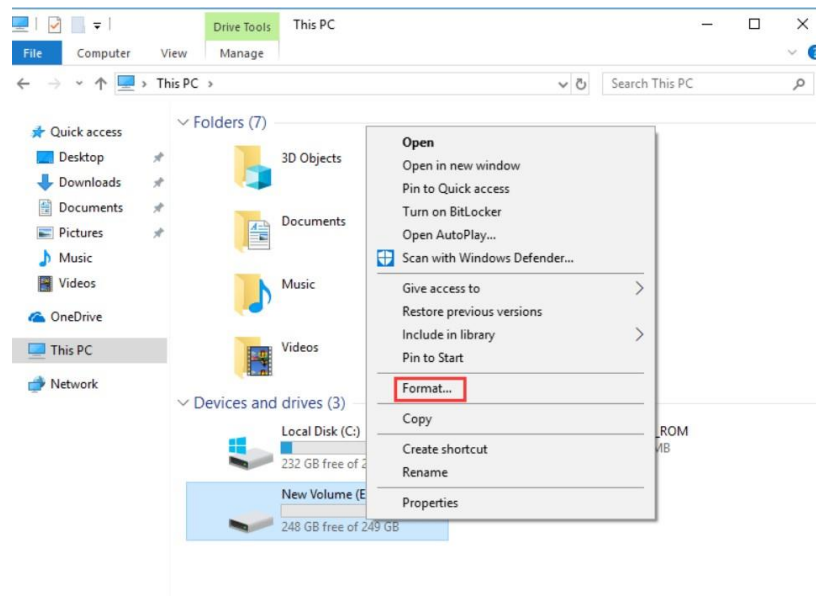
1. From the desktop, **right-click** the desired file.
2. From the drop-down menu, click **Open with**, then select the desired **application**. In this example, we'll select **Paint**.



3. The file will open in the selected application.

### What does format mean?

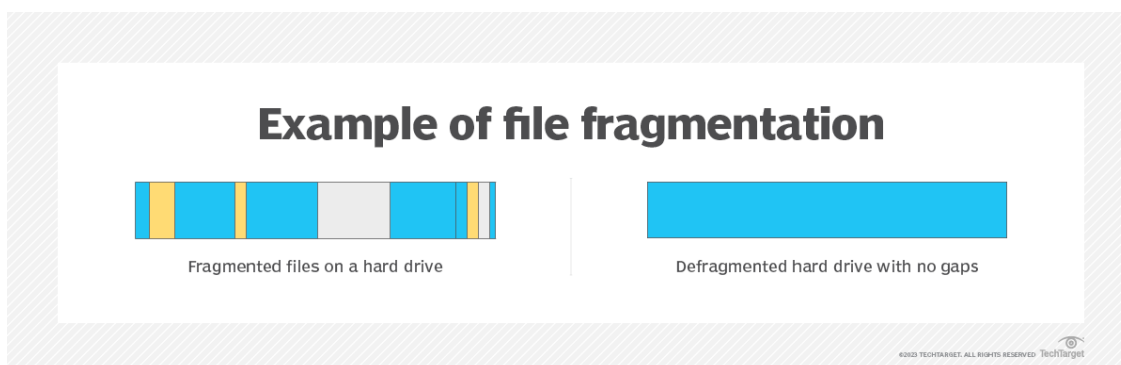
Formatting is the process of erasing all information on a disk and you may need to format a new hard drive before installing Windows on it. The process of formatting creates a new files system format



### What is defragmentation?

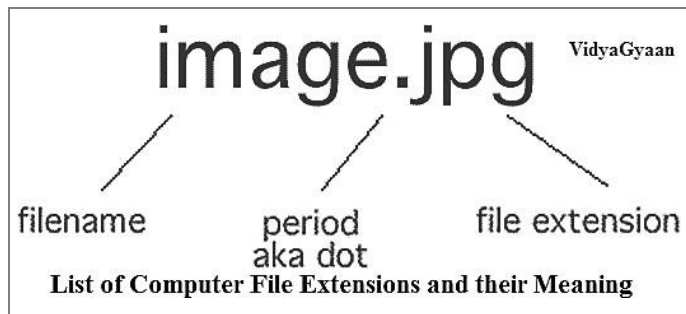
Defragmentation is the process of rearranging the data on a storage medium, such as a hard disk drive (HDD), for efficient storage and access.

Defragmenting a hard drive can improve a computer's or laptop's performance and speed. Certain disk defragmentation tools might try to keep smaller files together, especially if they're often accessed sequentially.



### What is File?

- A file contains data; every file has a filename.
- Most filename end with an extension (after the dot)



### What is the file extension?

The last three characters in the filename indicate the extension and the extensions are divided into several groups such as:

#### ➤ **System files**

These are files that the Windows operating system reads and returns to immediately. They are on different extensions, either to be in the form of files by extension **.sys** or drivers with **.DRV** extensions and these files work in a hidden way.

#### ➤ **Office Applications**

Files that have the extension such as

- .doc            Microsoft Word
- .xls            Microsoft Excel
- .ppt            Microsoft PowerPoint Presentation

#### ➤ **Video files**

.mp4 (Works with Media Player)

#### ➤ **Some other audio files:**

wav, mp3            (Works with Media Player)

➤ **Image files**

It is one of the most files, but most of the most important ones that are under these extensions:

.gif, .jpg, .jpeg

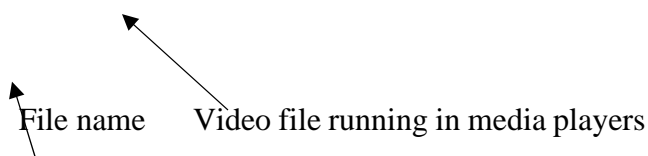
.gif (Used to save animation pictures)

➤ **.jpg, .jpeg (The most common types of images, used for fixed images, high quality, and relatively small size)**

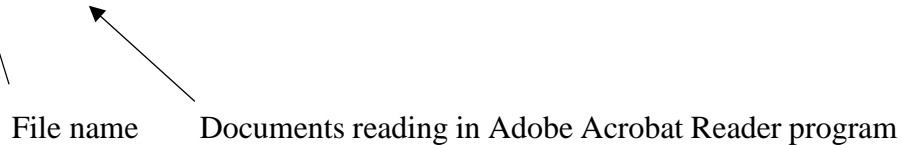
➤ **Others (Documents read by popular program)**

.pdf (Works in program Adobe Acrobat Reader)

Example 1: Dent.mp4



Example 2: Tikrit.pdf



**Save: Used to save change to current document.**

**Save as: This command enables you to save your current document into several kinds of files or name after modifying documents.**



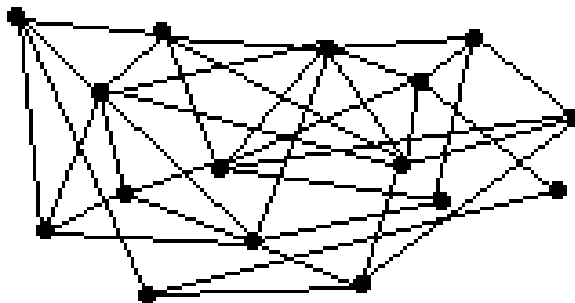
## Introduction to Internet and Web Browsers:

### What is a Network?

A network is an interconnection of two or more computing devices. They are linked to sharing resources, exchanging files, and allowing electronic communications. The computers on a network may be connected through cables, telephone lines, radio waves, satellites, or infrared light beams.

It can serve a variety of purposes including:

- File sharing between two computers
- Video chatting across different parts of the world
- Surfing the Web
- Instant messaging (IM) between computers with IM software installed.
- E-mail
- Voice over IP (VoIP)
- A converged network transports multiple forms of traffic (video, voice, and data)



## Types of computer networks



### 1. Local area network (LAN)

A local area network, or LAN, is the most common network type. It allows users to connect within a short distance in a common area. Once they connect, users have access to the same resources. For example, you might use a LAN when you connect your laptop to the internet at your home and print a document from a printer on the same network.

### 2. Wide area network (WAN)

A wide area network, or a WAN, is an extensive network that's not confined to geographical space. Corporations and international companies may use WANs to provide a common network with far-reaching connectivity. For example, remote workers who use the internet to access information from their company make use of a WAN.

## What is the Internet?

The Internet is a global network of computers connected by wires, (mostly phone lines). If you look at a map of big cities, smaller towns, and scattered houses, each is connected with roads, railways, etc.

This is like the Internet, except with the Internet, wires connect computers. The Internet is a superhighway



## What Is an Internet Application?

Internet applications are interactive, compiled applications that can be accessed through a corporation, Internet applications can perform complex business processes. In a server-based Internet application, the application uses the Internet protocol to receive requests from a client, typically a Web browser, process associated code, and return data to the browser.

### Example:

- On-line communication
- Product Promotion
- On-line shopping
- Online journals and magazines
- Real-time updates
- Communication
- Job Searches
- Finding books & Study materials
- Health & Medicine
- Travel
- Business
- Research, so on.....

## Connecting to the Internet

- Connect to Wi-Fi by going to your network settings, turning on Wi-Fi, and selecting your network name.
- Connect to ethernet by using an ethernet cable to connect your computer to your router or modem.
- Connect to dial-up by plugging in your modem to the phone jack, then connecting the modem to your computer.

**The World Wide Web (WWW)** is a hyperlinked network of documents and other resources found on the computers of the Internet.

**Internet Browser** is a software program that enables you to view Web pages on your computer. Browsers connect computers to the Internet and allow people to “surf the Web.”

Software program that allows a person to view WWW documents.

Examples of browsers are Netscape, Microsoft Internet Explorer, Chrome, Mozilla Mac Web, .....



## SEARCH ENGINES

A website that will help you search the Internet for keywords and subjects. Search engines are programs that search documents for specified keywords and return a list of documents

where the keywords were found. A search engine is a general class of programs; however, the term is often used to describe systems like Google, Bing, and Yahoo specifically!

## **URL (UNIFORM RESOURCE LOCATOR)**

The **unique address of any web page**. It tells your computer where the information is stored to be viewed.

### **A web address is typically composed of four parts:**

For example, the address **http://www.google.iq** is made up of the following areas:

- **http://**  
This **Web server uses Hypertext Transfer Protocol (HTTP)**. This is the most common protocol on the Internet.
- **www**  
This site is on the World Wide Web.
- **google**  
The Web server.
- **iq**  
This tells us it is a site in Iraq.

## **DOMAIN**

A way to indicate what type of site you may be viewing. Some common domains

- **com (commercial)**
- **edu (educational institution)**
- **gov (government)**
- **net (network)**
- **org (organization)**



## Communications and Emails

### Basic of Electronic mail:

Electronic mail, commonly shortened to “email,” is a communication method that uses electronic devices to deliver messages across computer networks. "Email" refers to both the delivery system and individual messages that are sent and received.

### Getting an email account

Gmail is free and simple to use. You can sign up for Gmail and use it in any web browser, or download the Gmail app for your iPhone, Android phone, or tablet.

To create a Gmail account, visit <https://accounts.google.com/signup>.

From there:

Enter your first and last name.

Type in your chosen username. This will be the first part of your email address (the part that comes before gmail.com).

Enter your password, then type it again in the Confirm box.

Your password must be at least 8 characters long and contain a mixture of letters, numbers, and other symbols.

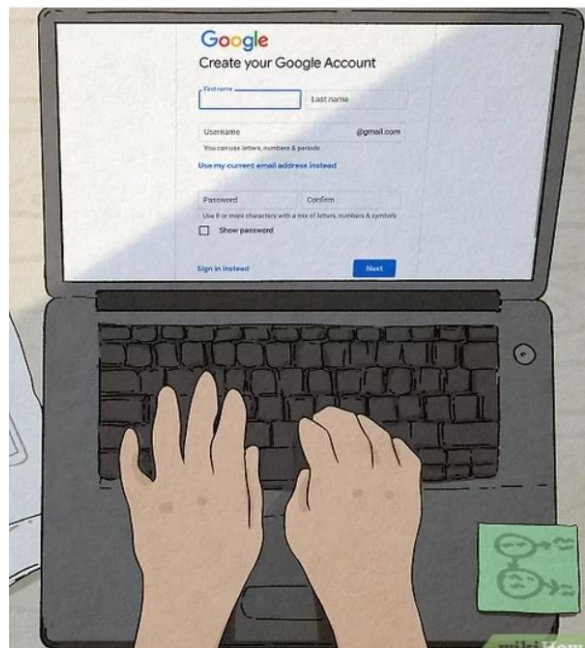
Click Next.

If you like, enter a recovery email address and phone number in case you get locked out of your new email address. These steps are optional.

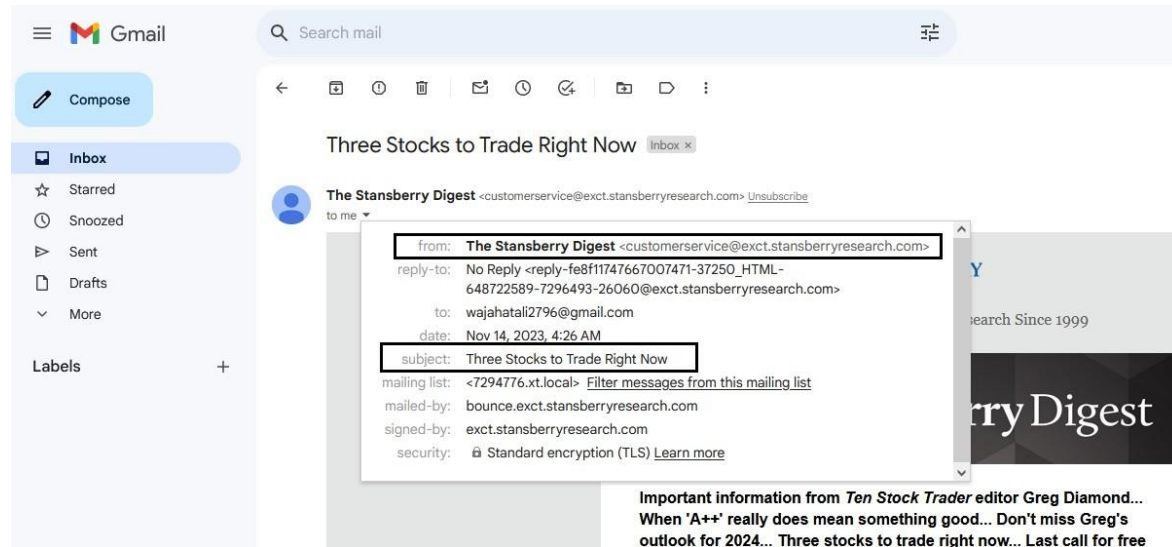
Enter your birth date and gender.

Click Next again.

Review the terms and services and click I Agree. Enjoy your new free Gmail account!



## Sending and Receiving emails; Accessing sent emails; Using emails.



At the foundational level, emails consist of basic components that we encounter with every message we send or receive.

### Sender's Name and Email Address

The "From" field not only displays the sender's name but also their email address. It establishes the source of communication, allowing recipients to identify the sender.

### Recipient's Name and Email Address

Conversely, the "To" field shows the recipient's name and email address. This ensures that the message reaches the intended audience.

### Subject Line

Considering the gateway to your email, the subject line provides a concise preview of the message's content. A well-crafted subject line can significantly impact the recipient's decision to open the email.

### Body of the Email

The main content resides in the body of the email. It can be as simple as a few lines of text or a detailed message with rich multimedia elements.



## **Attachments**

Attachments allow users to share documents, images, or other files along with their message. This feature facilitates the exchange of additional information beyond the email body.

## **Cc (Carbon Copy) and Bcc (Blind Carbon Copy)**

These fields enable sending copies of the email to other recipients. Cc is visible to all recipients, while Bcc conceals the additional recipients, ensuring privacy.

## **What Are the Most Used Email Service Providers?**

There are several email service providers one can use for business and personal use.

### **✓ Gmail**

Gmail by Google is one of the most popular web clients for email because it's free and easy to use.

### **✓ Outlook**

Outlook is an email client offered by Microsoft as part of the Microsoft Office package.

### **✓ Yahoo! Mail**

Launched in 1997 and currently available in 27 languages, Yahoo! Mail is one of the oldest email clients on the web.

### **✓ iCloud mail**

iCloud has become increasingly popular as iPhones and iOS operating systems are big players in the tech world. If you have an account with Apple and an Apple device, you can connect to iCloud mail using your Gmail, Hotmail, Yahoo! Mail, or AOL Mail address.

**Collaborative Email** is an inbox to which several people have access to. Work team members can access this collaborative email and work from it. Team collaborations now support email-based project management and collaboration. With this you can add notes for your tasks, associate documents with tasks, post comments to forums, attach files in forums, file a bug, add bug comments attach files for a bug, and so on, all through an email.



**Ass.Lec Heba Hani Raheem**

**Semester 1 contain:**

**1) MS – Word 2010**

- **Introduction of MS-Word 2010**
- **Insert Objects in MS-Word 2010**
- **More Option in MS-Word 2010**

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**Lecture 1 contain:**

- **Introduction of MS-Word 2010**

**1.1 Definition of MS-Word 2010**

**1.2 How to open MS-Word 2010?**

**1.3 Appearance of MS-Word 2010 (Home Page)**

**1.3.1 Title bar**

**1.3.2 Quick Access Toolbar**

**1.3.3 Status bar**

**1.4 MS-Word 2010 Ribbon and Tabs**

**1.4.1 File Tab**

**1.4.2 Home Tab**

**1.4.3 Page Layout Tab**

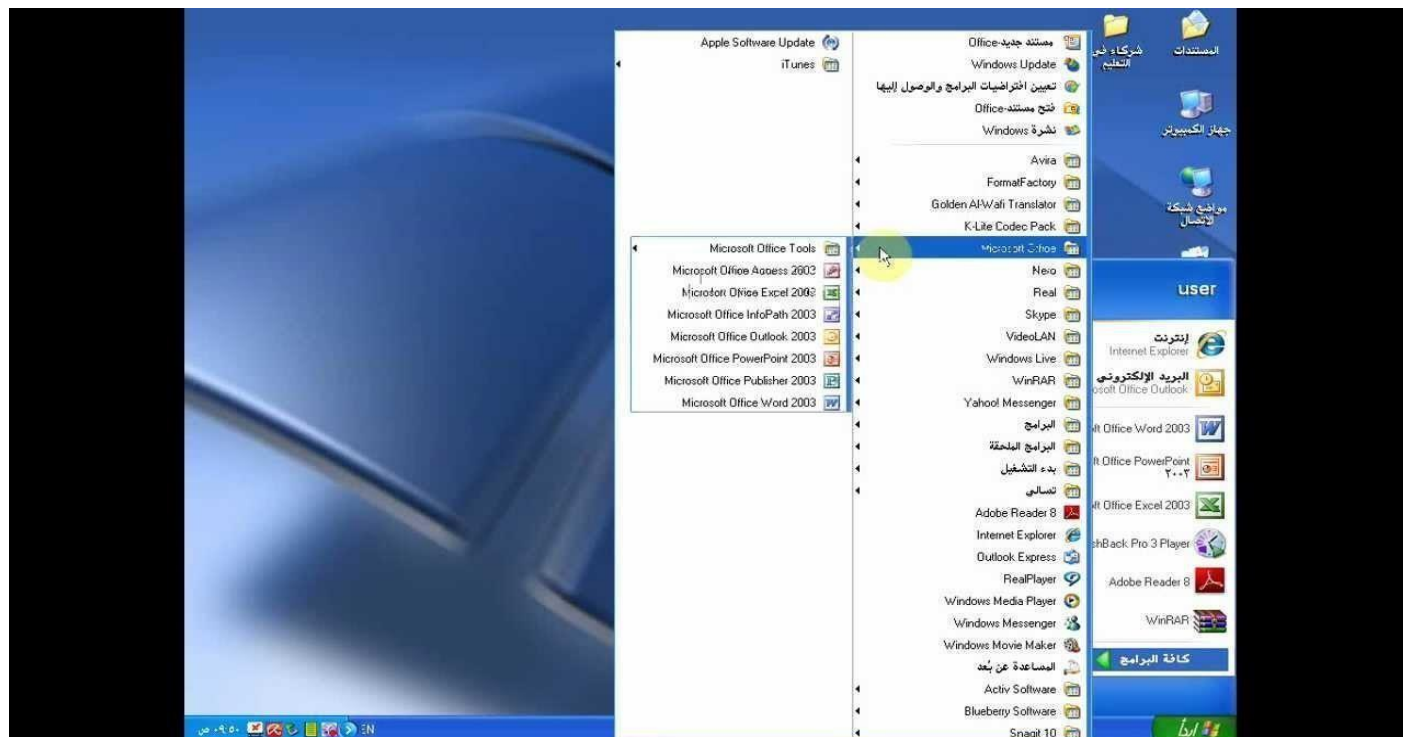
**1.1 Definition of MS-Word 2010**

**Microsoft Word 2010:** is a word processing program that helps you quickly and efficiently author and format all the business and personal documents you are ever likely to need. It is used primarily to enter, edit, format, save, retrieve and print documents.

### 1.2 How to open MS-Word 2010?

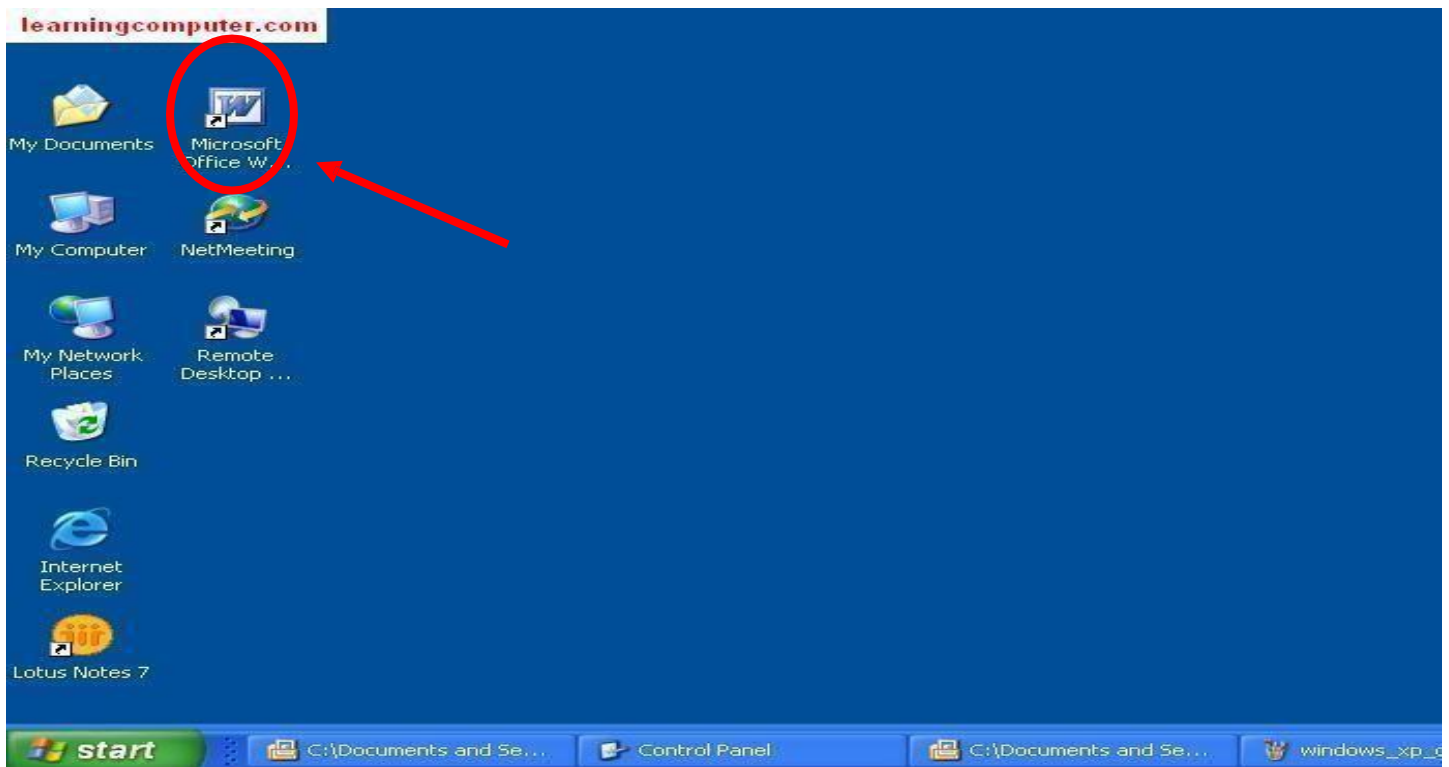
A. From start menu

Start → All programs → Microsoft Office → Microsoft Office Word 2010

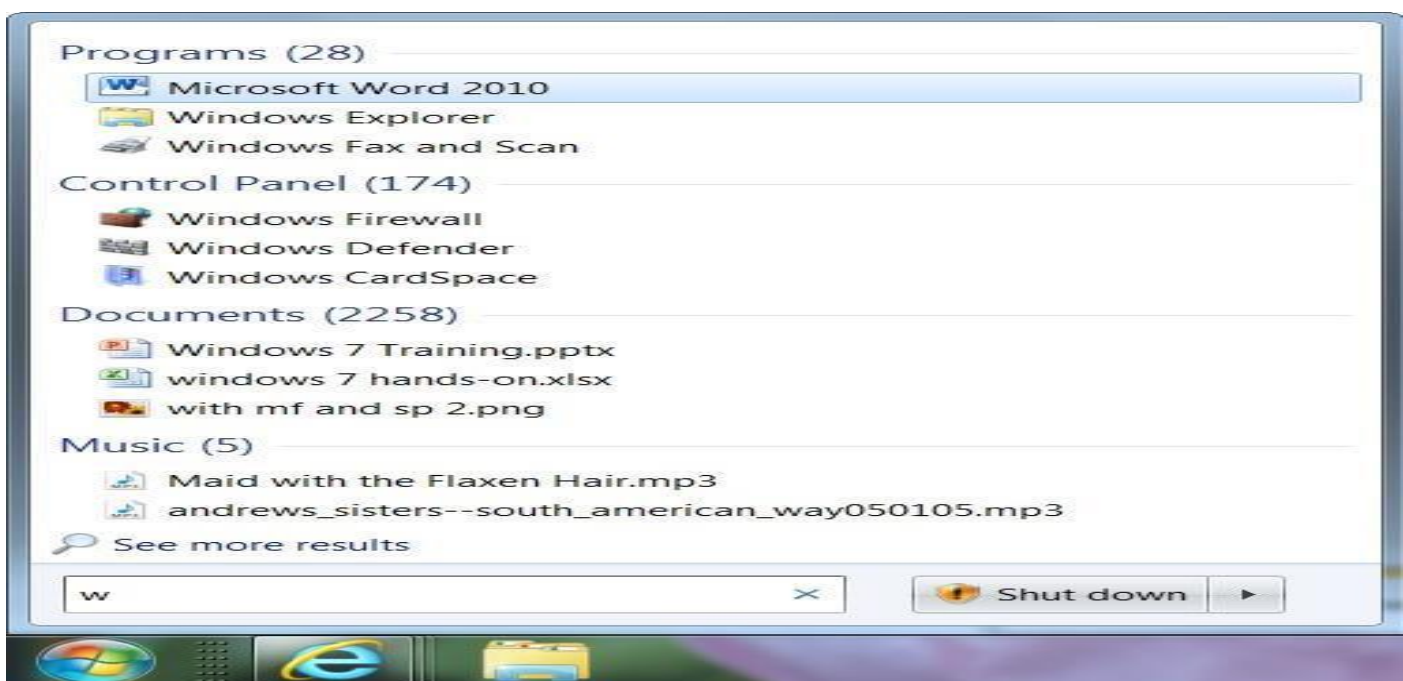


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B. From shortcut icon in desktop

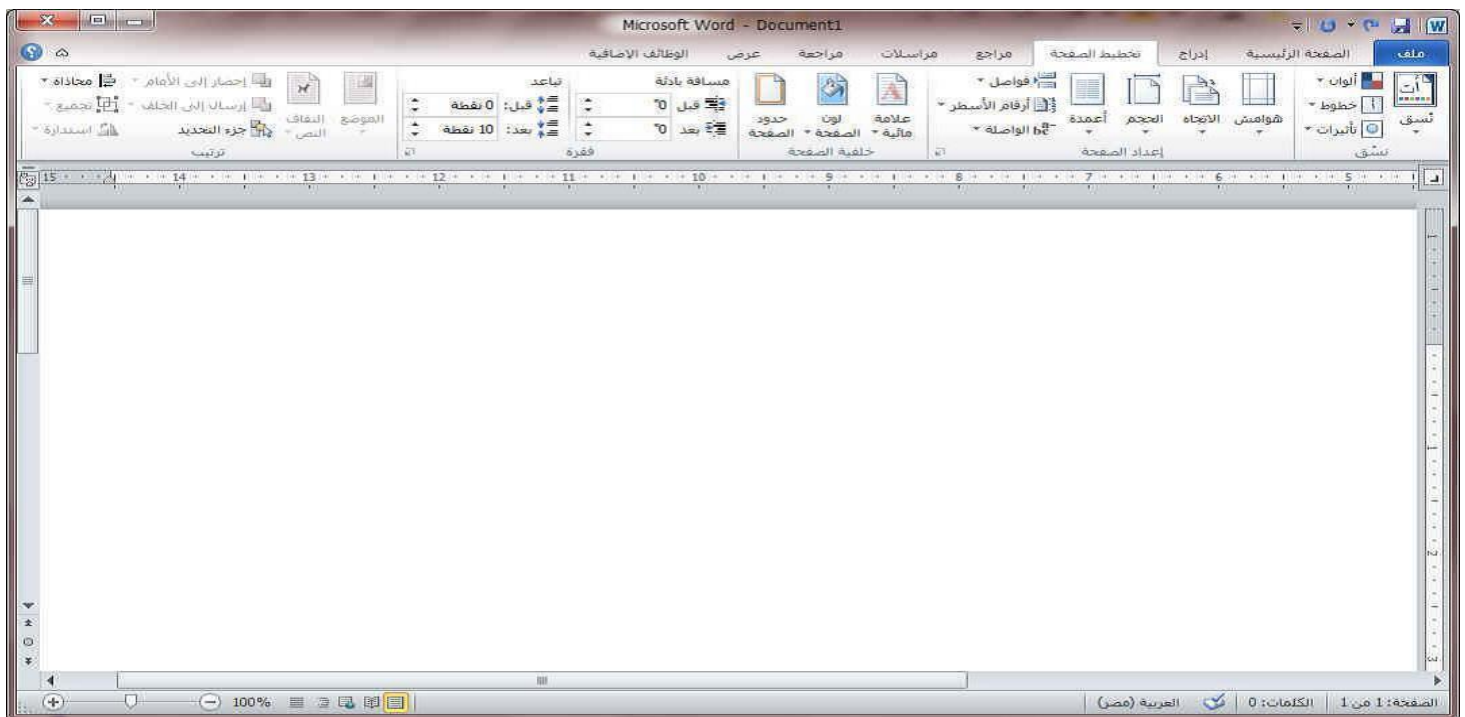
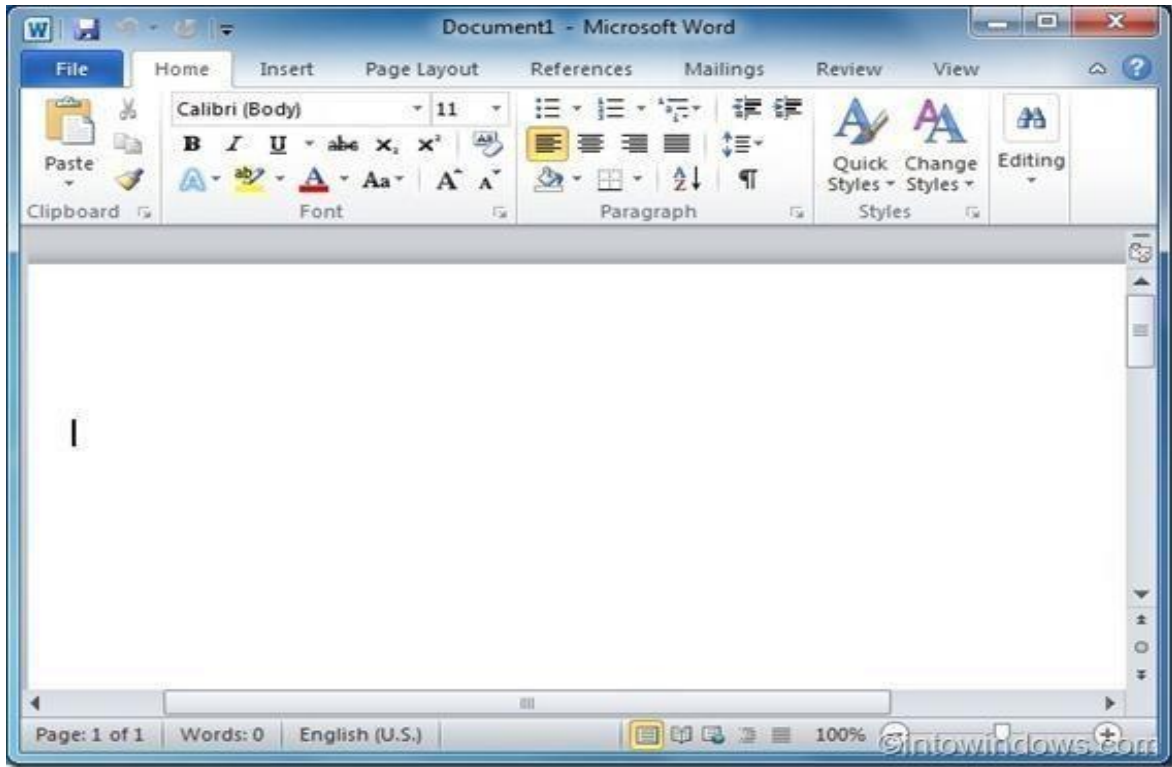


C. From write **Microsoft Word** in start menu search



Ass.Lec Heba Hani Raheem

After opening Microsoft Word, you will be taken to a blank document and see the following screen, It's called MS-Word Home page or Appearance of Microsoft Word.





### 1.3 Appearance of Microsoft Word (Home page)

Microsoft word 2010 appearance containing:

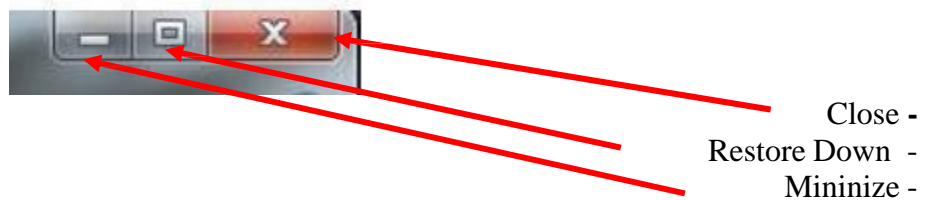
#### 1.3.1 Title bar



usually was at the top, it's displays the name of the active document, This file is not saved so the name is given (document 1), Files created for the first time are often referred to by this name, and file extension (doc,docx).

*Its location usually at the top of the window, in the right of title bar there are:*

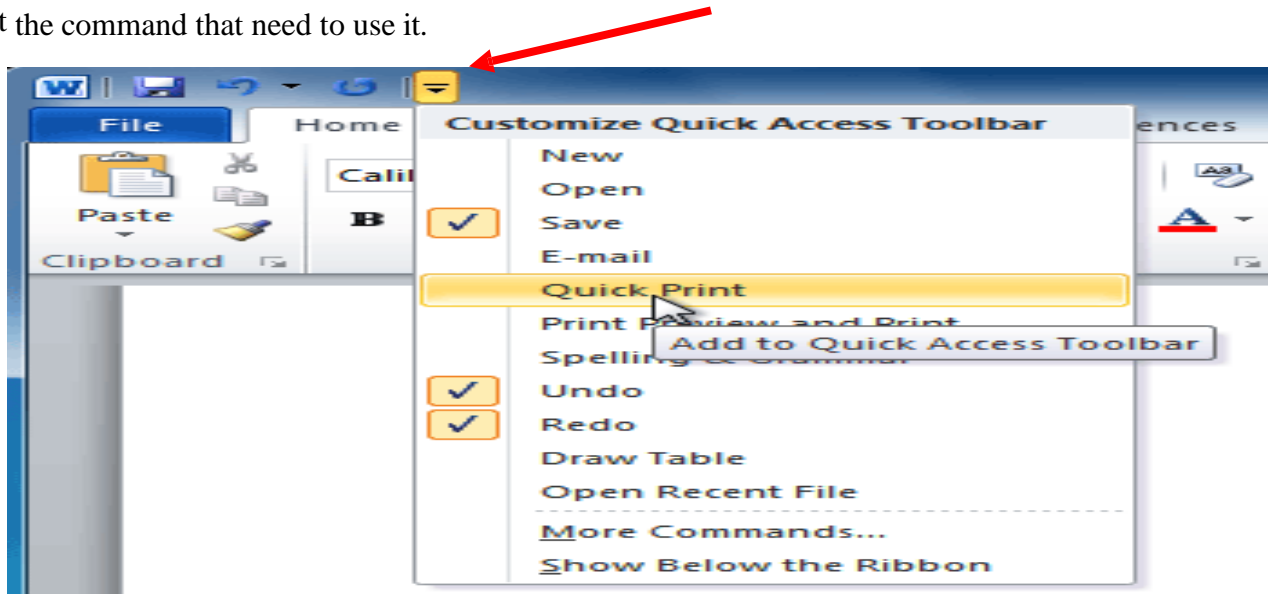
- Three buttons



#### 1.3.2 Quick Access Toolbar



This bar is to the left of the title bar and contains a set of commands Save, Redo, Undo. It can be customized with the addition of commands that frequently used by the user. Clicking on this arrow will show a list can add from it the command that need to use it.



### 1.3.3 Status bar

Its location usually at the bottom of the window, it is contains:



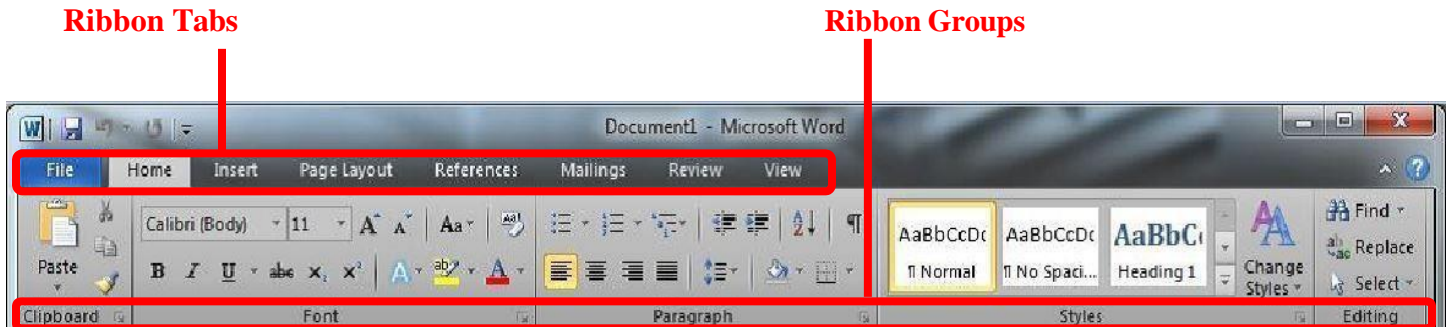
- Page number in document
- Number of words in document
- Language
- View buttons
- Zoom control



Lecture 2 contain:

➤ Introduction of MS-Word 2010

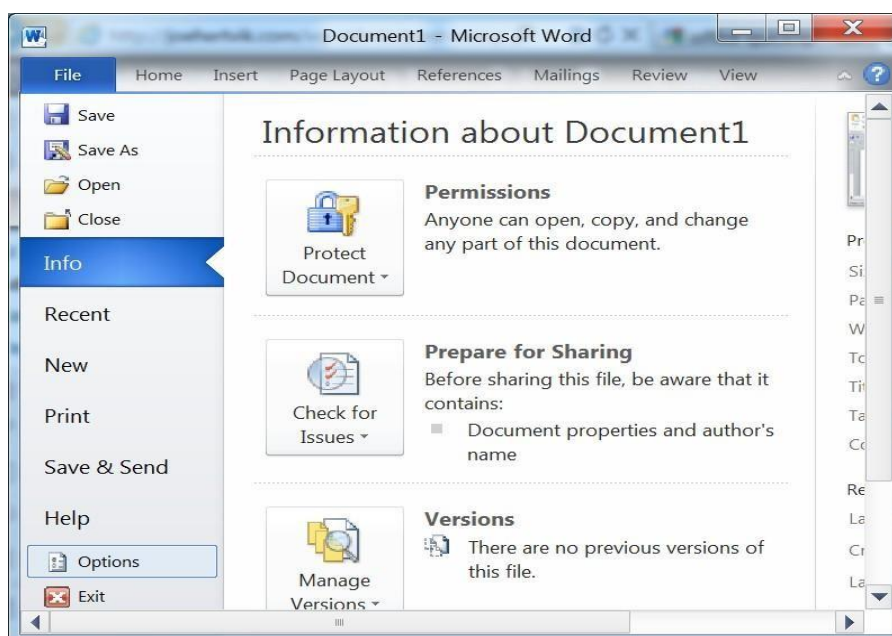
1.4 Tabs & Ribbon



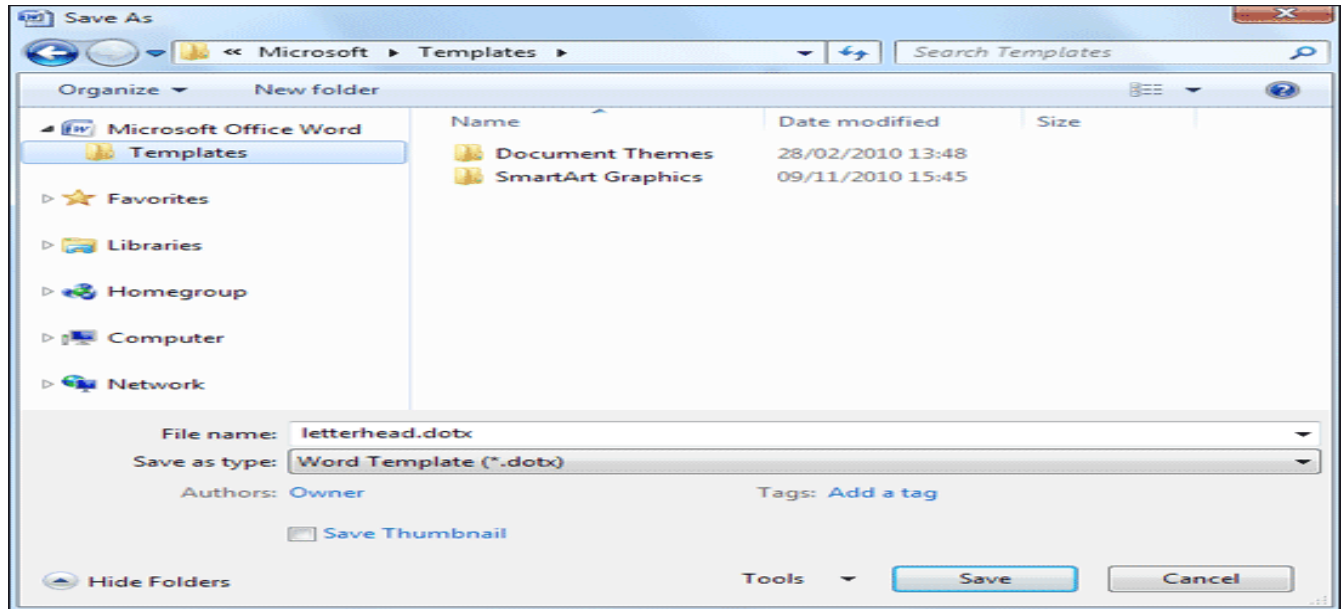
All Office 2010 programs organize commands on a horizontal bar called the *ribbon*, which appears across the top of each program window whether or not there is an active document.

Each ribbon tab contains groups, and each group contains a set of related tools. Here, the **Paragraph** group on the **Home** tab contains tools for how text should be aligned within the document.

1.4.1 File Tab



- **Save:** Used to save changes to the current document.
- **Save as:** this command enable you to save your current document into several kinds of files.



**File formats that are supported in Word.**

The following table describes the file formats that are supported in Word, alphabetized by extension.

Extension	Name of file format	Description
.doc	Word 97-2003 Document	The binary file format for Word 97-Word 2003.
.docx	Word Document	The default XML-based file format for Word 2019, Word 2016, Word 2013, Word 2010, and Office Word 2007.
.pdf	PDF	Portable Document Format (PDF), a PostScript-based electronic file format that was developed by Adobe Systems. It preserves document formatting and enables file sharing. Files that use the PDF file format can be saved and opened by using Word 2019, Word 2016, and Word 2013.

**File formats that are supported in Excel.**

The following tables describe the file formats that are supported in Excel.

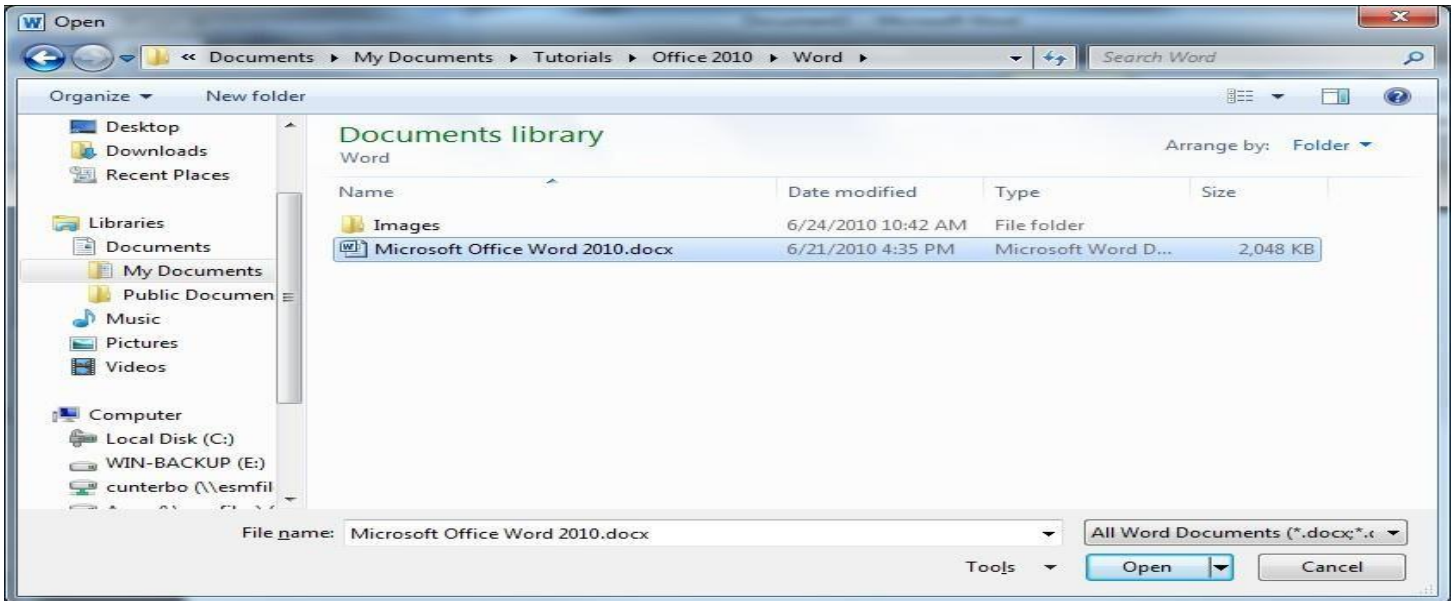
<b>Extension</b>	<b>Name of file format</b>	<b>Description</b>
.csv	CSV (Comma delimited)	Saves a workbook as a comma-delimited text file for use on another Windows operating system, and makes sure that tab characters, line breaks, and other characters are interpreted correctly. Saves only the active sheet.
.xls	Excel 97-Excel 2003 Workbook	The Excel 97-Excel 2003 Binary file format.
.xlsx	Excel Workbook	The default XML-based file format for Excel 2019, Excel 2016, Excel 2013, Excel 2010, and Office Excel 2007. Can't store VBA macro code or Microsoft Excel 4.0 macro sheets (.xlm).

**File formats that are supported in PowerPoint.**

The following tables describe the file formats that are supported in PowerPoint.

<b>Extension</b>	<b>Name of file format</b>	<b>Description</b>
.gif	GIF Graphics Interchange Format	A slide that is saved as a graphic for use on web pages.
.jpg	JPEG File Interchange Format	A slide that is saved as a graphic for use on web pages.
.mp4	MPEG-4 Video	A presentation that is saved as a video.
.pdf	PDF	Portable Document Format, a PostScript-based electronic file format that was developed by Adobe Systems. It preserves document formatting and enables file sharing.
.ppsx	PowerPoint Show	A presentation that always opens in Slide Show view instead of in Normal view.
.ppt	PowerPoint 97-2003 Presentation	The default PowerPoint 97 to Office PowerPoint 2003 format.
.pptx	PowerPoint Presentation	The default PowerPoint 2019, PowerPoint 2016, PowerPoint 2013, PowerPoint 2010, and Office PowerPoint 2007 XML-based file format.

- **Open:** Used to open Microsoft Word documents stored in versions 2003,2007,2010



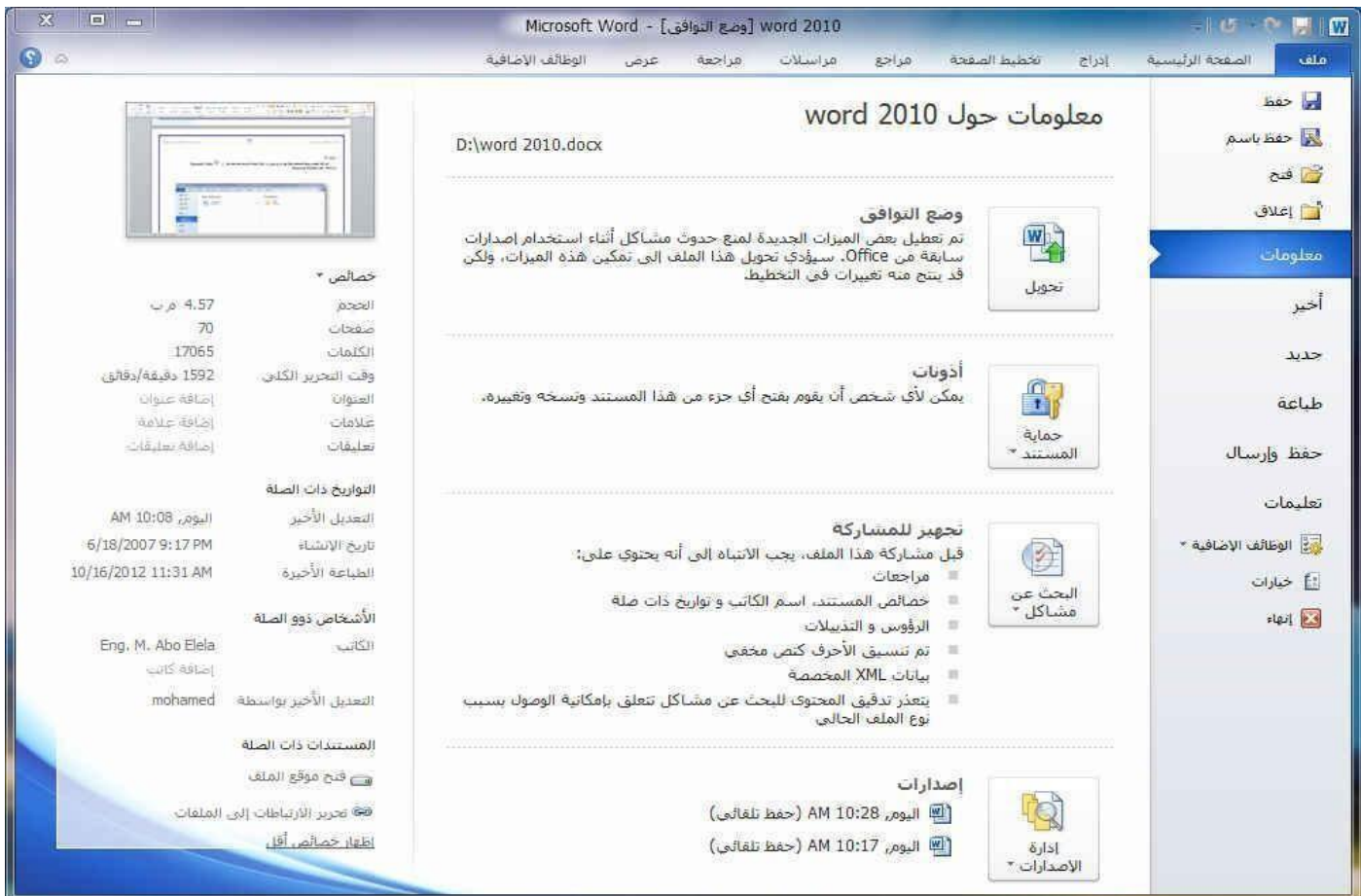
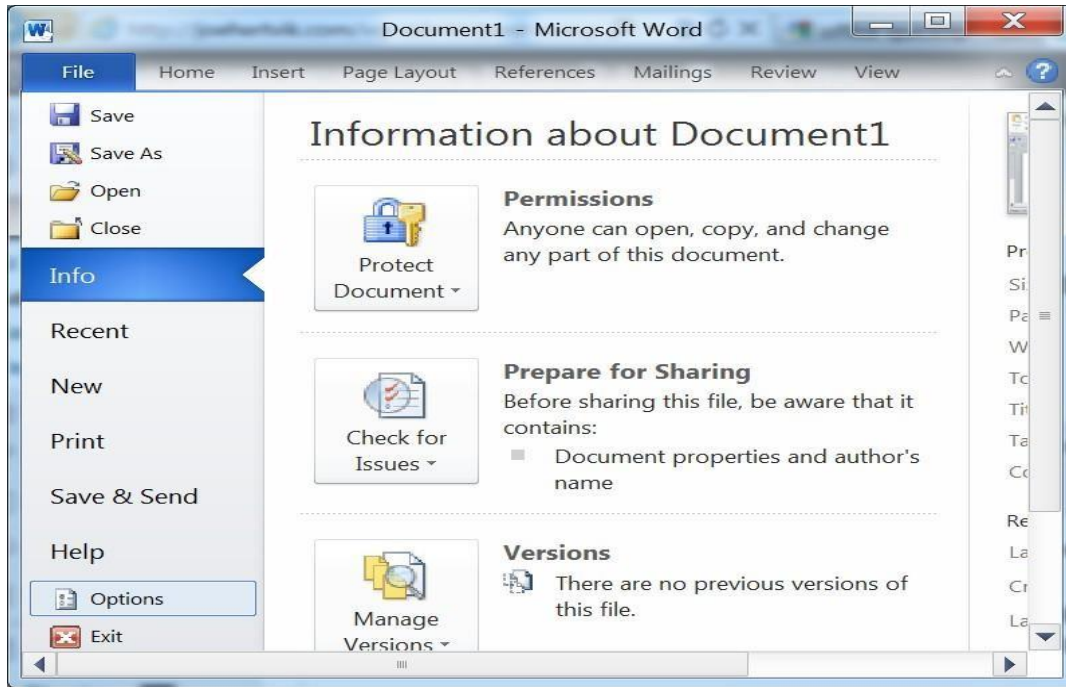
- **Close**

The exit of program is mean close and exit it, (save or not to save the changes) and the way to close it is the same way that the user used it when closing any program open in the Windows system, you can close MS-Word using one of the following methods:

- 1- Double click on the icon W In the top corner of MS-Word Home page.
- 2- From File Tab click on the close button or click (Ctrl + W).  
Step (1), (2) will close the document without close the MS-Word program.
- 3- Click on the button on the title bar or click (Alt + F4).
- 4- From File Tab click (Exit).  
Step (3), (4) will close the document and close the MS-Word program.

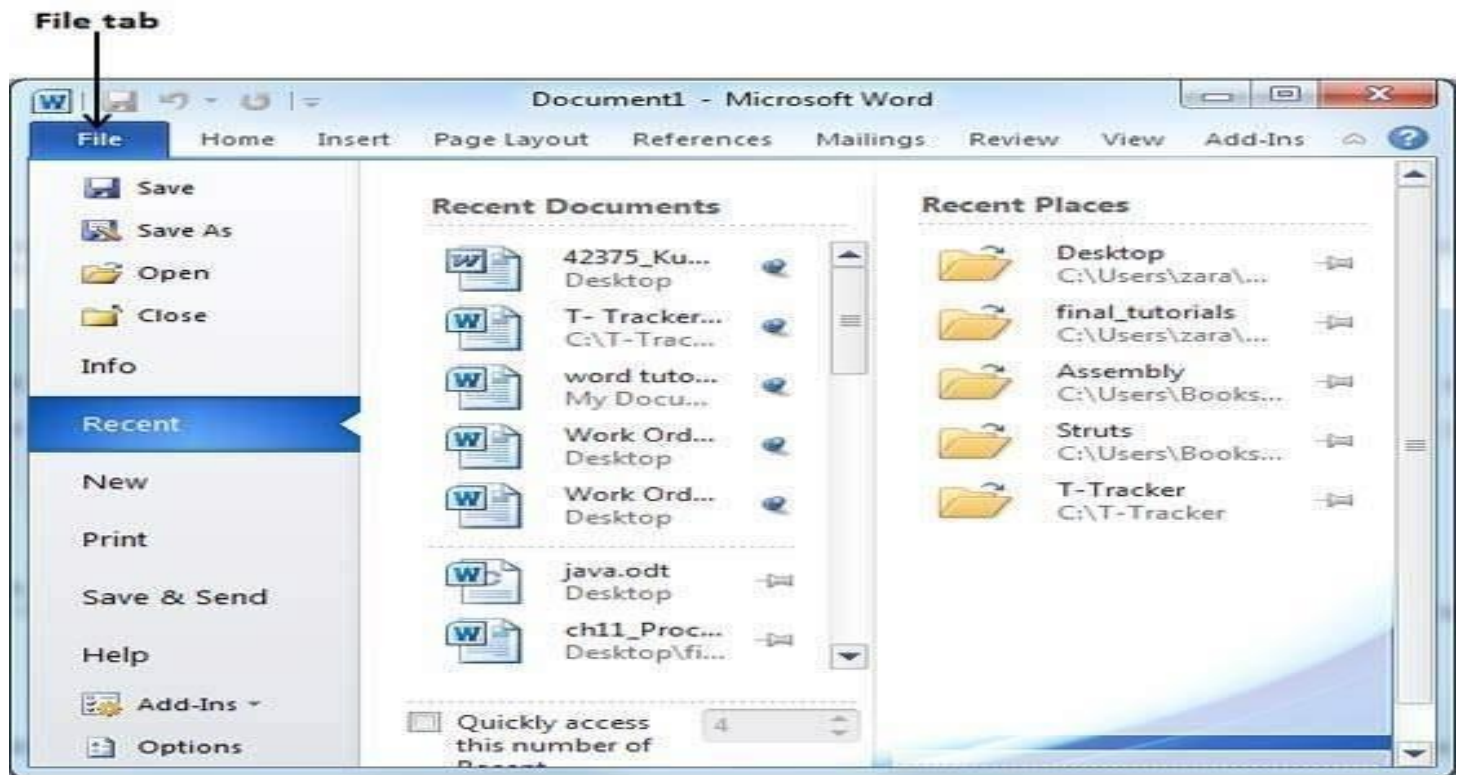
- **Information**

Contains information or properties about the current document (number of pages & words, name, size, date of last update and creation date) and consists of a set of options: activating the product, displaying document properties, setting a password to open the document (document protection) ,,,



➤ **Recent**

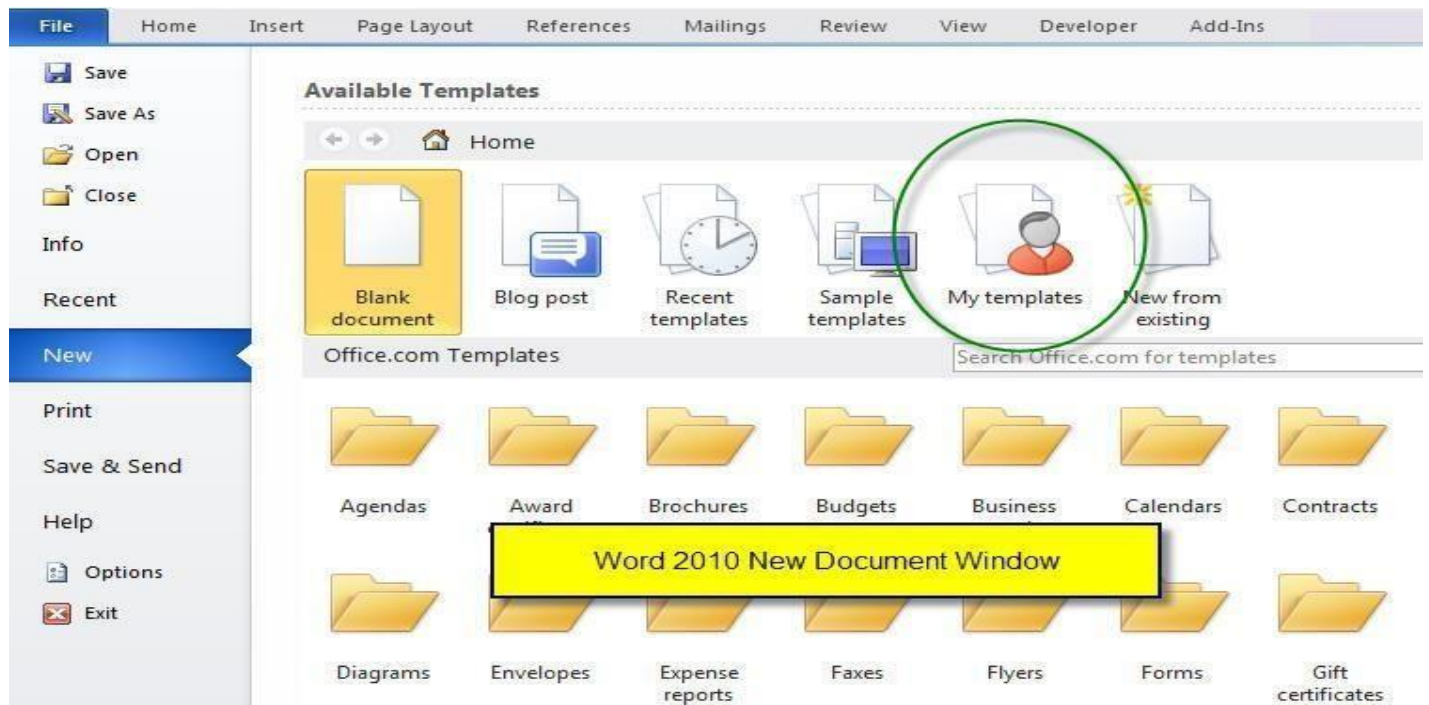
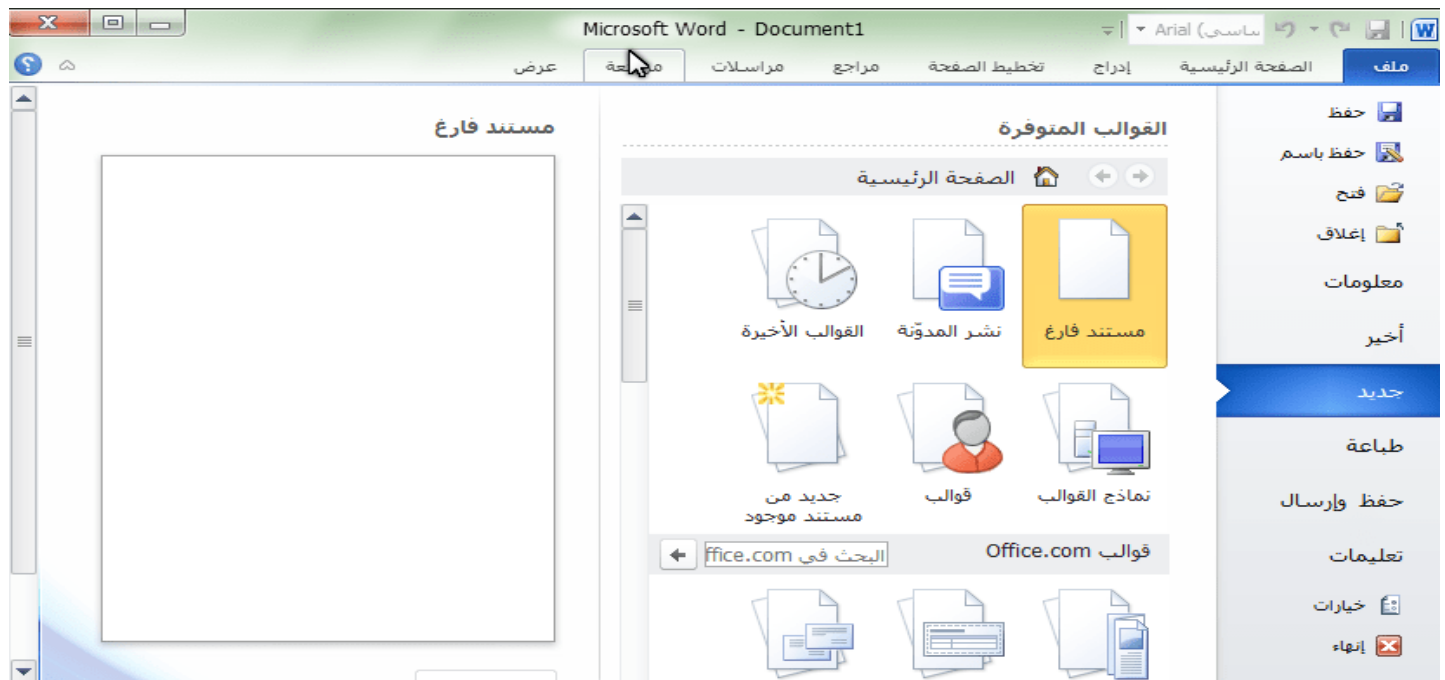
Ability to view or open recently opened documents by clicking on them and the possibility of knowing where to save them through the path that write under the document name.



➤ **New**

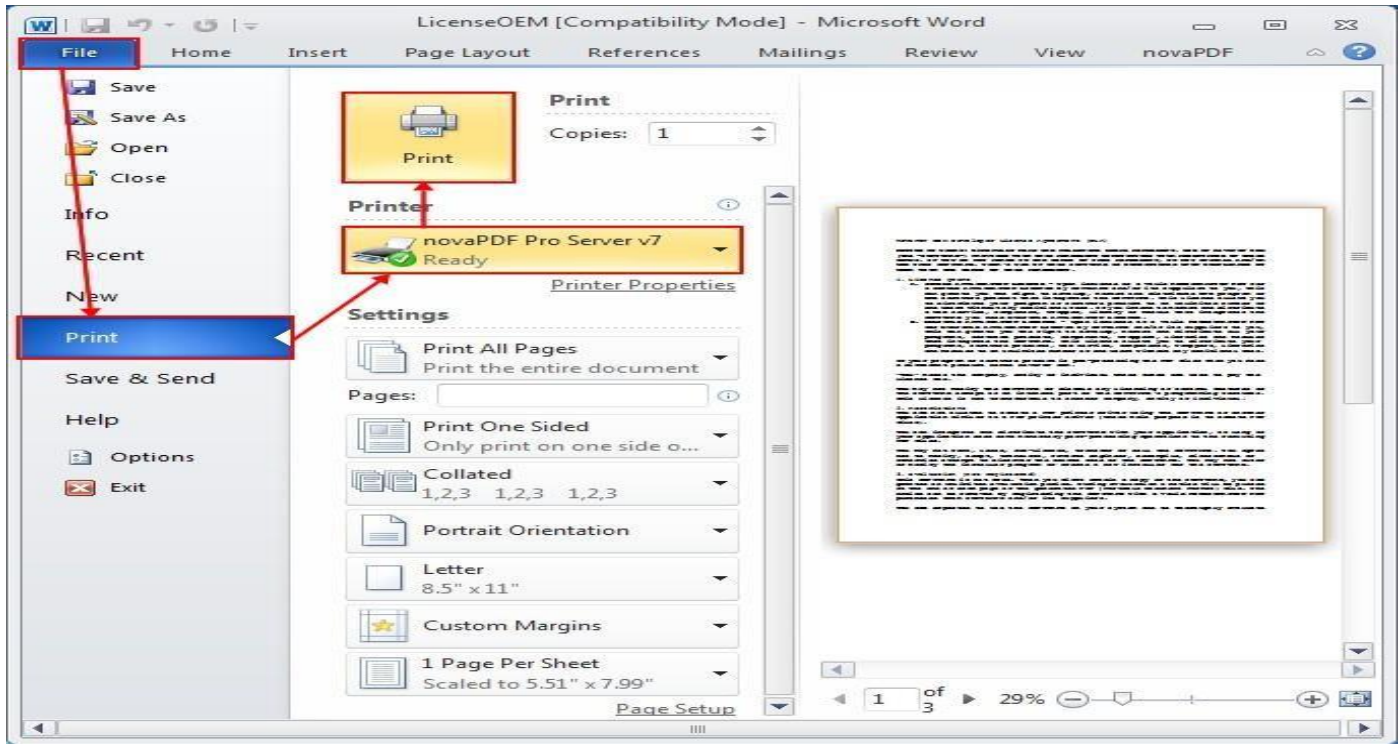
It is used to open a new document and you can choose a **Blank** document or **Templates** according to the type of work that the user wants to do or through the **Internet** from the site (Office.com).



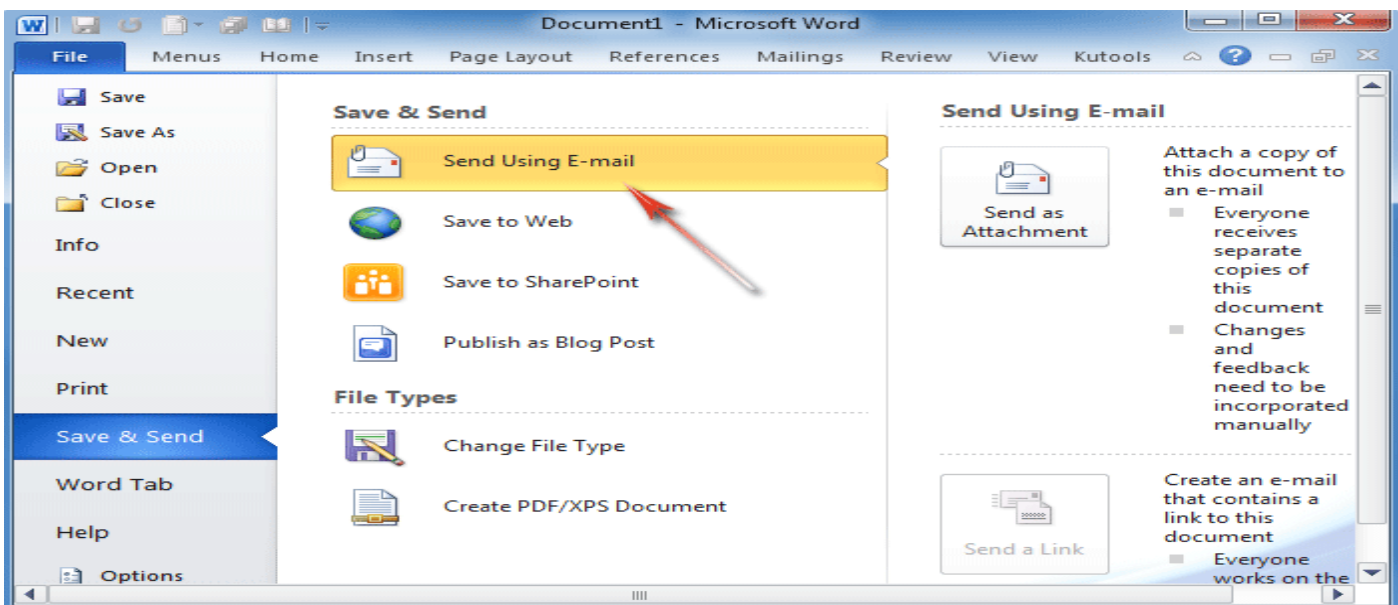


➤ **Print**

Print document pages on a sheet, and user can change the printer type, page settings, and the number of paper.

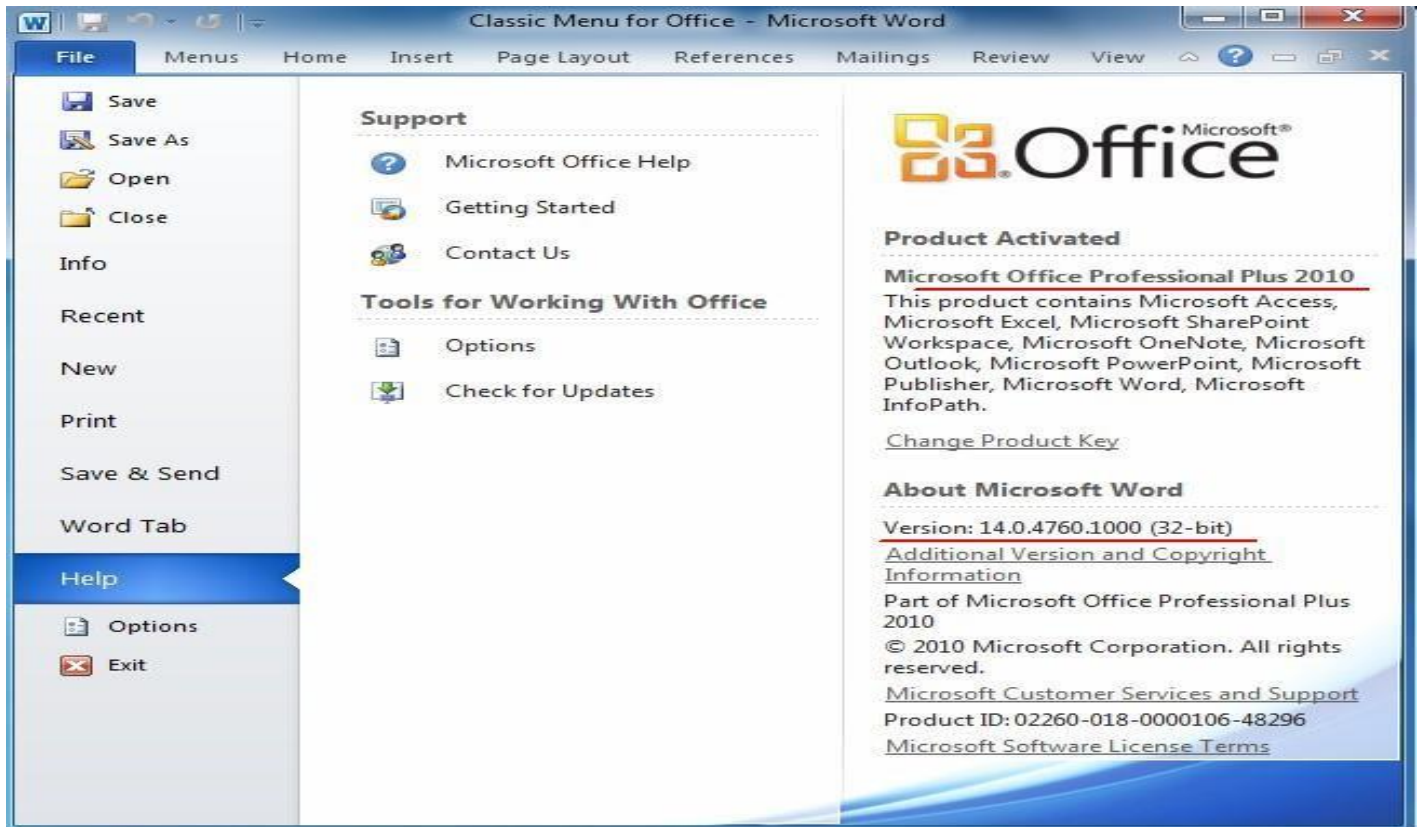


**Save and send:** The Save & Send page displays all the commands related to making the current document available to other people.





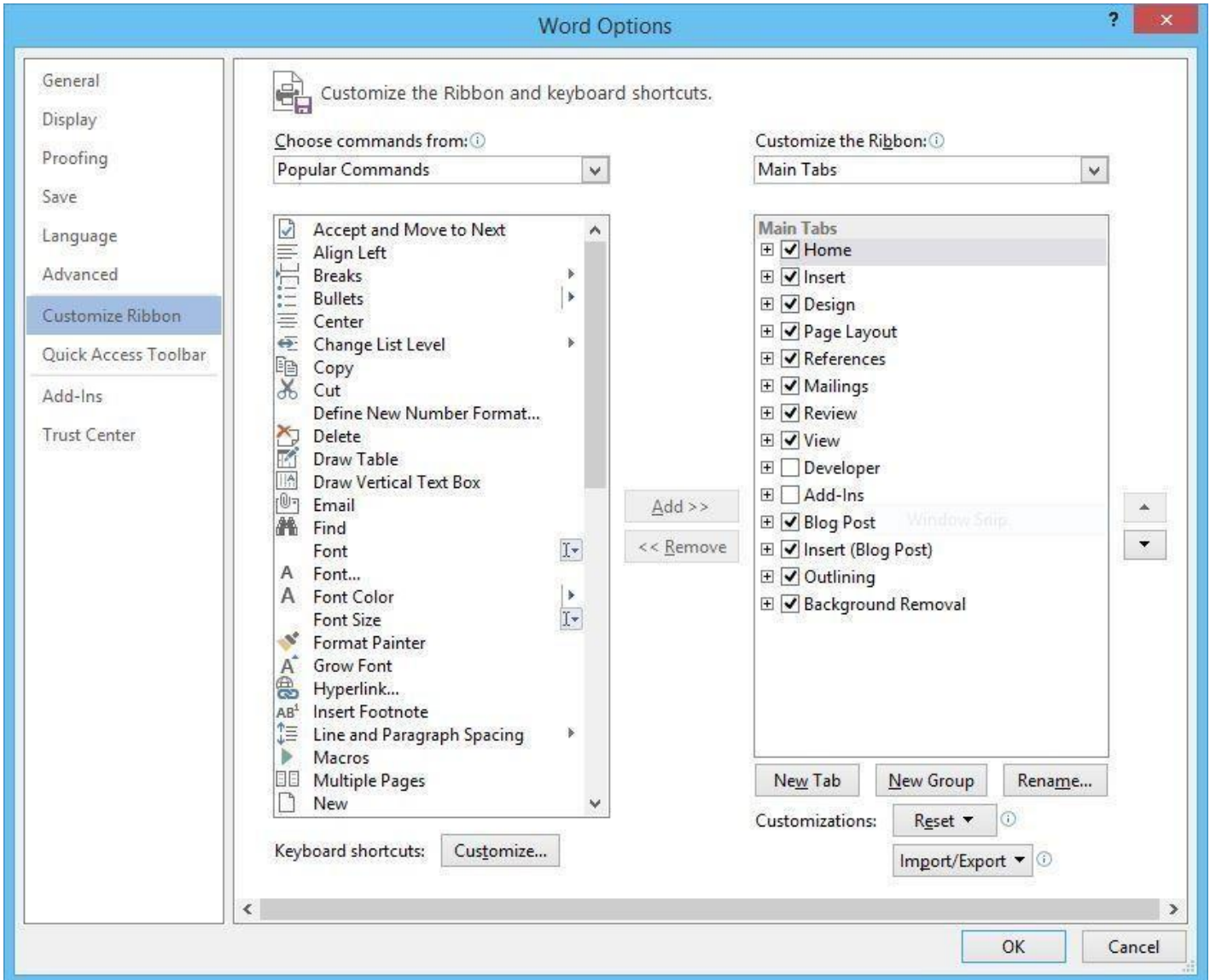
➤ Help



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➤ Options

It includes a set of options that can control the properties of the document, such as program interface control, default font type, spell check control, language control (add or delete language), dictionary setup, The format of the file in which the document is stored ( MS-Word 2003,2010,pdf, ...) the status of the printed numbers (Arabic, English), customize Quick Access bar ....



Lecture 3 contain:

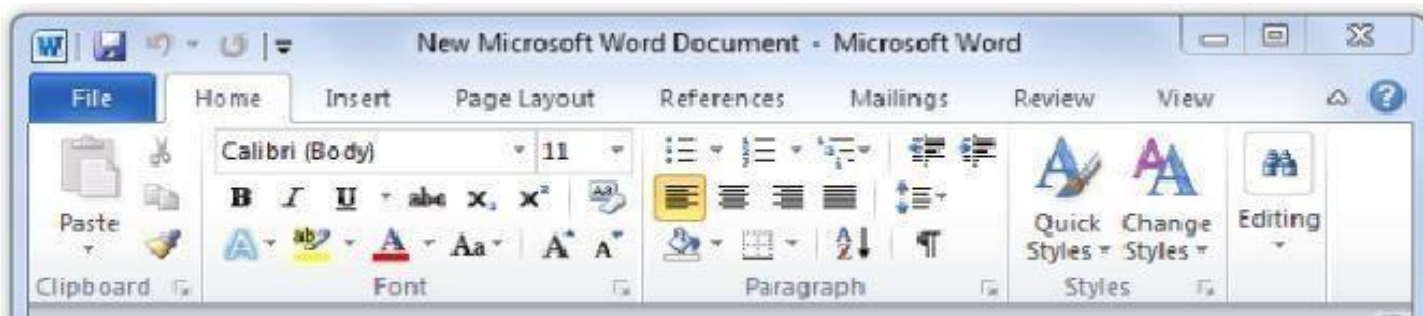
➤ Introduction of MS-Word 2010

1.4 MS-Word 2010 Ribbon and Tabs

1.4.1 File Tab

1.4.2 Home Tab

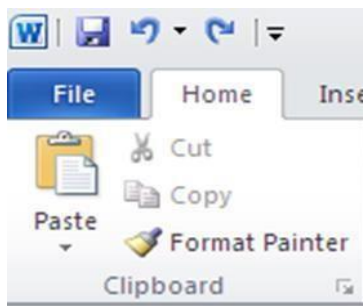
1.4.2 Home Tab



The Home Tab is about the basics of how text looks when it is printed or displayed. It gives access to both direct and Style-based formatting. It's containing five groups:

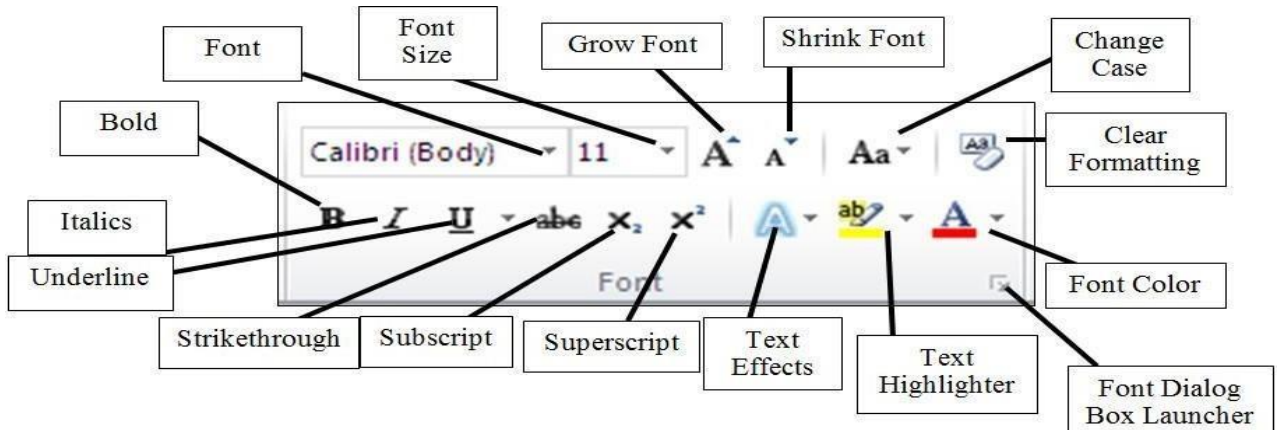
1) Clipboard group

The Clipboard is on the far left of the Home Tab, it's the place where information is temporarily stored when you are cutting or copying. Its contain some commands like: paste, cut, copy and format painter.



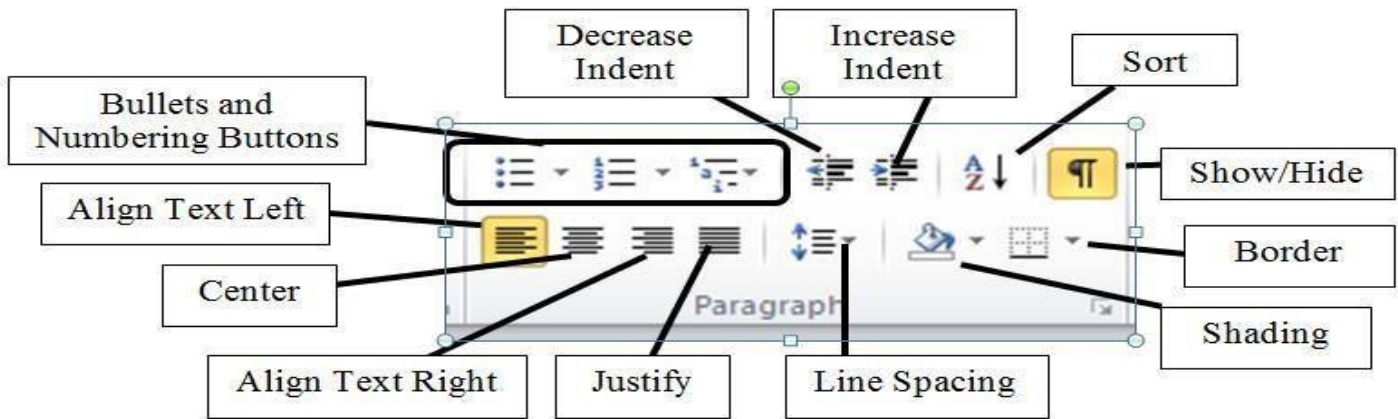
2) Font group

The font group has to do with how characters look. It is distinguished from the paragraph group where the formatting handles the entire paragraph.



3) Paragraph group

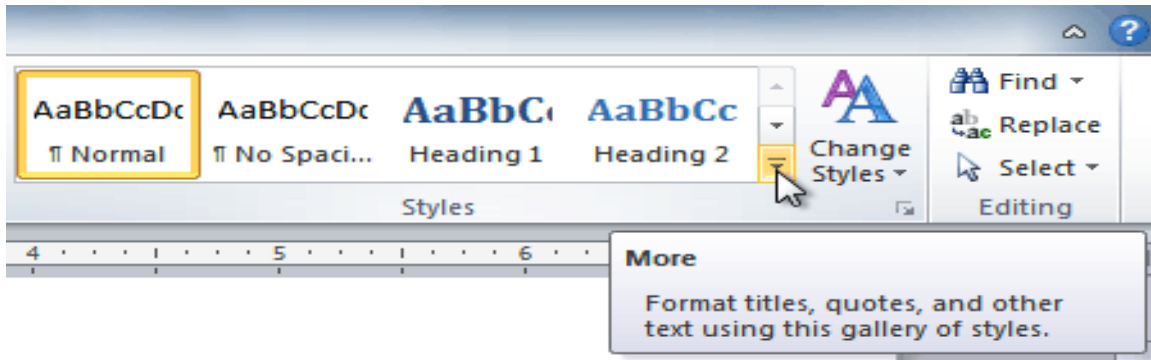
Paragraph group lets you control the appearance if individual paragraphs.



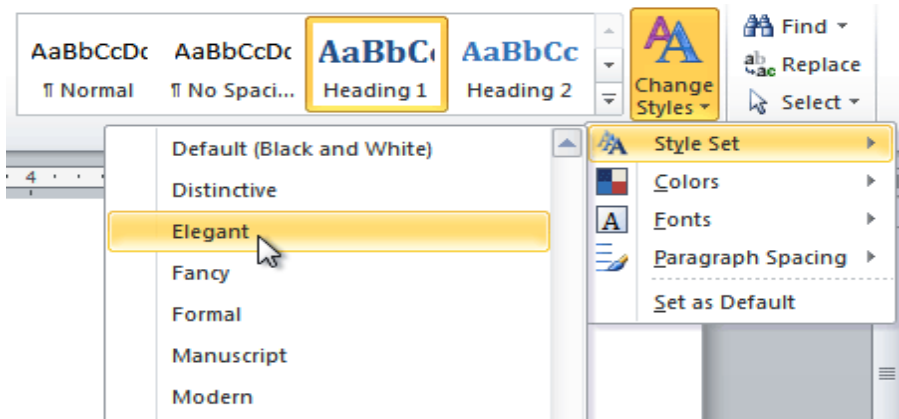
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4) Styles group

Styles allow you to quickly format major elements in your document, such as headings, titles, and subtitles.

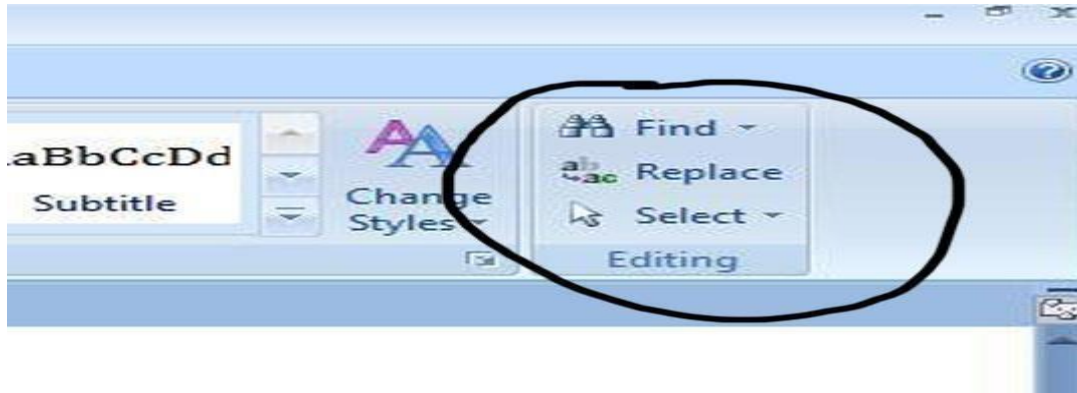


Additionally, you can customize the pre-defined style by clicking a Style and then clicking Change Styles from the Styles group.



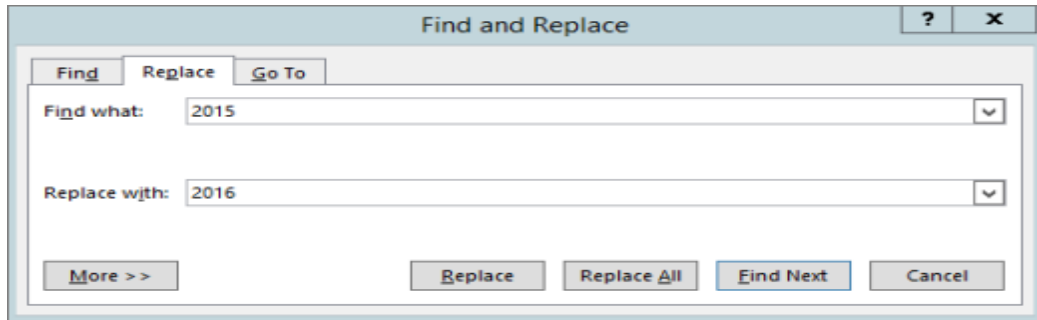
5) Editing group

This group is the last group of home tab. That contains three options. Such as find, replace, and select. There are three options which can help you how to change or remove some similar and opposite words immediately in your document. If you want to remove any word and put a new word in the state of that you can use this option. Through the replace option we have an option which helps you to go on the particular word or page which you have written.



This group includes three options, but the first option contains again three options. These three options have different specifications that you want from your document

- Find: A word or phrase can be found within your document by using the Find command.
- Replace: A word or phrase can be replaced with another using the Replace command.



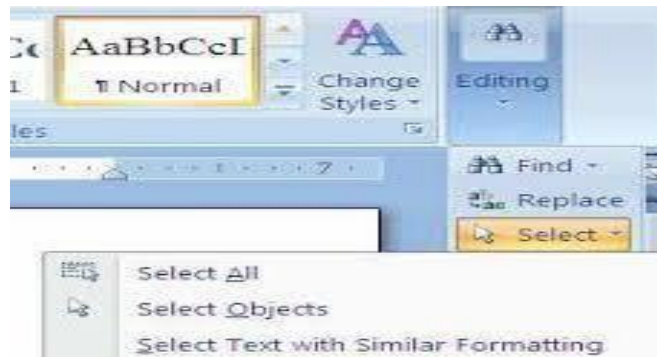
- Go to: When you opened advanced find you have one more option which is **Go to**. Through to this option you can go where that you want. Here you have some options such as page, section, lines, and some other options, You select one of them and click next, and if you want to come back click previous and come back.






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- Select:



- To select all of the text in the document, click **Select All**.
- To select objects that are hidden, stacked, or behind text, click **Select Objects**. To select an object, click when your pointer becomes a selection arrow  as it moves over an object. To select multiple objects, press and hold Ctrl while you click the objects that you want.
- To select text with similar formatting, click **Select All Text with Similar Formatting**.

## Lecture 1 contain:

### ➤ Introduction of MS-Word 2010

## 1.4 MS-Word 2010 Ribbon and Tabs

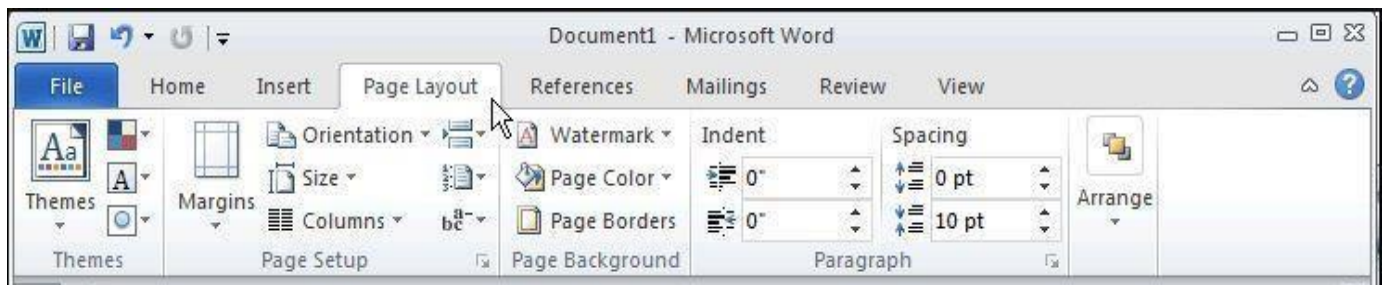
### 1.4.1 File Tab

### 1.4.2 Home Tab

### 1.4.3 Page Layout Tab

## 1.4 MS-Word 2010 Ribbon and Tabs

### 1.4.3 Page Layout Tab

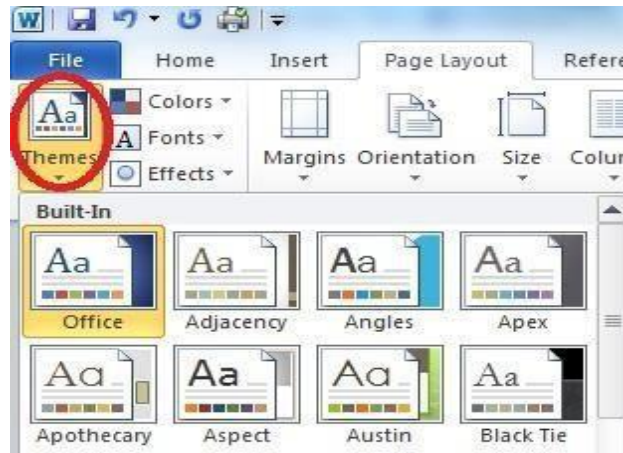


This tab can be used to set and control the appearance of your document. The page layout tab contains five group:

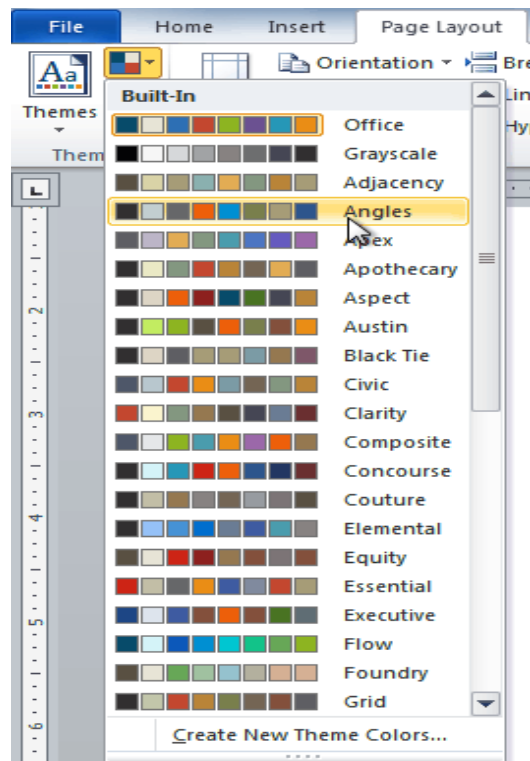


1) **Themes group:** contain four options

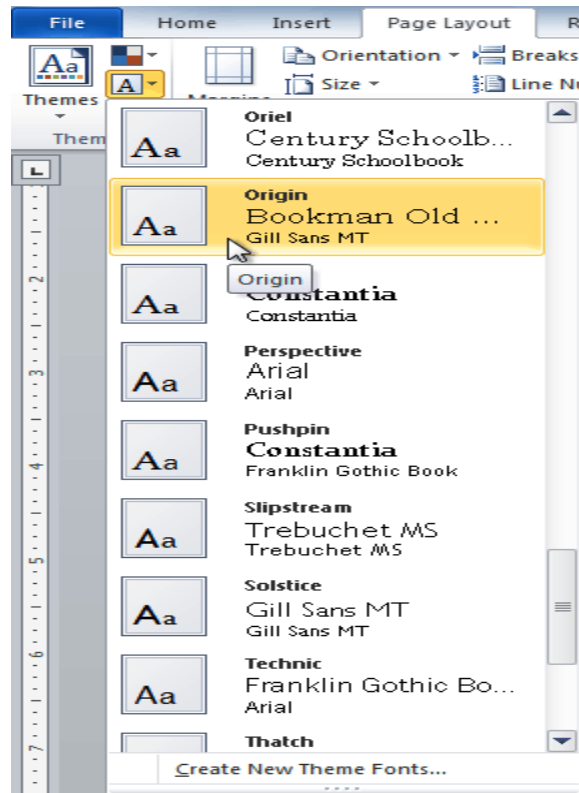
- Themes, This changes the overall design of the entire document, including colors, fonts, and effects.



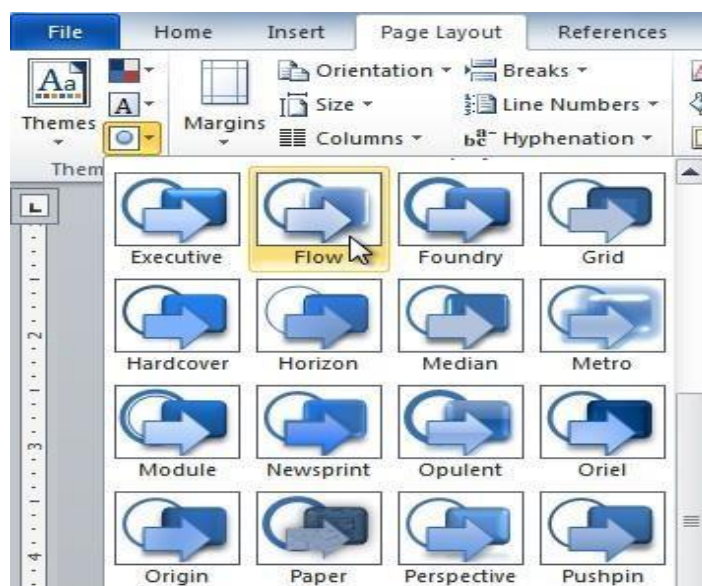
- Colors, this command changes the colors for the current theme.



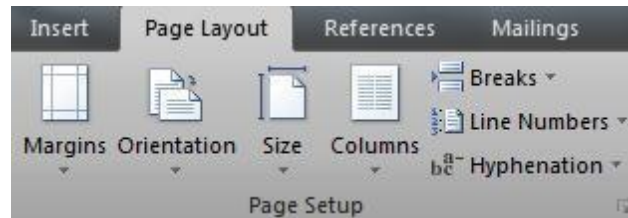
- Font, Fonts for the current theme are enabled for change using this command.



- Effects, The current theme effects are available for change using this command.



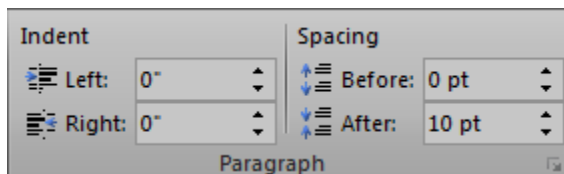
- 2) **Page setup:** The Page Setup group contains the options to specify the layout of a page, such as margins, orientation, and page size.



- **Margins**, to set the margin for your document.
- **Orientation**, to change the page orientation (Portrait or Landscape) of your document.
- **Size**, to change the paper size.
- **Columns**, to create columns within your document.

3) **Page background**

- 4) **Paragraph:** The Paragraph group will allow you to set indentations and line spacing for your document.

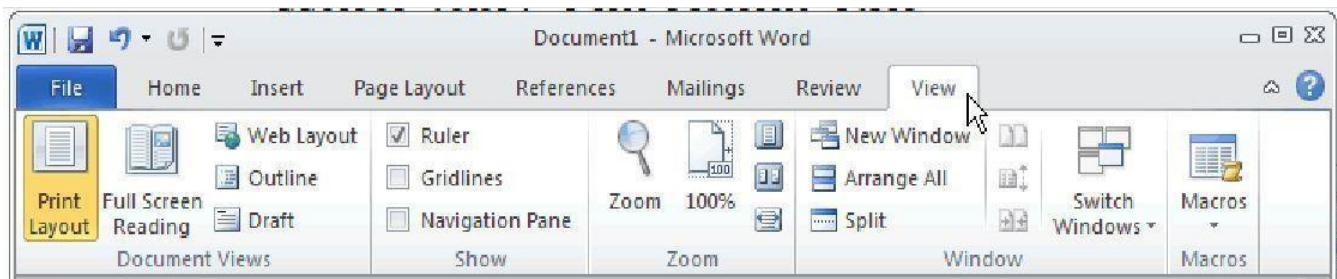


- 5) **Arrange:** This area allows you to quickly arrange how graphic elements (such as pictures and shapes) appear on your page: its contain the options below:

- **Position:** Quickly choose a basic location on the page for a graphic. This feature will automatically arrange for Text Wrapping.
- **Bring to Front / Send to Back:** Quickly arrange the layers of overlapping graphics.
- **Text Wrapping:** when you insert a graphic, usually only one line of text will appear to the left or right, leaving a large empty area on each side of the graphic. Text Wrapping allows text to fill in those empty spaces, and "wrap" around an image. There are various ways you can have the text wrap.
- **Align:** Automatically takes several different graphics and lines them up according to pre-set rules.
- **Group:** Same as in PowerPoint--allows multiple graphics to be temporarily joined, so they behave like one object.
- **Rotate:** Rotate or flip graphics. You can also rotate using the green "Rotate" handle on the object placeholder, again like in PowerPoint.

**Lecture 5 contain:**➤ **Introduction of MS-Word 2010****1.4 MS-Word 2010 Ribbon and Tabs****1.4.4 View Tab**

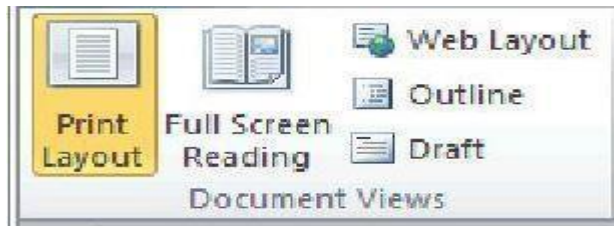
This tab is used to view *Word* documents in a variety of ways.

**View Tab contain five group:**

- 1) **Document Views group**
- 2) **Show group**
- 3) **Zoom group**
- 4) **Window**
- 5) **Macros**

- 1) **Document Views group**, The default view in Microsoft Word 2010 is *Print Layout*, displaying the document as it would be printed. The document view can be changed by selecting one of the other Layout options from the *Document Views* group.

- Print Layout
- Full Screen Reading
- Web Layout
- Outline
- Draft

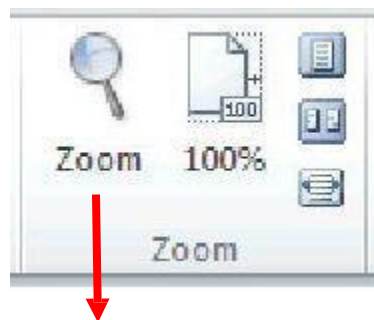


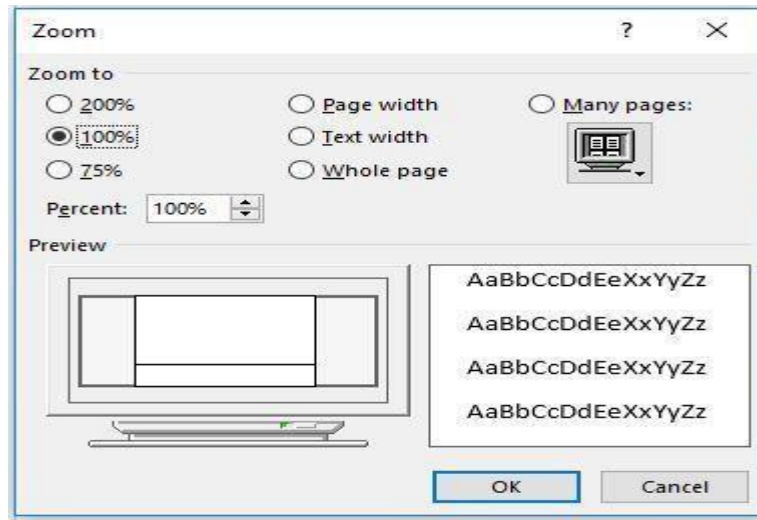
2) **Show group**, The Show/Hide group allows different components of Word to be displayed, including:

- ruler,
- gridlines,
- Navigation pane (document map).



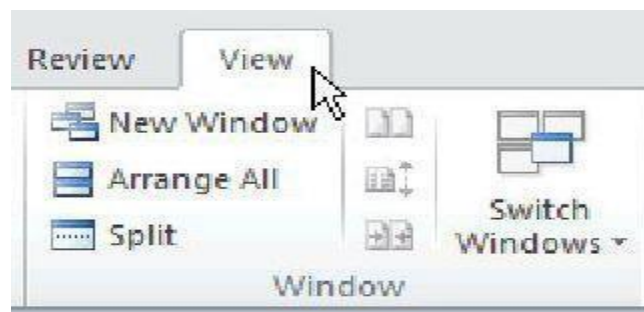
3) **Zoom**, the Zoom group, lets us increase or decrease size of view without changing the size of the fonts or rest of document.



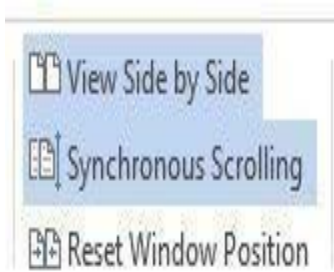


- One page: zoom the document so you can see the entire page in the window.
- Multiple Pages: zoom the document so you can see the multiple page in the window.
- Page width: zoom the document so that the width of the page matches the width of the window.

4) **Window**, This group essentially lets you work on the same document utilizing different views and windows its contain the option bellow :



- **New Window**, This opens new window that shows document we are currently working in, allowing us to view two parts of the same document at once.
- **Arrange All**, This arranges multiple windows so we can view them at the same time.
- **Split**, this does same thing as New Window, but it fits two views of our document into one window.



- **View Side by Side:** This arranges two windows next to each other.
- **Synchronous Scrolling:** This is used in the case when we scroll in one window in side-by side view, the other window scrolls the same amount, making it easy to compare two documents.
- **Reset Window Position:** This resets the position of the current window in use.

- **Switch Windows:** It is used to switch between different windows.

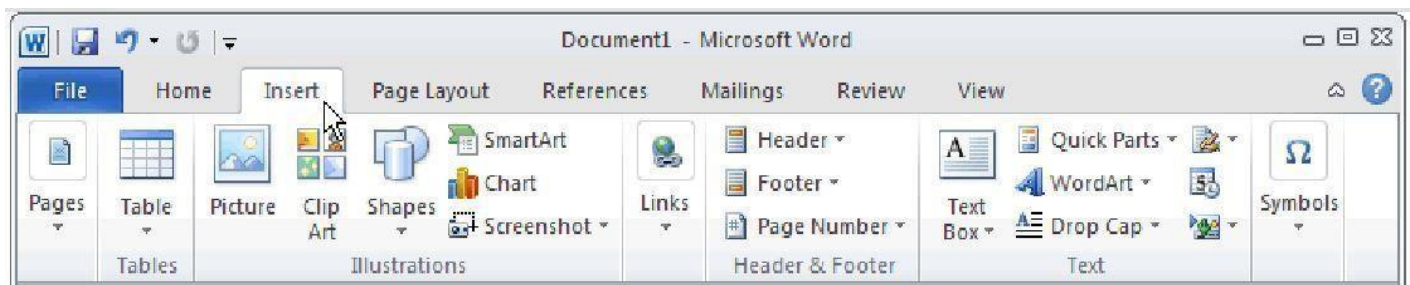
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Lecture 6 contain:

- **Insert Objects in MS-Word 2010 (Insert Tab)**
- .....

### 1.4.5 Insert Tab

This tab has a lot of useful features that will let you insert various types of objects, including pages, tables, illustrations, links, headers & footers, text, and symbols.

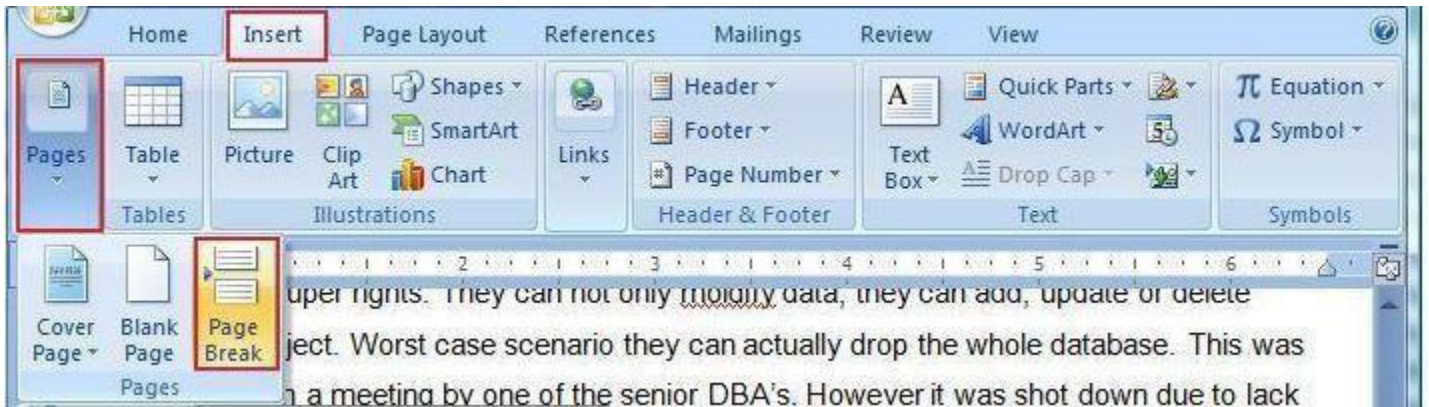


It's including seven groups:

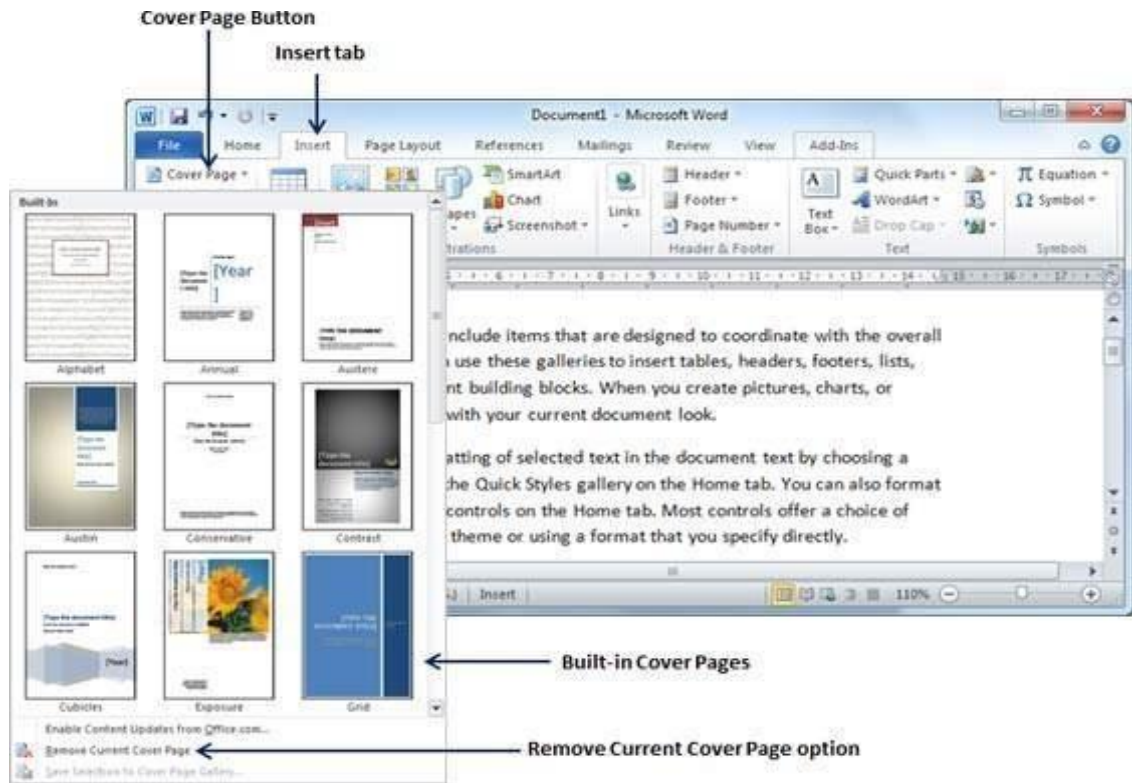
- 1) **pages**
  - 2) **tables**
  - 3) illustrations
  - 4) links
  - 5) headers & footers
  - 6) text
  - 7) symbols
- 1) **pages**, this group use to insert things to current page and its contain three options



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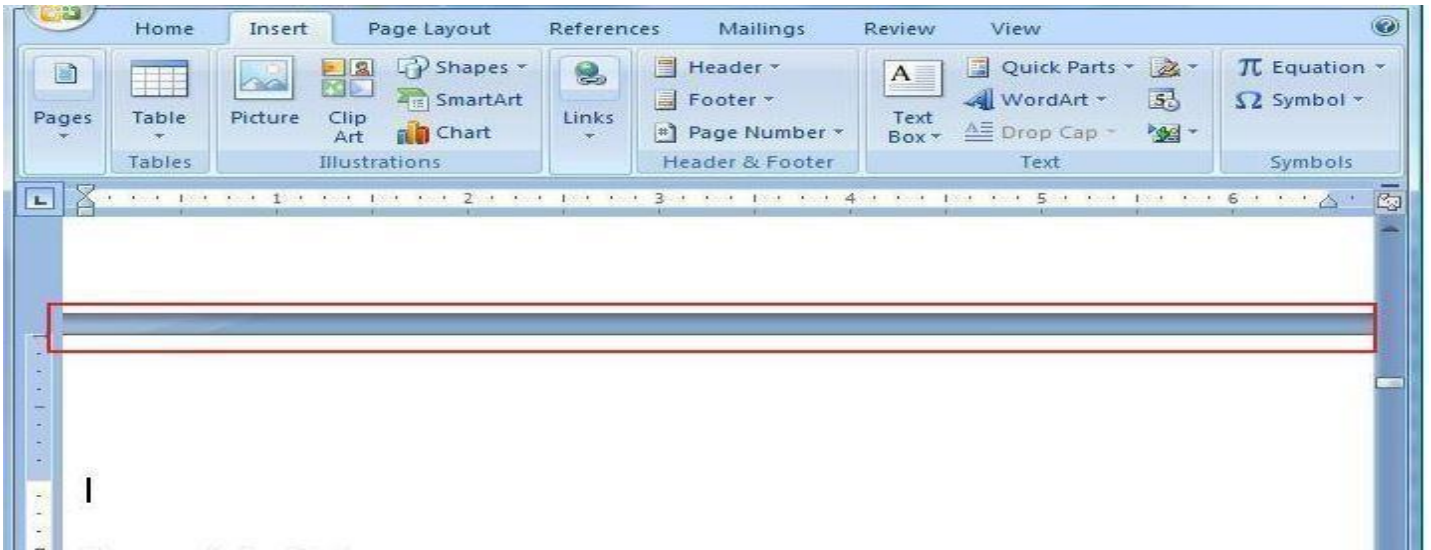


- **Cover page**, which help user to choose cover from list of different cover page style.

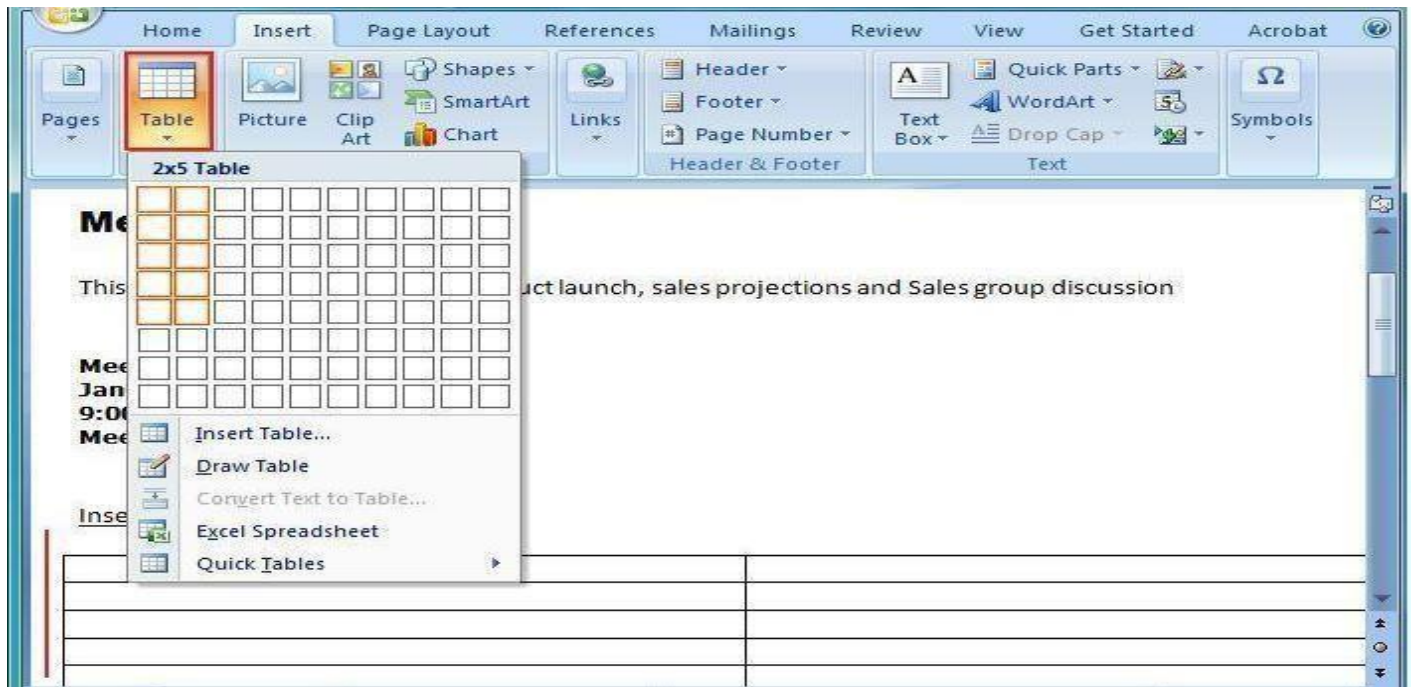


- **Blank page**, help user to insert blank page after current page
- **Page Break**, use this option to end current page and move to next page.

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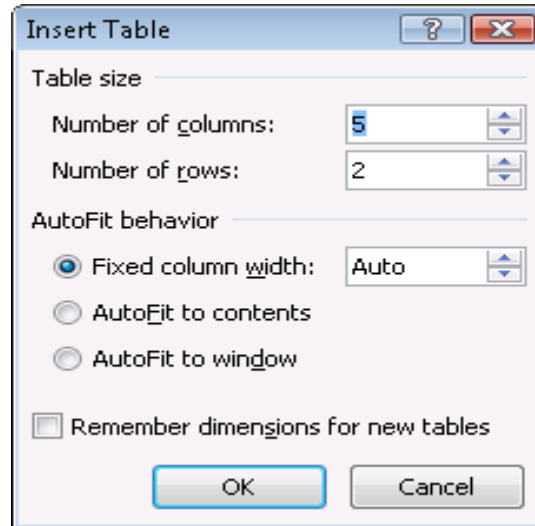
2) **Tables**, this group help user to create and built table by using some option



- **Insert table**, if user click the **Table** icon from the Tables group and then select the number of cells you want. The example above has a table that is 2 cells wide by 5 cells high.

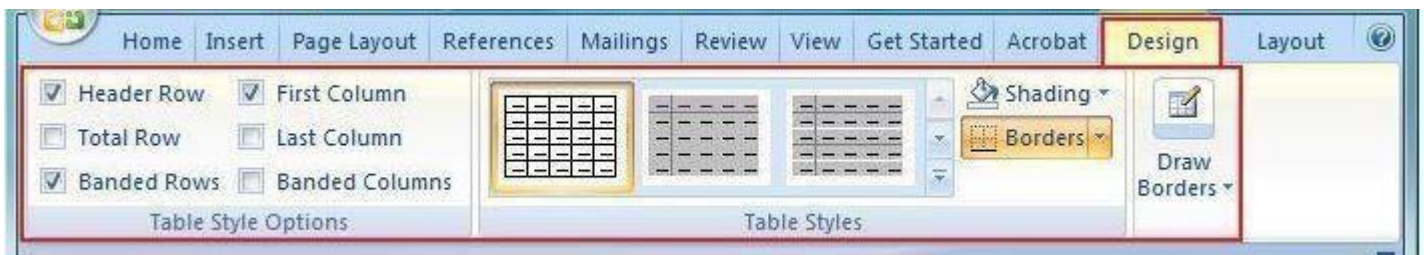
If a user need a table that is larger than 10 cells wide by 8 cells high, click **Insert Table** that mentioned above, then user can customize the table as need from the window below:.

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Before we go ahead, we need to talk about Contextual tabs. These are special tabs that appear only when certain objects are being used such as a table or a picture. The idea is to keep them hidden until the object is active,

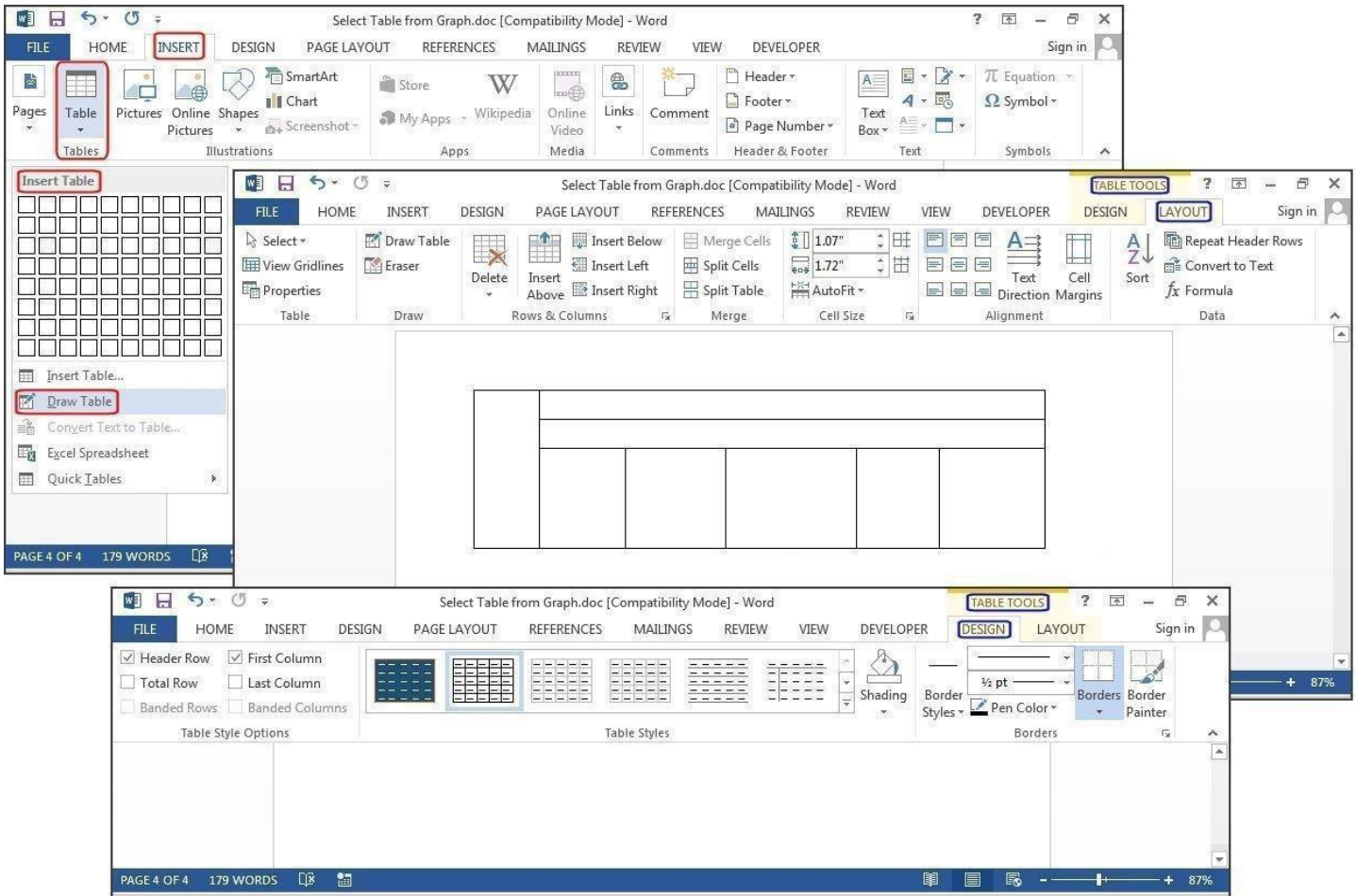
The Table object has two such contextual tabs: design and layout. The design lets you control things like table styles, borders and shading.



The next contextual tab related to Tables is the layout tab. This tab will actually let you modify the structure of the table including rows and columns plus alignment and cell size.

- **Draw Table**, This option allows the user to draw a table in any shape that user need.

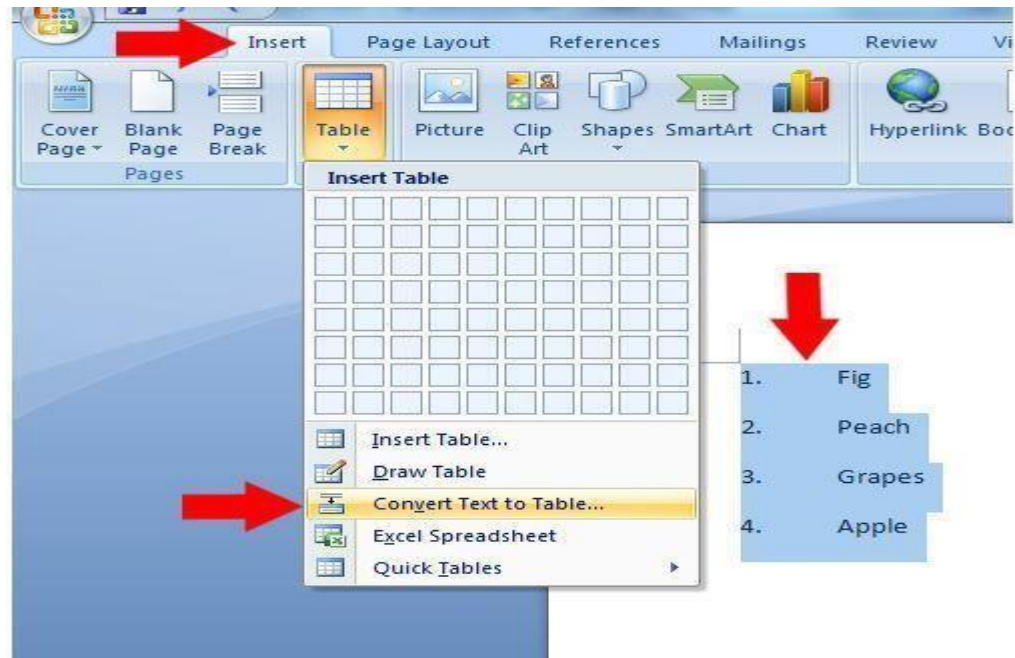
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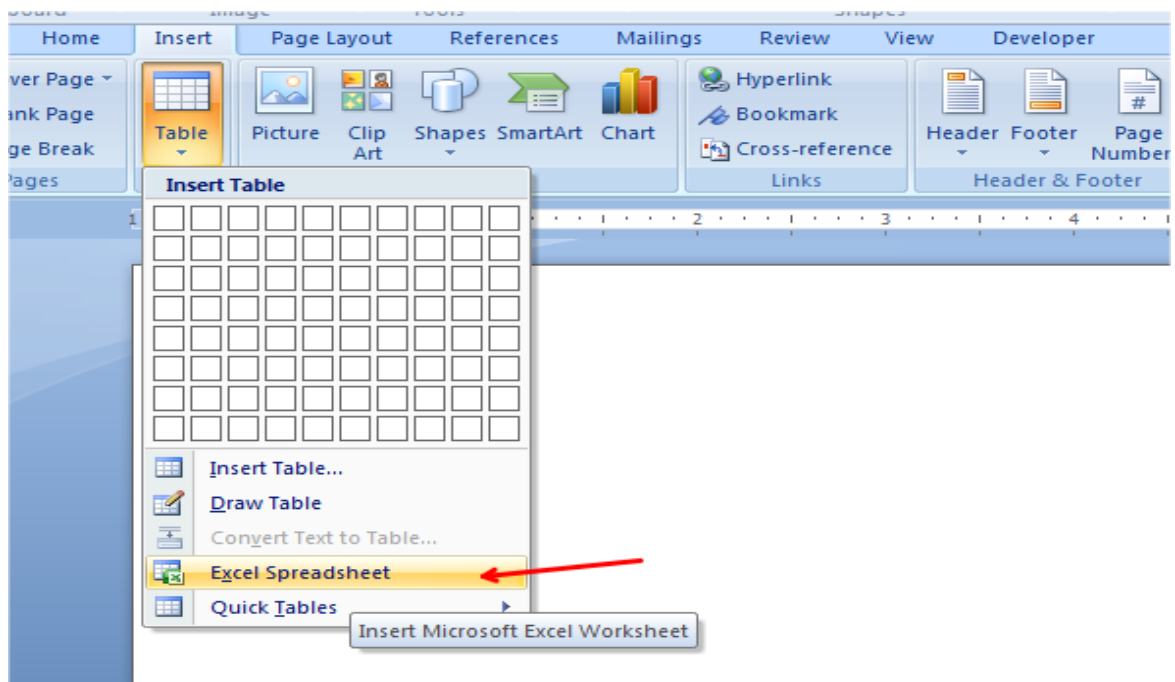
**Convert Text to Table**, if the data you want to present in a table already exists in the document, either as regular text or as a tabbed list, you can convert the text to a table by selecting it and then clicking Convert Text To Table.



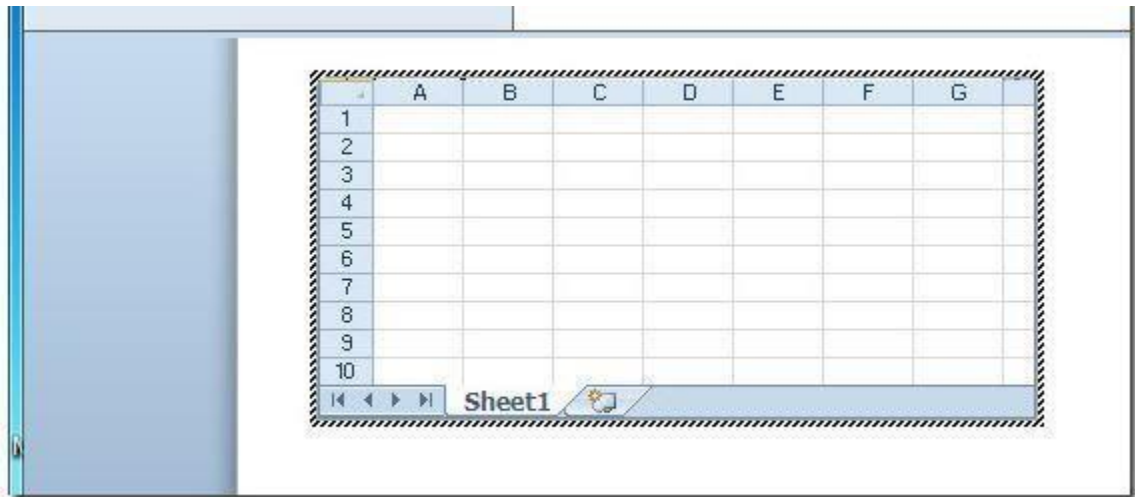
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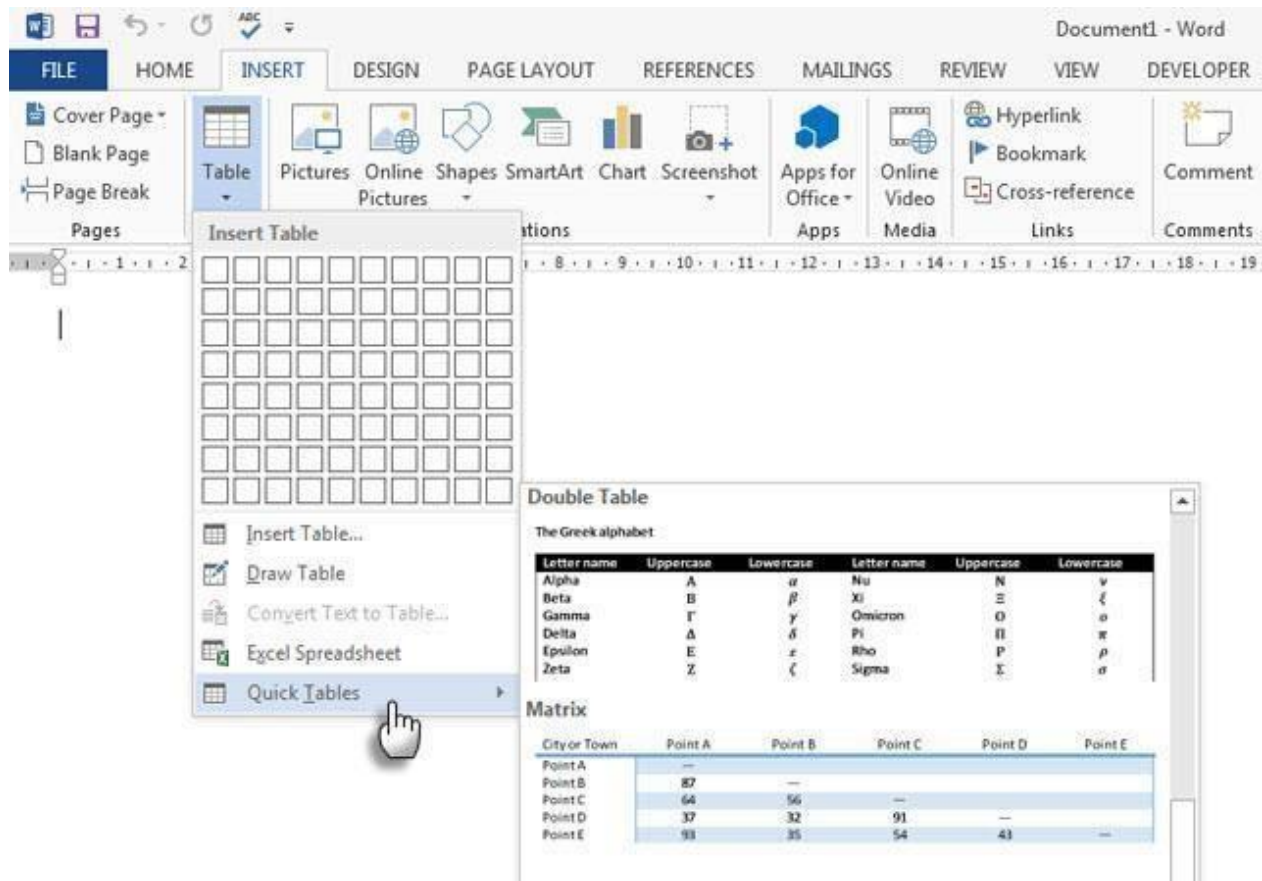
- **Excel spreadsheet**, this option allows the user to quickly insert an Excel sheet into Word document.



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- **Quick Table**, this option allows user to create table from multi types of templates.



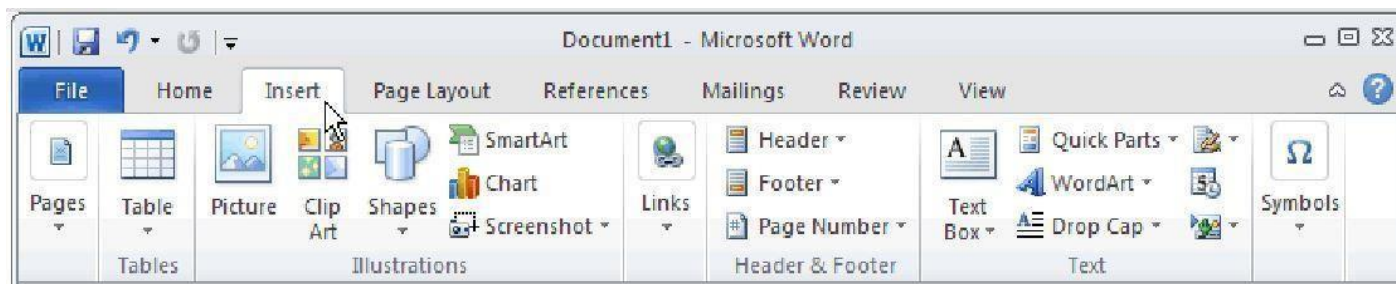
## Lecture 8 contain:

### ➤ Insert Objects in MS-Word 2010 (Insert Tab)

.....

#### 1.4.5 Insert Tab

This tab has a lot of useful features that will let you insert various types of objects, including pages, tables, illustrations, links, headers & footers, text, and symbols.

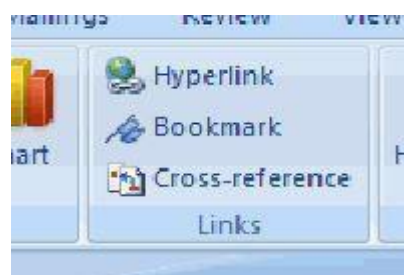
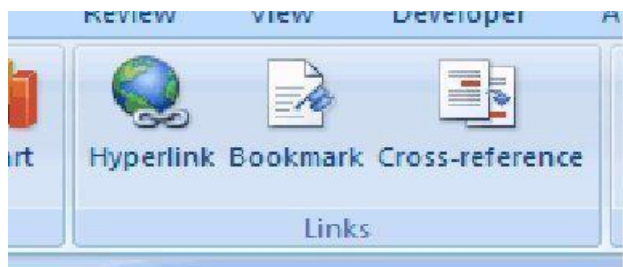


It's including seven groups:

- 1) pages
- 2) tables
- 3) illustrations
- 4) **links**
- 5) headers & footers
- 6) text
- 7) symbols

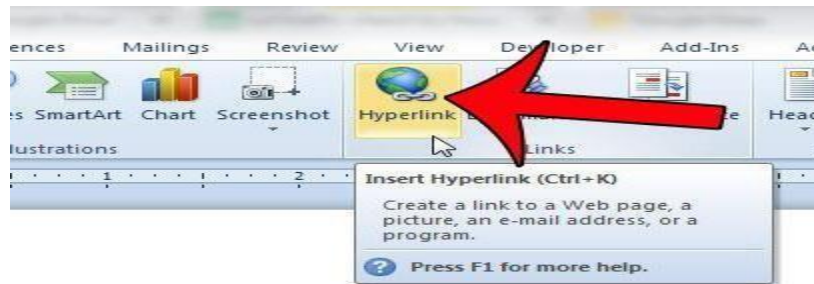
4) **links**: this group contain three option:

- Hyperlink
- Bookmark
- Cross - reference

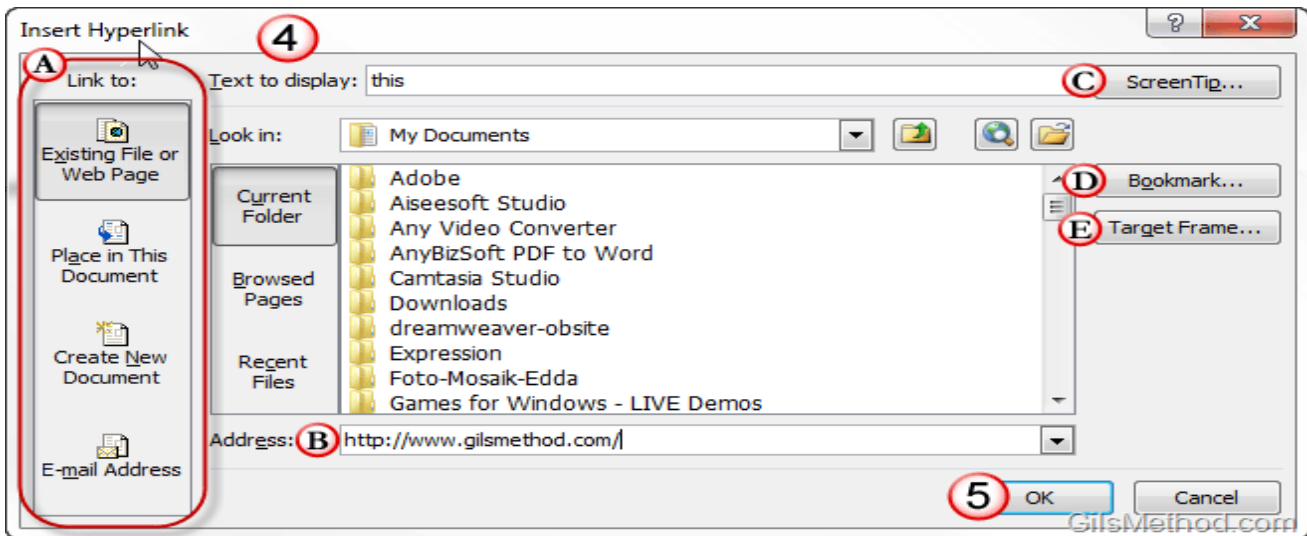


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- **Hyperlink:** to include a link to a website, within a document you were working on,
  1. Select the text you wish to add a link to.
  2. Click on the **Insert** tab on the MS-Word Ribbon.
  3. Click on the **Hyperlink** button in the Links group.



When the button is clicked, the Hyperlink dialog box will display. This is where the link can be specified.



A. Click on what you would like to link to.

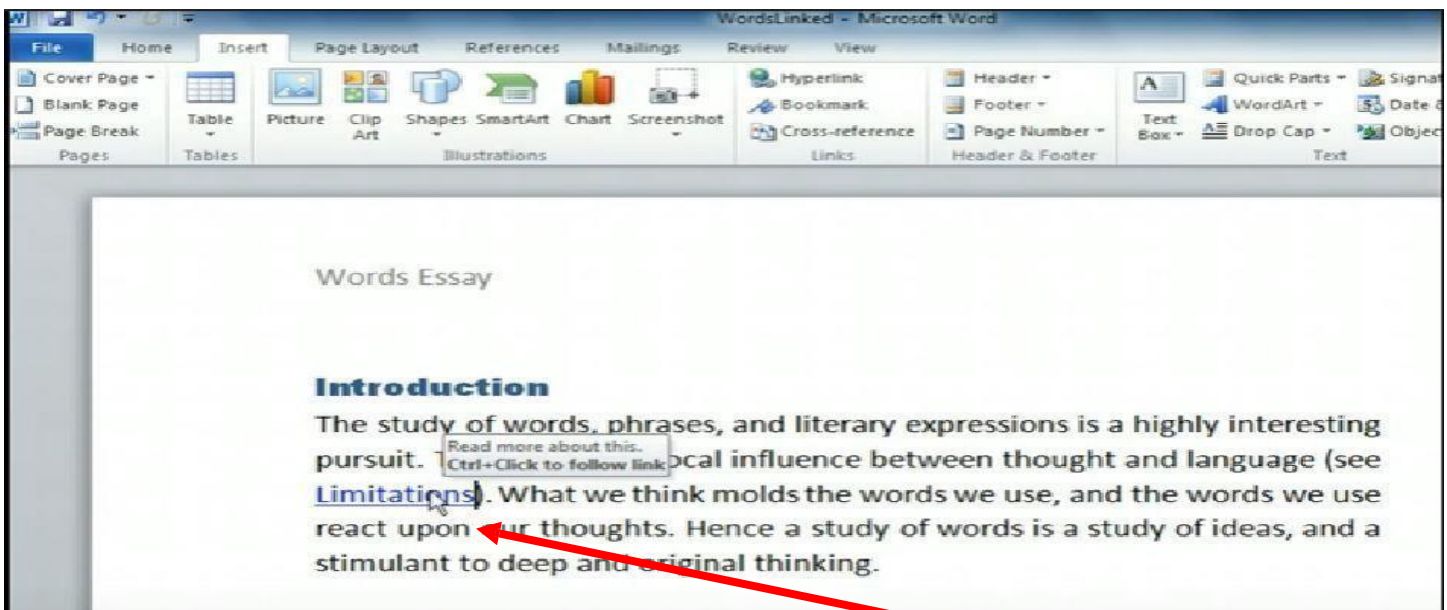
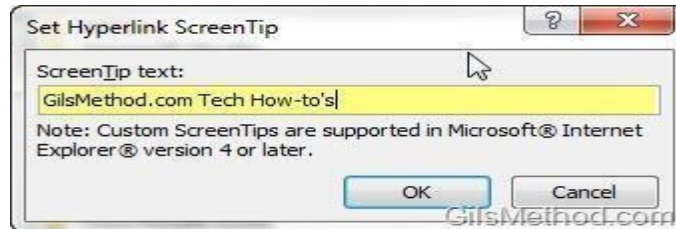
- Existing File or Web Page
- Place in This Document
- Create New Document
- Email Address



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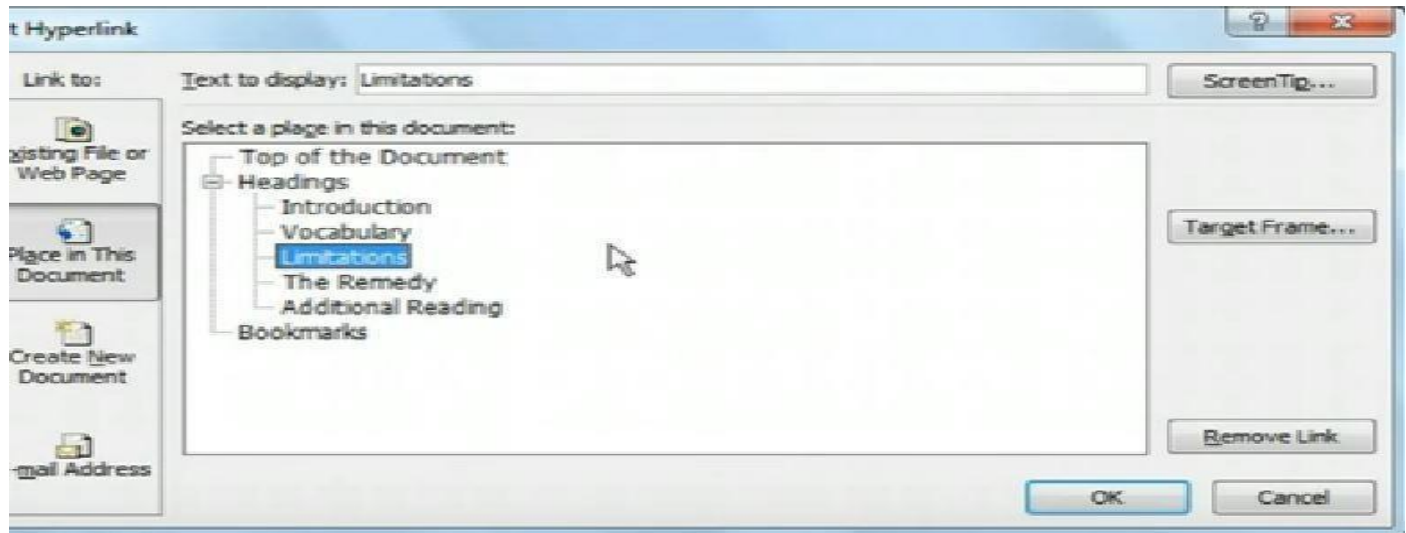
B. In this place we can linking to a website or file by enter the Address to the link to.

C. Click on the **ScreenTip** button to include a small tip when users move the mouse over the link.

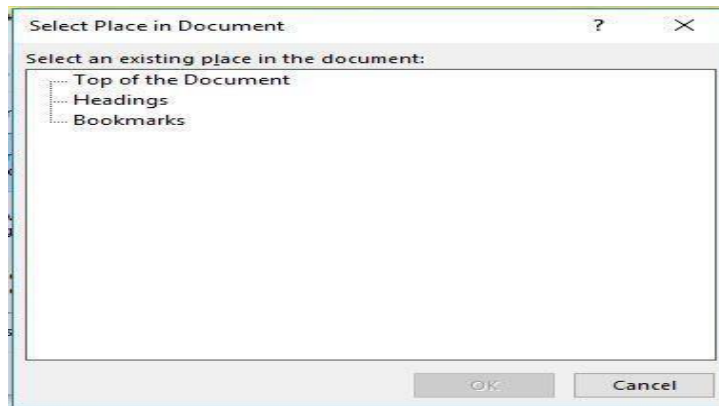


4. In the Text to Display box, enter the text you want displayed for the hyperlink (Ex. Limitations)

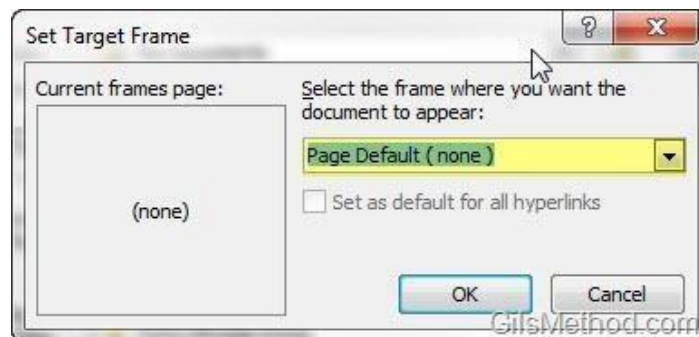
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D. Click on the **Bookmark** button to select a bookmark from the document.



E. Click on the **Target Frame** to set where the document will open when the person clicks on the Link.



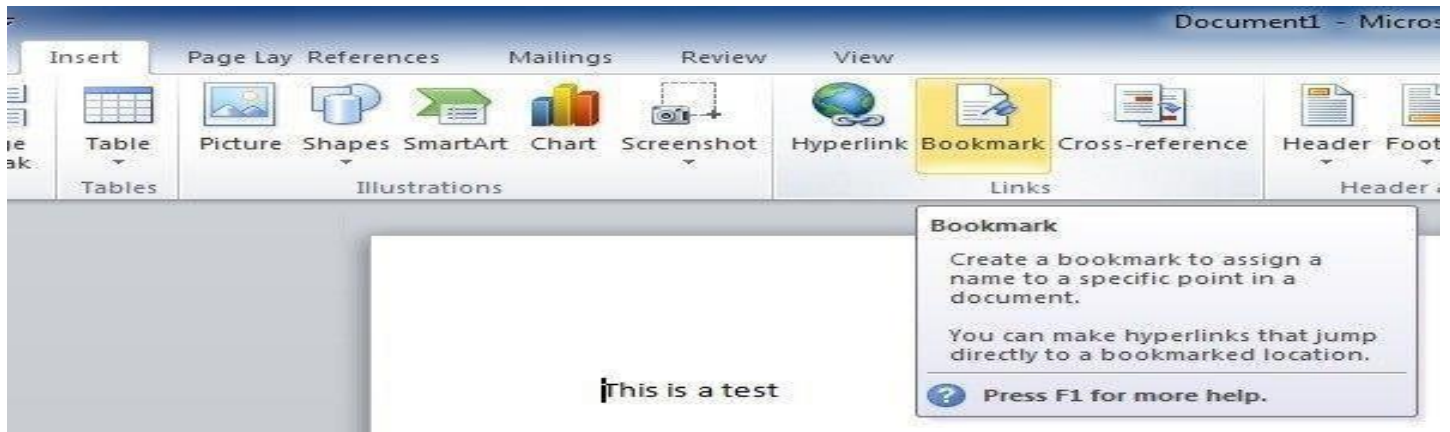
5. When you are done click **OK** to set the link.

If you wish to edit the link or remove it, right-click on the link and use the options from the list.

- Edit Hyperlink
- Select Hyperlink
- Open Hyperlink
- Copy Hyperlink
- Remove Hyperlink

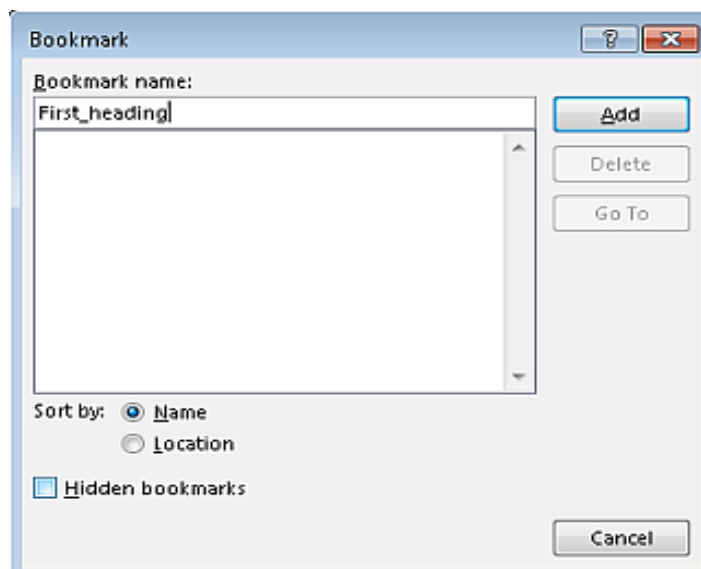
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- **Bookmark:** This button is used to create a bookmark. A bookmark is used to assign a name to a specific area within a document. A hyperlink can then be created to the bookmark.



- Add a bookmark
  1. Select the text or item to which you want to assign a bookmark, or click where you want to insert a bookmark.
  2. On the Insert tab, in the Links group, click Bookmark.
  3. Under Bookmark name, type or select a name.

Bookmark names must begin with a letter and can contain numbers. You can't include spaces in a bookmark name. However, you can use the underscore character to separate words — for example, "First\_Heading."

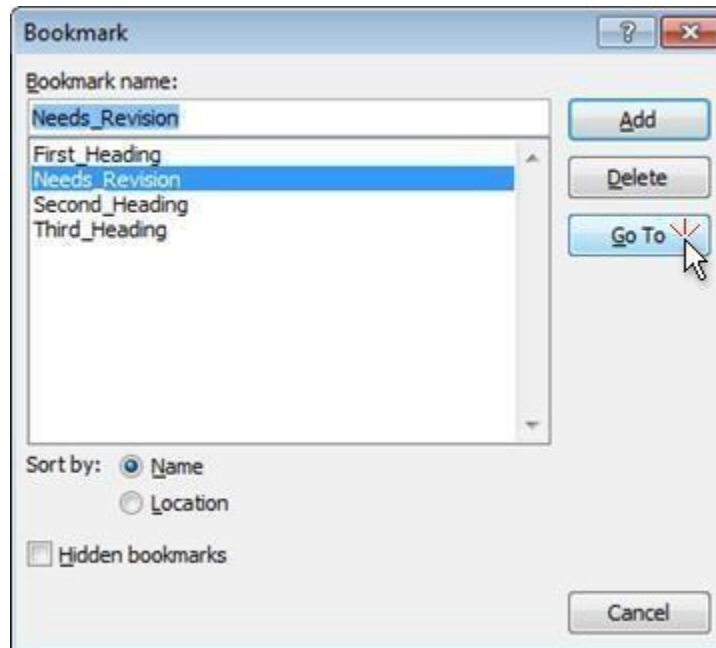


4. Click **Add**.

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- Go to a specific bookmark
  1. On the **Insert tab**, in the **Links group**, click **Bookmark**.
  2. Click either **Name** or **Location** to sort the list of bookmarks in the document.
  3. Click the name of the bookmark that you want to go to.
  4. Click **Go To**.



- Delete a bookmark
  1. On the **Insert tab**, in the **Links group**, click **Bookmark**.
  2. Click either **Name** or **Location** to sort the list of bookmarks in the document.
  3. Click the name of the bookmark you want to delete.
  4. Click **Delete**.

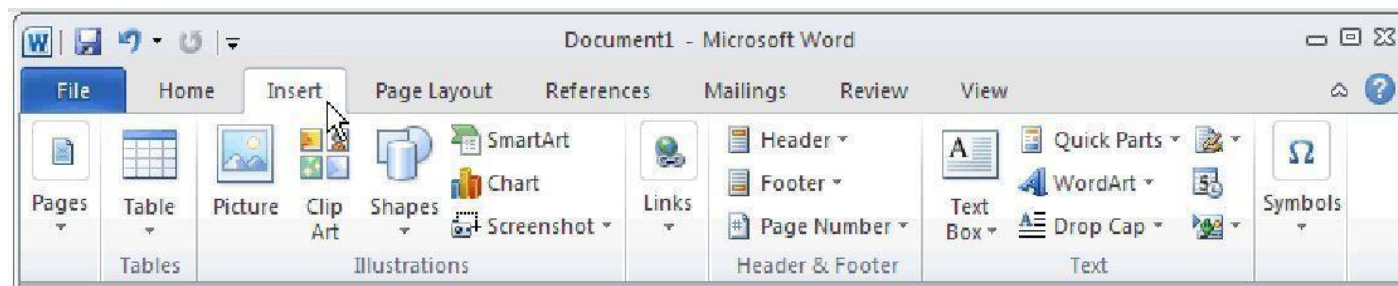
## Lecture 7 contain:

### ➤ Insert Objects in MS-Word 2010 (Insert Tab)

.....

### 1.4.5 Insert Tab

This tab has a lot of useful features that will let you insert various types of objects, including pages, tables, illustrations, links, headers & footers, text, and symbols.



It's including seven groups:

- 1) pages
- 2) tables
- 3) **illustrations**
- 4) links
- 5) headers & footers
- 6) text
- 7) symbols

#### 3) **illustrations**

The Illustrations group includes six commands that will allow you to use images in your documents to help you communicate information that must be represented visually.

- Picture
- Clip Art
- Shapes
- SmartArt
- Chart
- Screenshot

- **Pictures:** allows you to insert pictures stored on your computer into your documents.

1. From the **Insert** tab's **Illustrations** group, click the **Picture** button.



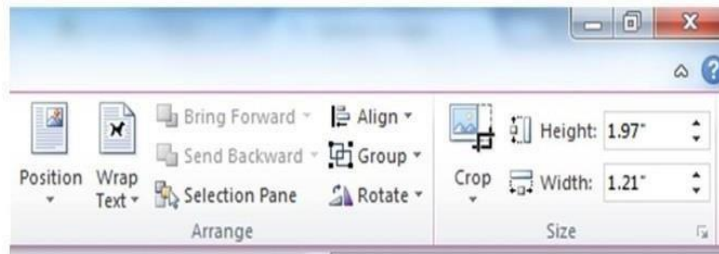
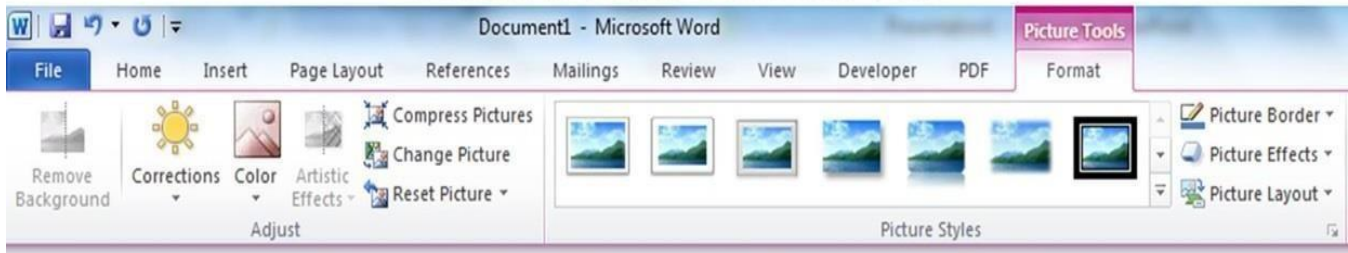
2. Use the dialog box controls to browse for the image you want.
3. Click to select the image.
4. Click the **Insert** button.

**The image is insert into your document. After you insert a picture, the Picture Tools Format tab appears on the Ribbon.**

You can make a variety of formatting changes to the picture, including changing the shape, adding a border, modifying effects, and applying a predefined style. From one location you can now switch, compress, and modify the image settings.



## Picture Tools Format Tab



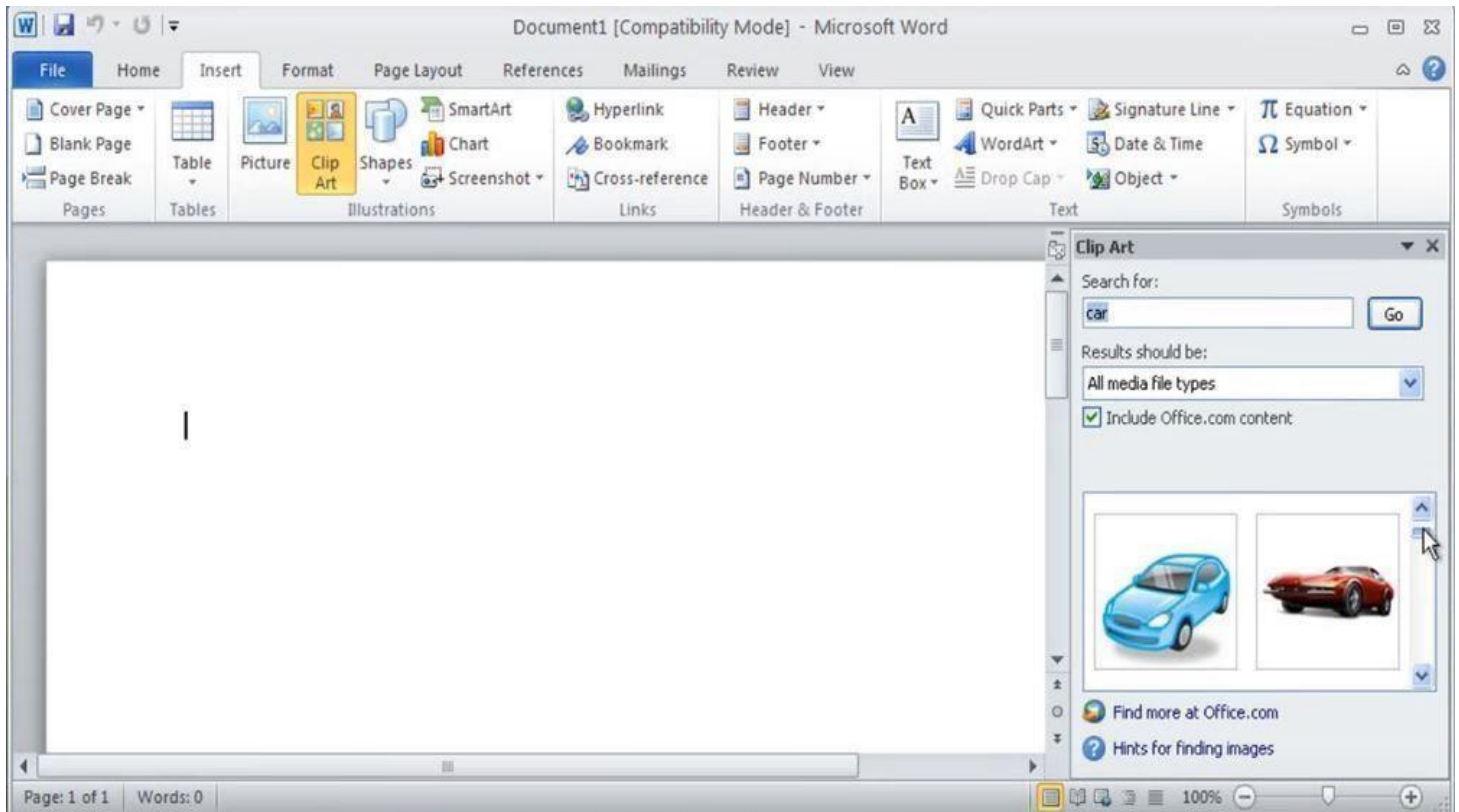
- **Clip art:** is a picture or graphic that can be inserted into a word processed document. Clip art comes in a wide variety of formats and styles, from a simple cartoon to a photographic image. Microsoft Word comes with its own clip art collection that you can use.

1. On the **Insert tab**, in the **Illustrations group**, click the **Clip Art** button. The Clip Art task pane appears.





2. In the **Search for** box, type a description of what you want.  
For example, a picture of a car. Type **car** in the box.
3. Click the **Go** button.

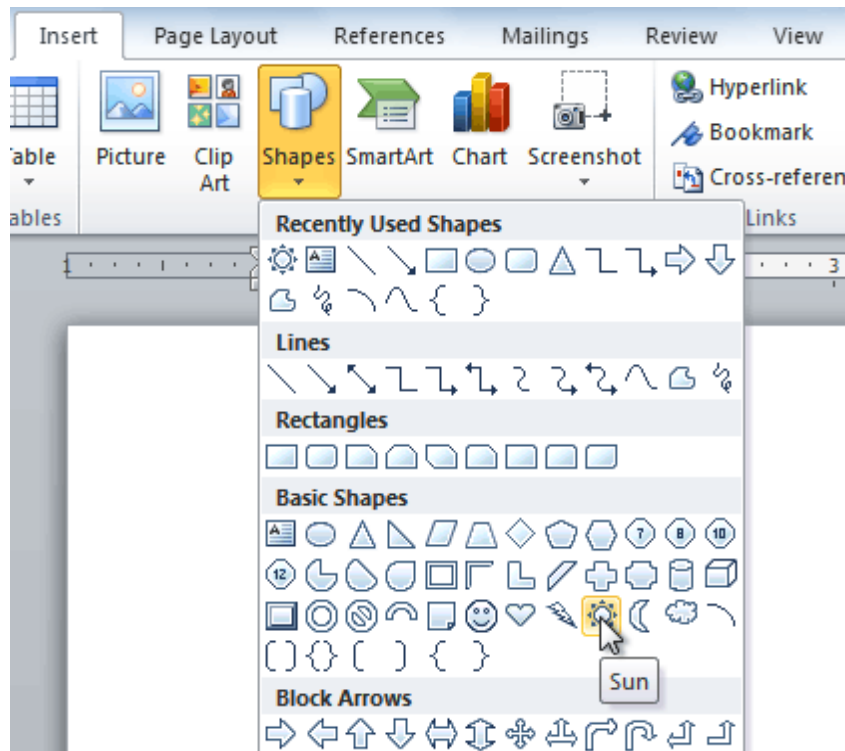


The results are displayed in the task pane. Peruse the results and note that you may have to scroll a bit to see all of them. If you don't find what you want, go back to Step 2 and refine your search.

4. Click the **image** you want. The image is plopped into your document.
5. Close the **Clip Art task pane** by clicking the **X** in its upper-right corner.

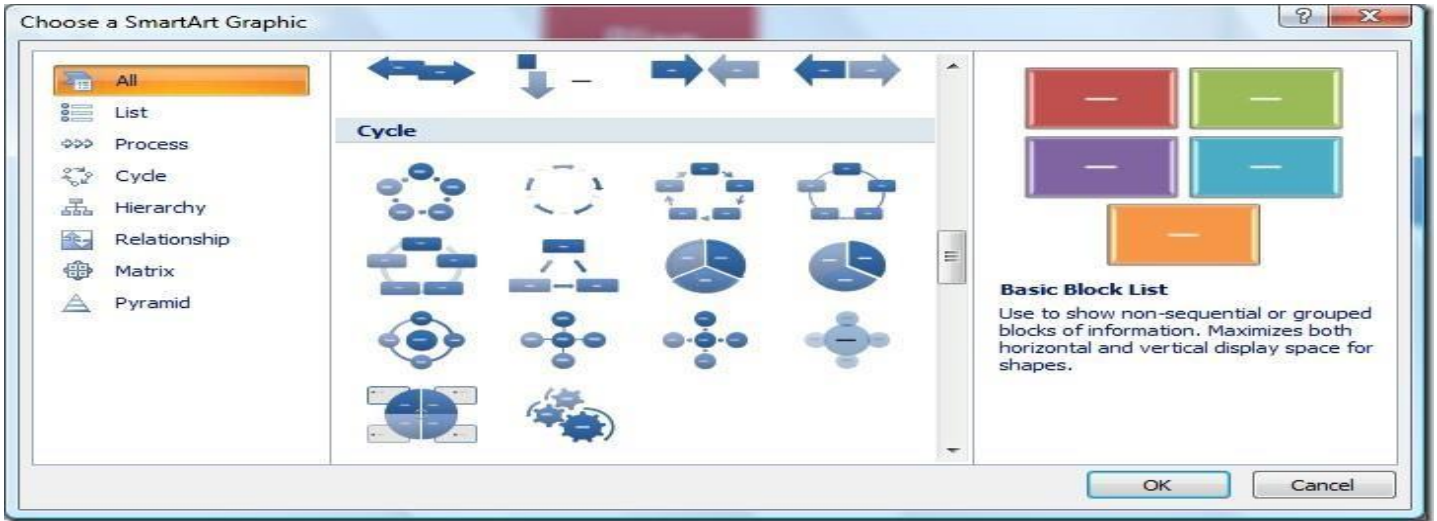
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- **Shapes:** Word comes with a library of common shapes lines, arrows, squares, and much more ready to insert into your document.
  1. Choose a predefined shape from the **Shapes** button menu, found in the **Illustrations group** on the **Insert tab**.



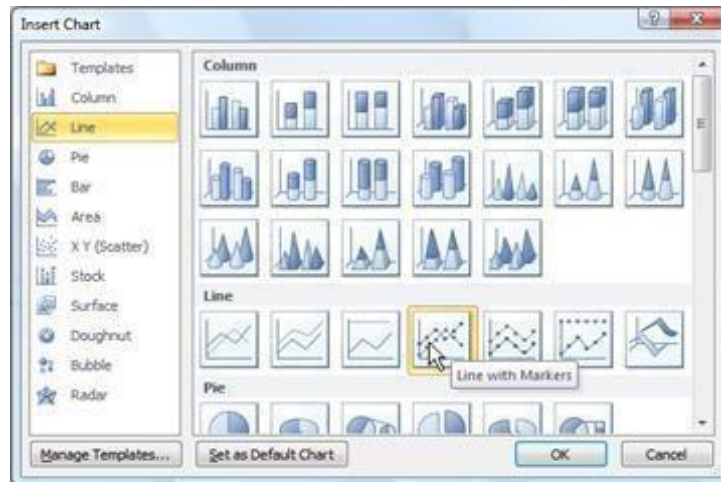
2. Drag the **mouse** in the document where you want the shape to appear, then **Drag down**, from the **upper-left corner** of the shape to the **lower-right corner**. The shape appears at the location where you **draw** it, as a size determined by how you **drag the mouse**.
- **SmartArt:** in the SmartArt feature you can easily create business diagrams such as process, radial, and organization charts; hierarchy diagrams; and lists that display textual information in an easy-to-read format. SmartArt illustrations represent the information in a visual format and add shape, to your text. With SmartArt illustrations, you can easily try different styles. Live Preview displays how the diagram will appear before you choose one, which allows you to see your options in your document.
    1. Clicking the **SmartArt** button in the **Illustrations group** on the **Insert tab**.

2. The **Choose a SmartArt Graphic** dialog box will appear. You can use that dialog box to quickly arrange a layout of graphics in your document.
3. After chosen a layout, you type captions.



- **Charts:** Charts are a great way to present numerical data in an easy-to-read format, and with the Word 2010 Chart command organizing and displaying your information is simple. You can insert many kinds of data charts and graphs, such as column charts, line graphs, bar charts, area graphs, surface charts, bubble graphs, and radar graphs.

1. On the **Insert tab**, in the **Illustrations group**, click **Chart**.



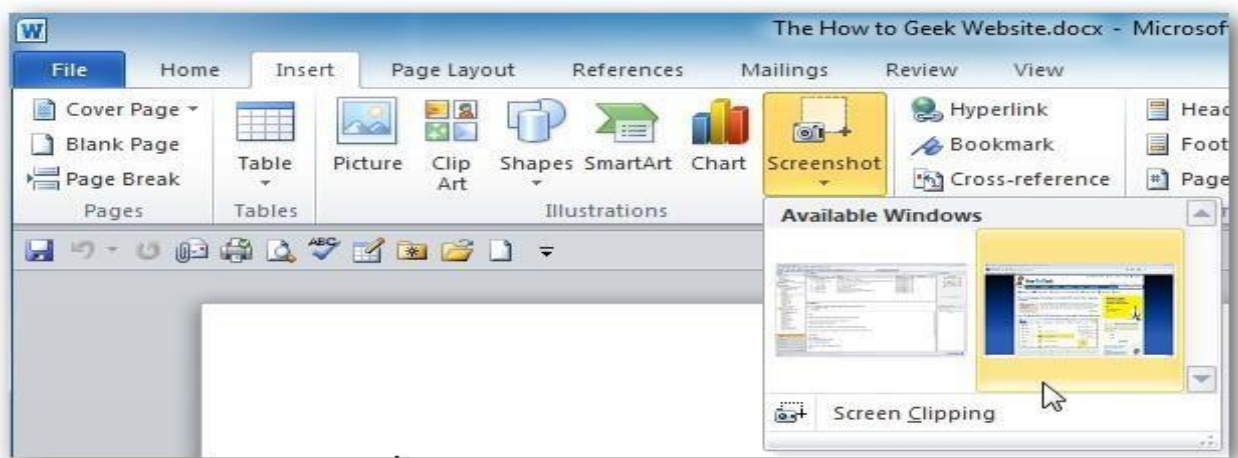
2. In the **Insert Chart** dialog box, click the **arrows** to scroll through the chart types.
3. **Select** the type of **chart** that you want and then click **OK**.

\*\*\* When you rest the **mouse pointer** over any **chart type**, a **ScreenTip** displays its name.

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- **Screenshot:** When the image you need is on the computer screen, either in another program window or the other program window itself, you can use Word's Screenshot command to capture that image and stick it into your document:
  1. **Set up** the **program window** that you want to appear in your Word document.
  2. **Switch** to the program and position everything for picture-taking.
  3. **Switch** back to Word.
  4. Click the **Screenshot** button, found in the **Illustrations group** on the **Insert tab**.



A little menu appears. It lists any other program windows that are open and not minimized.

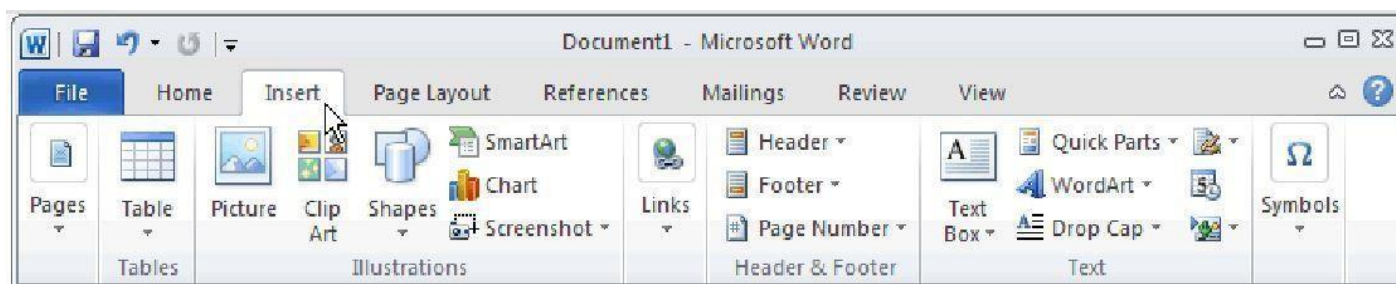
5. Choose a program window to select it and paste into your document. The image is insert into your text just like any other picture.

## Lecture 10 contain:

### ➤ Insert Objects in MS-Word 2010 ( Insert Tab)

#### 1.4.5 Insert Tab

This tab has a lot of useful features that will let you insert various types of objects, including pages, tables, illustrations, links, headers & footers, text, and symbols.



It's including seven groups:

- 1) pages
- 2) tables
- 3) illustrations
- 4) links
- 5) headers & footers
- 6) **text**
- 7) **symbols**

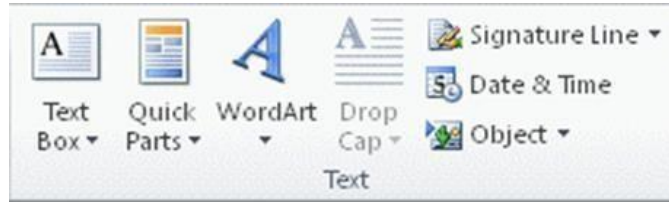
#### 6) Text

This group contain option below:

- *text box*
- *Quick Parts*
- *WordArt*
- *Drop Cap*
- *Signature Line*
- *Date & Time*

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- Object



- **Text box**

There are two ways you can insert a text into a Word document

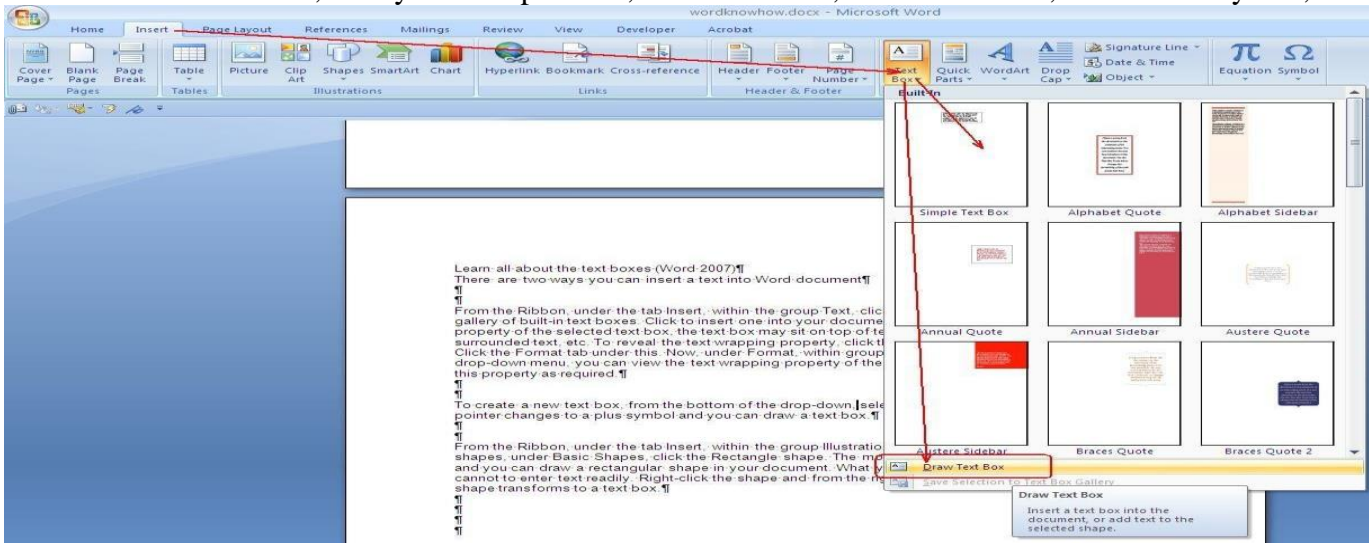
*First method:*

From the Ribbon, under the tab Insert, within the group Illustrations, click Shapes. From the gallery of Shapes, under Basic Shapes, we already explain in previous lecture.

*Second method:*

From the **Ribbon**, under the tab **Insert**, within the group **Text**, click the **Text Box** icon. You can view a gallery of built-in text boxes in a drop-down list.

- Click to insert one of these into your document. Depending on the **Text Wrapping** property of the selected text box, it may sit on top of text, behind the text, in line with text, surrounded by text, etc.



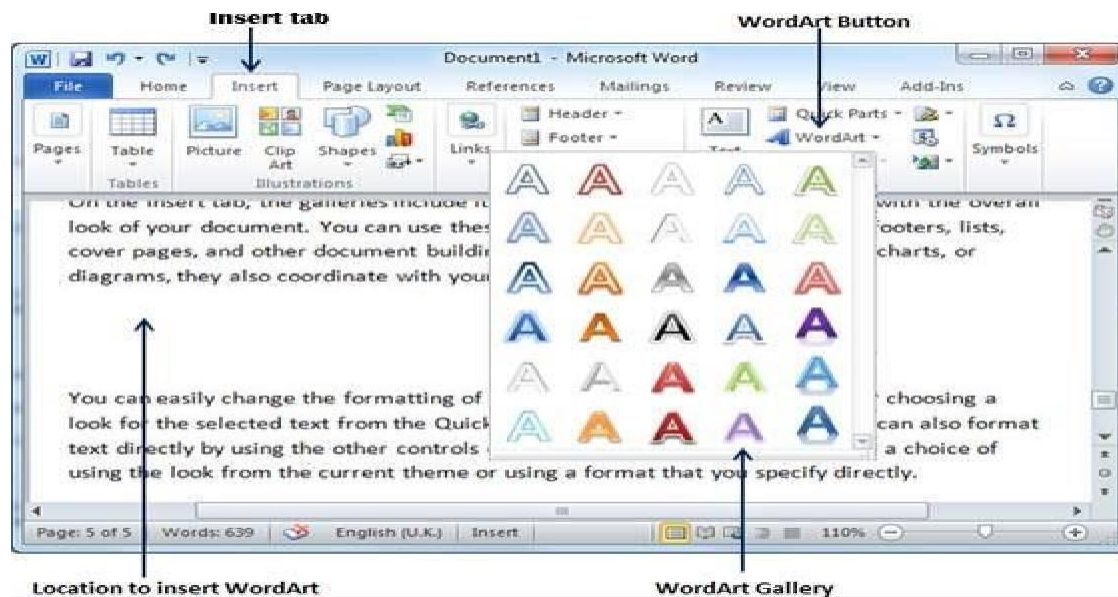


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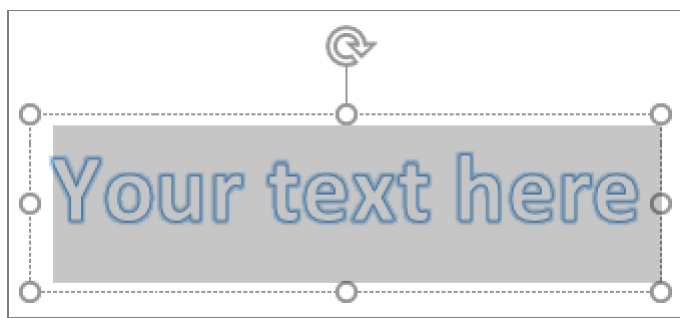
- **WordArt**

WordArt is a quick way to make text view with special effects.

- Click **Insert** tab within the group Text, click **WordArt**, and pick the WordArt style you want.



- The placeholder text "Your text here" appears, with the text highlighted.



Enter your own text to replace the placeholder text.



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- **Drop Cap**

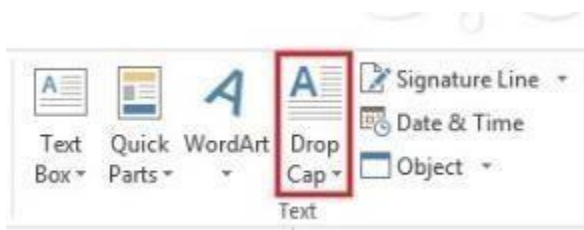
A drop cap (dropped capital) is a large capital letter used as a decorative element at the beginning of a paragraph or section. The size of a drop cap is usually two or more lines. Use drop caps to give your Word document a dramatic and polished look.

**L**orem ipsum dolor sit amet, at mea vidisse philosophia. Mel latine patrioque id, accusam complectitur an per. Ne autem percipit recusabo nec. Utamur vulputate usu eu. Mei blandit electram et. Postea laoreet vix ei.

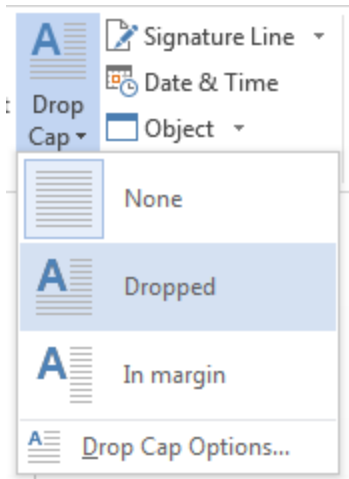
1. Select the first character of a paragraph.

**L**orem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

2. On the **INSERT** tab, in the **Text** group, select **Drop Cap**.



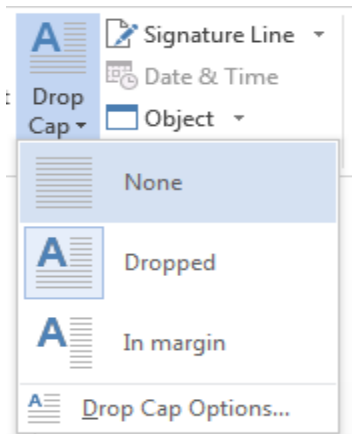
3. Select the drop cap option you want.





### Remove a drop cap

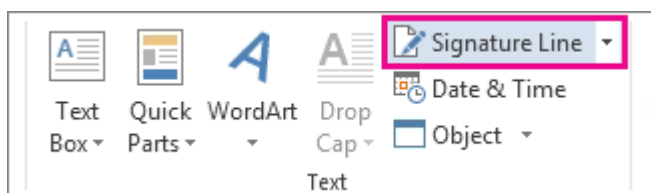
1. Highlight the large drop cap letter.
2. On the **INSERT** tab, in the **Text** group, click **Drop Cap** then choose **None**.



### - Signature Line

Use the **Signature Line** command to insert a signature line with an X by it to show where to sign a document.

1. Click where you want the line.
2. On the **INSERT** tab, in the **Text** group, select **Signature Line**.



3. Click **Microsoft Office Signature Line**.
4. In the **Signature Setup** box, you can type a name in the **Suggested signer** box. You can also add a title in the **Suggested signer's title** box.

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5. Click **OK**. The signature line appears in your document.

X

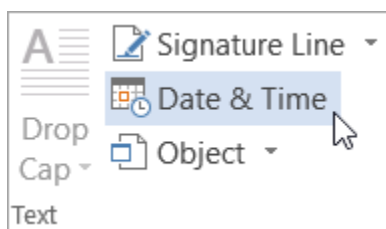
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Kim Abercrombie  
Manager

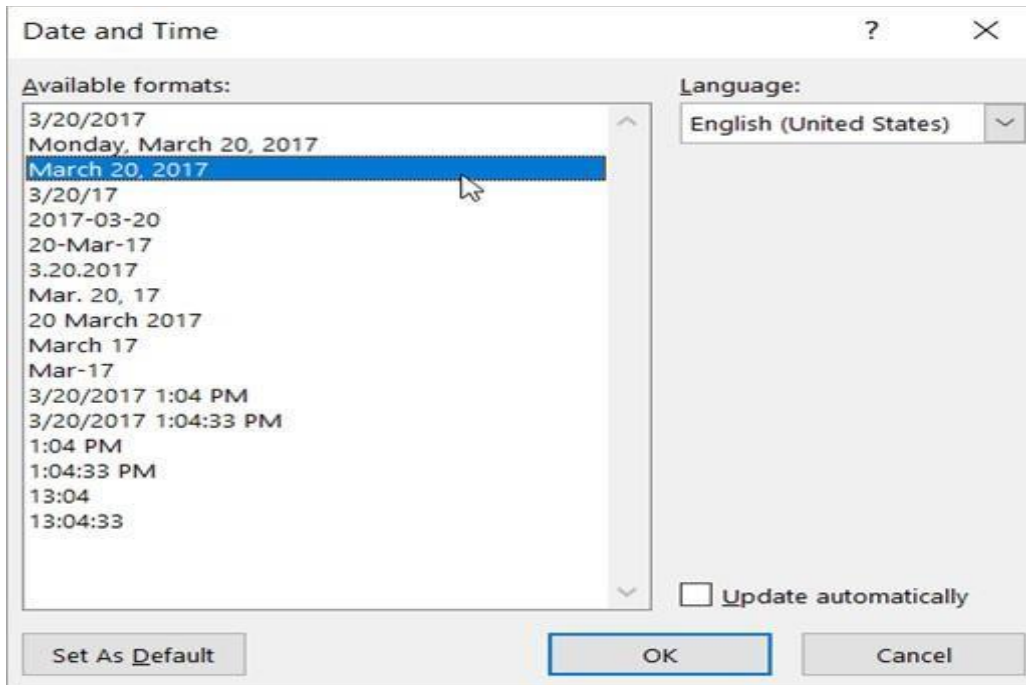
- **Date & Time**

If you don't need the date to update automatically, you can insert the current date as text.

1. On the **Insert** tab, in the **Text** group, click **Date & Time**.



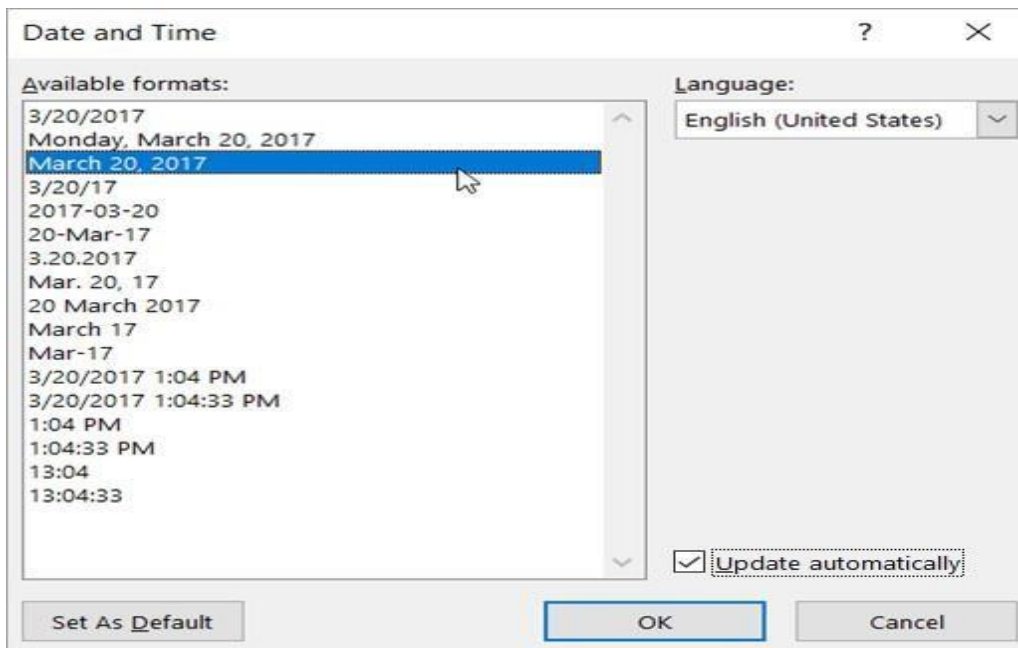
2. In the **Date and time** dialog box, select the format you want and click **OK**.



The date is inserted as text.

If you'd like the date to be updated every time someone opens the document, you can insert the date as a field.

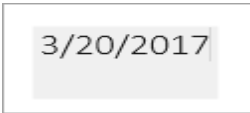
1. Select the **Update automatically** check box.



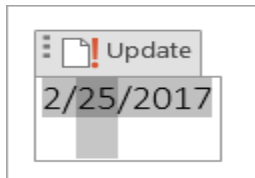
The date is inserted as a field and will update automatically.

### Edit or update a date field

If you selected **Update automatically** when inserting the date, you'll see a faint gray box when you rest your mouse pointer over the date. This means you've inserted a field that you can change or update.



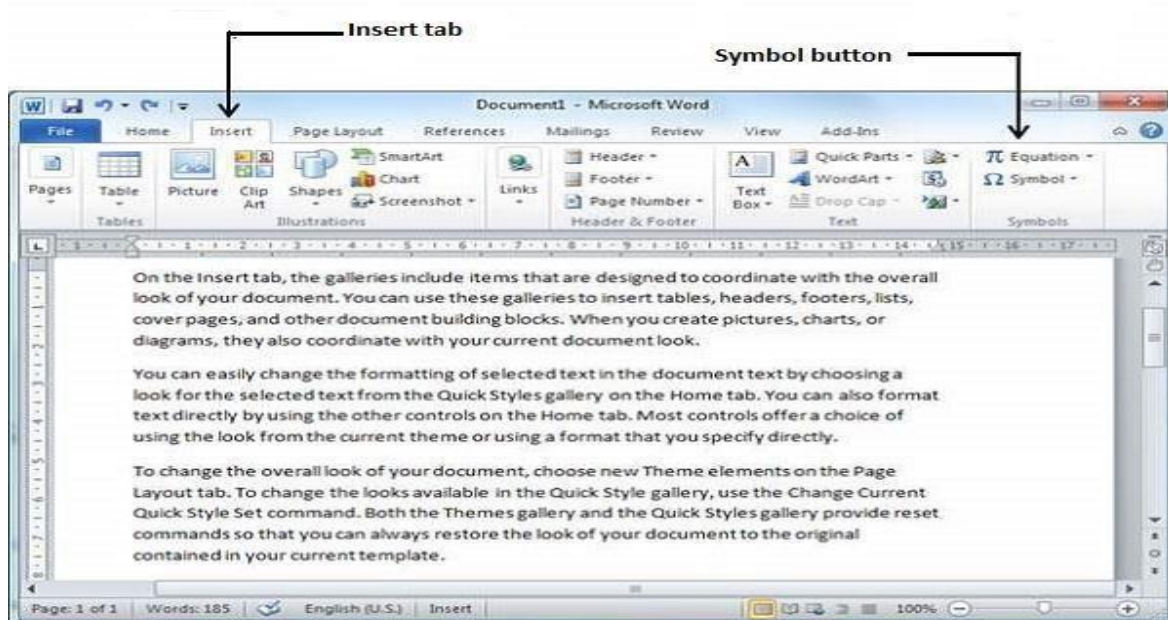
- To edit the date, click the gray box, type a new date, and then click outside the box.
- To change the date back to the current date, click the date field and click **Update**.



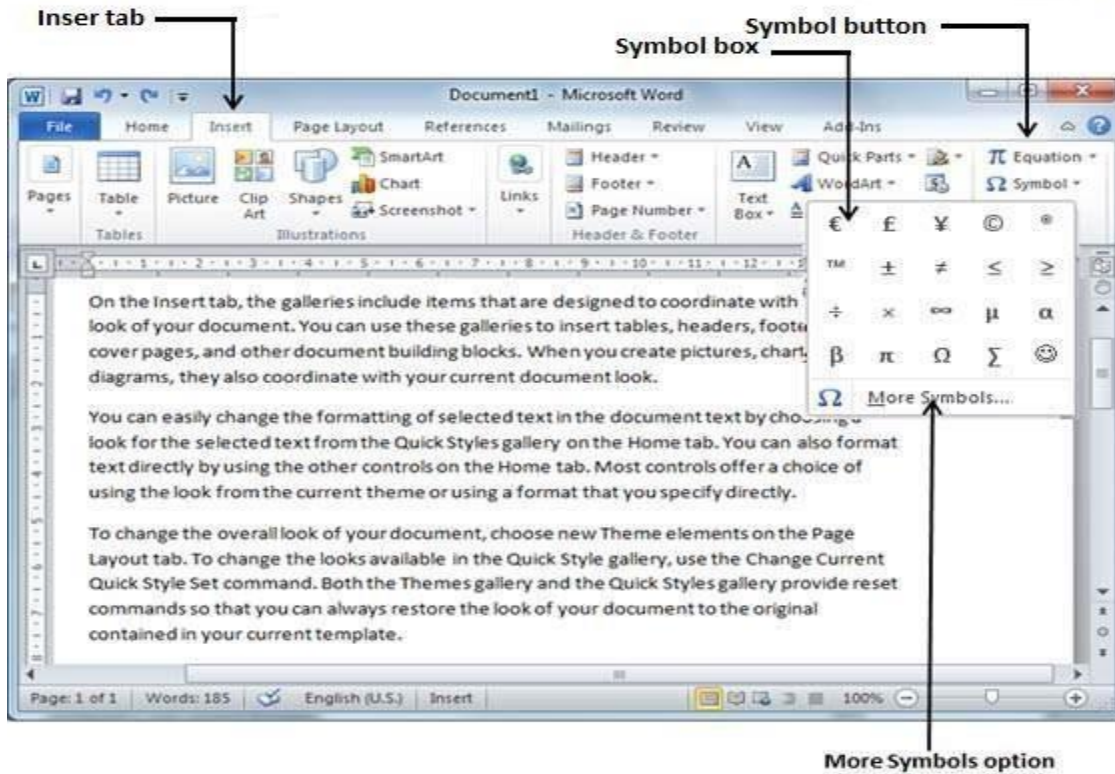
### 7) symbols

This group help user to insert different symbol and mathematical equations that usually not found in your keyboard.

- Go on **insert tab**, bring your cursor at the (a) **Equation** & (b) **Symbols**. Click one of these two options based on your requirement.



- When you choose Symbol button, a small list of symbols box will appear as shown below.



- If you do not find the symbol that you need in this small box, then you can click on the More Symbols option to have a wide range of symbols as shown below in the Symbol dialog box.

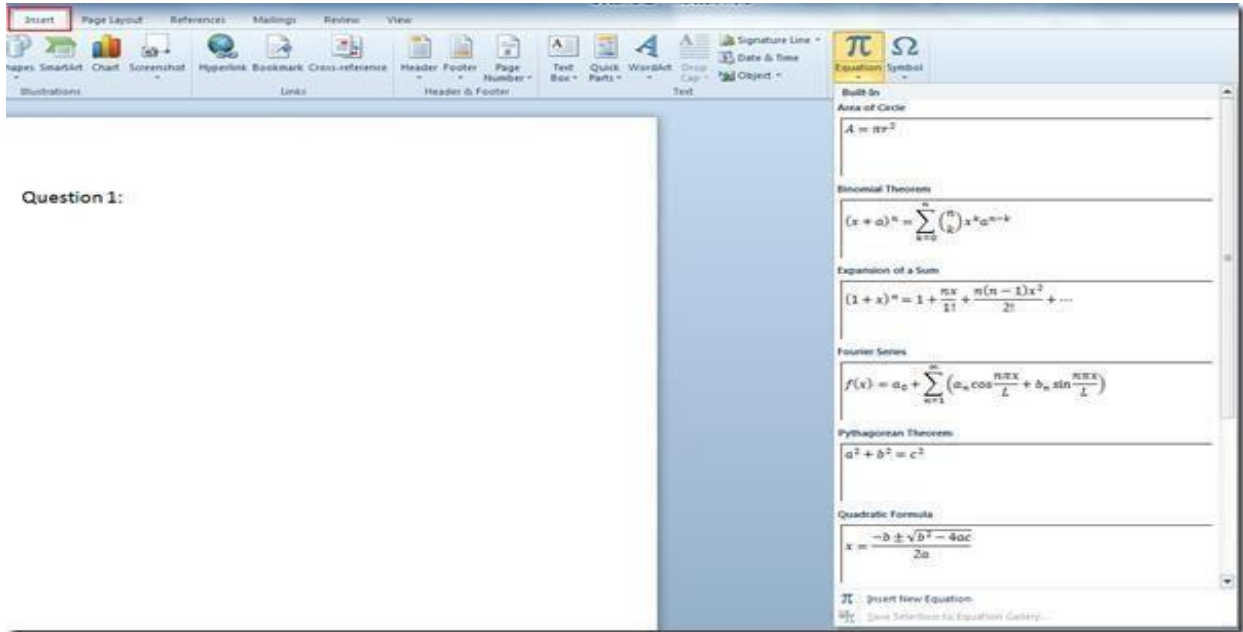


- You can select the symbol by clicking on Insert button to insert the symbol which you want to select.

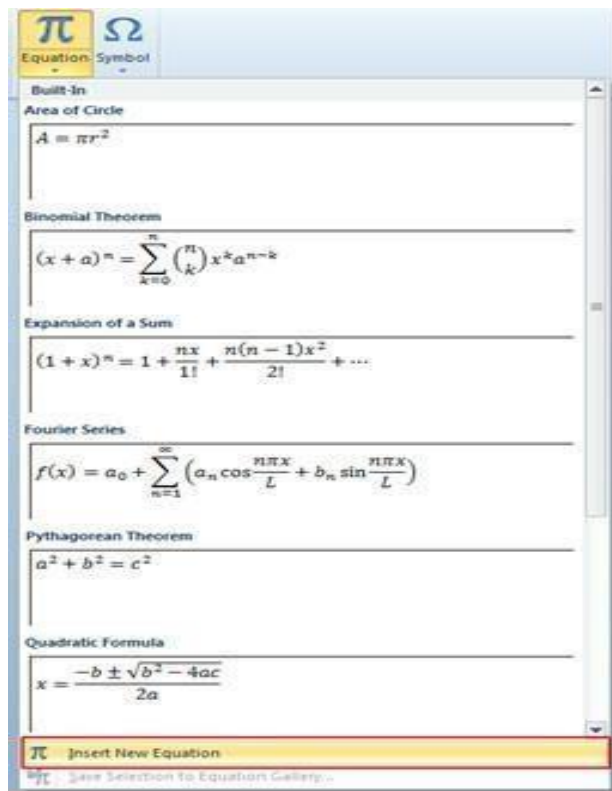


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- When you choose Equation button, a small list of symbols box will appear as shown below.



- if you want to include another equation which is not present in the list, from *Equation* options, click *Insert New Equation*.



**Lecture 9 contain:**

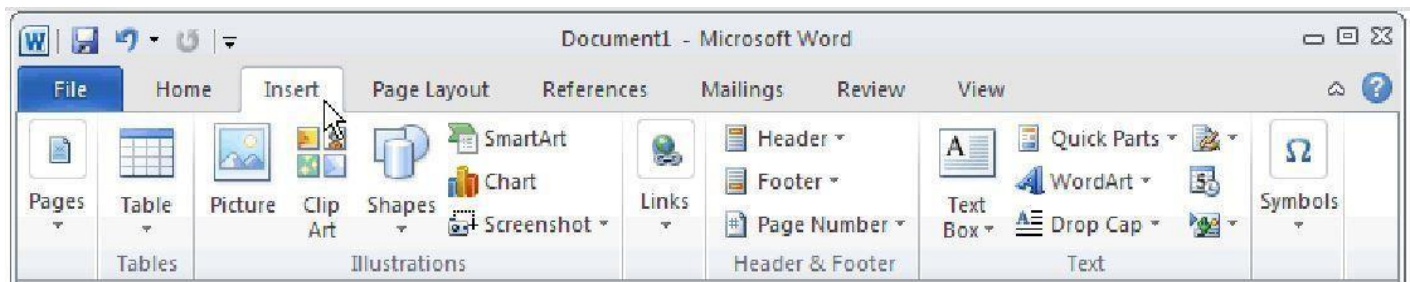
➤ **Insert Objects in MS-Word 2010 ( Insert Tab)**

.....

**1.4 MS-Word 2010 Ribbon and Tabs**

**1.4.5 Insert Tab**

This tab has a lot of useful features that will let you insert various types of objects, including pages, tables, illustrations, links, headers & footers, text, and symbols.

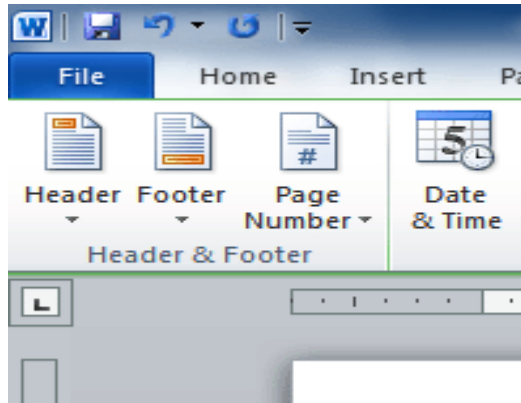


It's including seven groups:

- 1) pages
- 2) tables
- 3) illustrations
- 4) links
- 5) **headers & footers**
- 6) text
- 7) symbols

### 5) Headers & footers

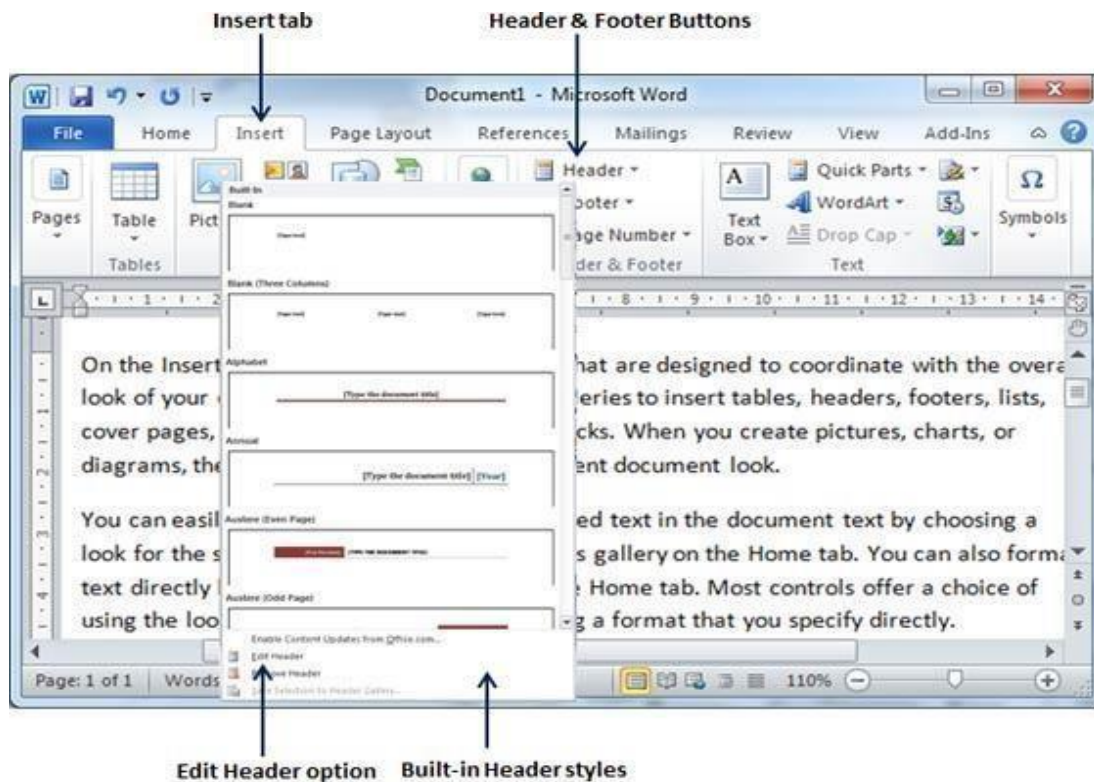
Headers and footers are important items they are areas in the top and bottom margins of each page in a document. You can add, edit, or delete headers and footers. They are contain three options:



#### 1) Headers

To insert text that appears at the top of each page of the document,

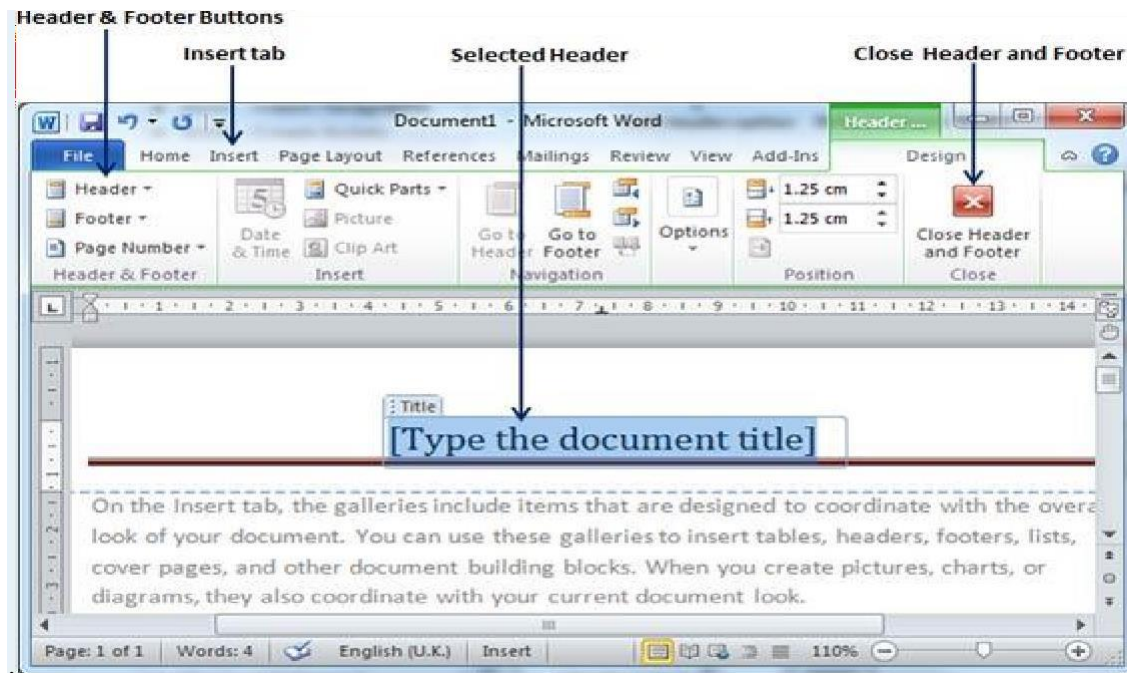
1. Click this button. A gallery of header styles and formats will appear.
2. Click the heading style that is to be applied to insert it into the document.



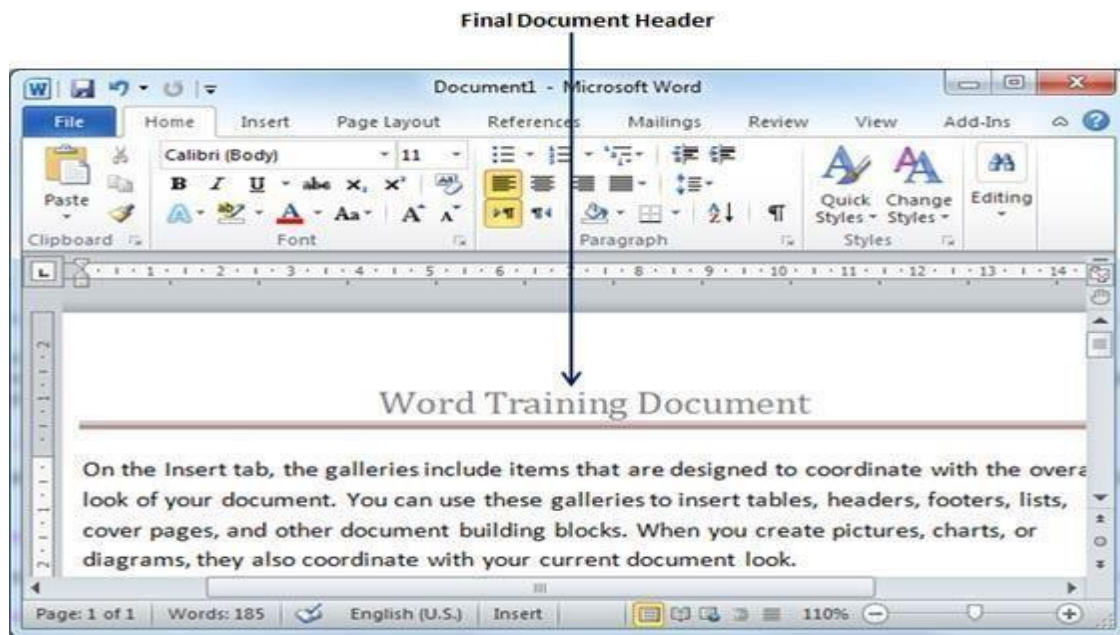


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3. Once you select any of the headers, it will be applied to the document in editable mode and the text in your document will appear dimmed, Header and Footer buttons appear on the Ribbon and a Close Header and Footer button will also appear at the top-right corner.



4. Finally you can type your information whatever you want to have in your document header and once you are done, click Close Header and Footer to come out of header insertion mode. You will see final result as follows.

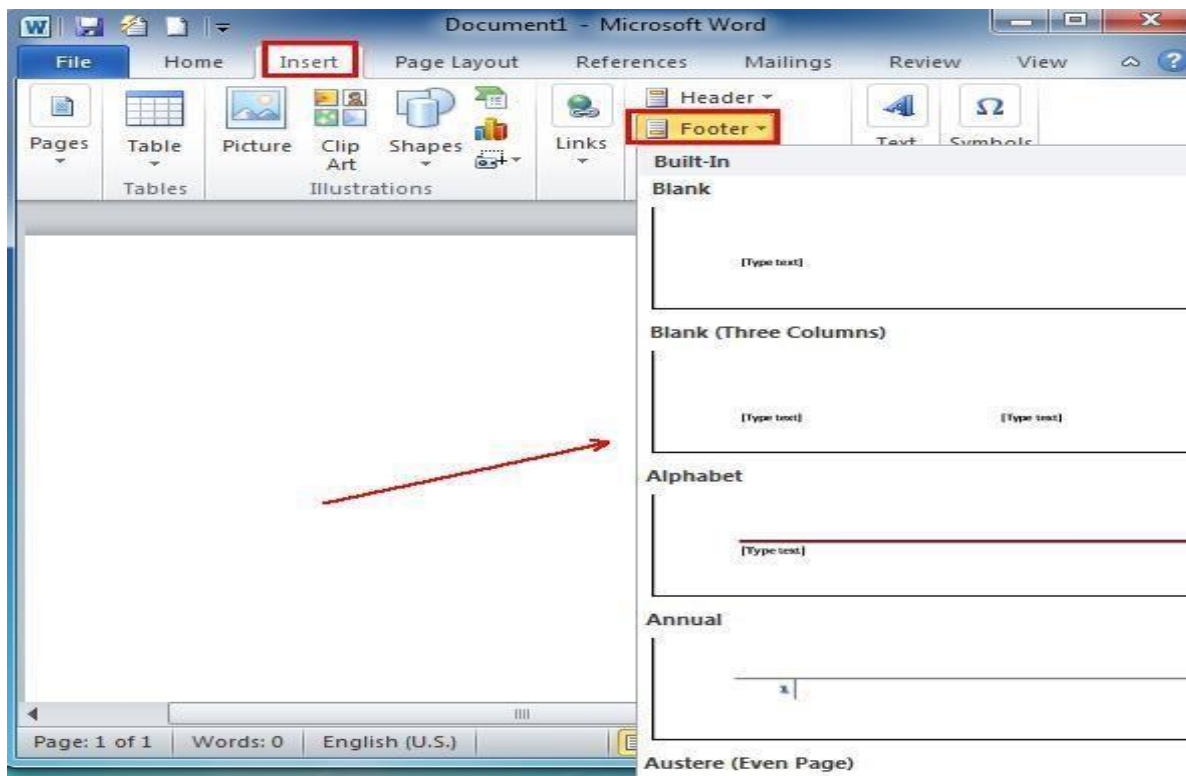


You can follow a similar procedure to add footer in your document.

## 2) Footers

This button is used to insert text that appears at the bottom of each page of the document.

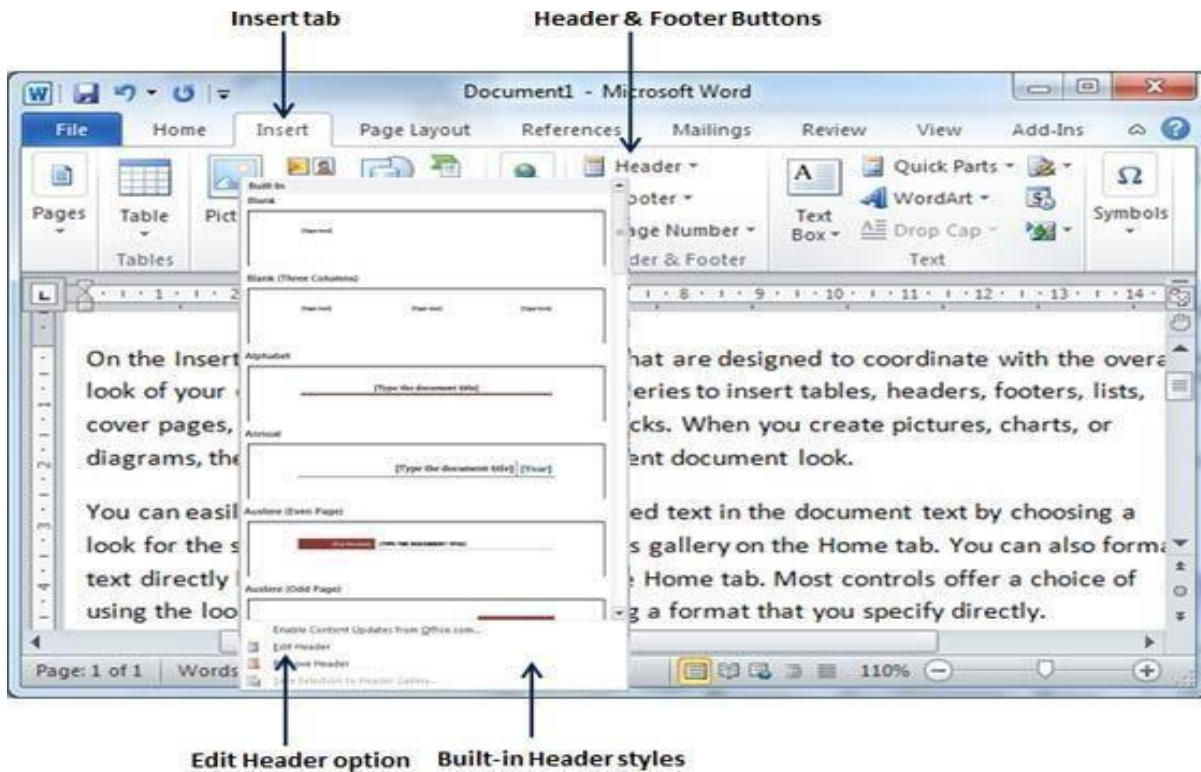
1. After chosen a footers button a gallery of footer styles and formats will appear.
2. Click the footer style that is displayed to insert it into the document.



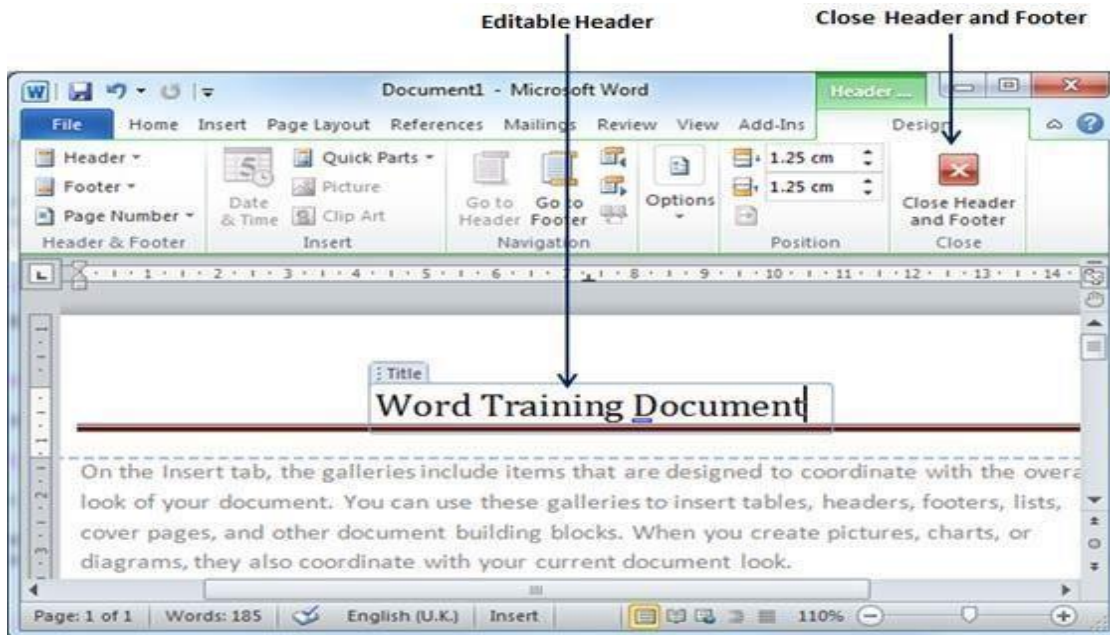
### Edit Header and Footer:

Follow the following simple steps in case you want to edit existing header or footer of your document.

**Step (1):** Click the **Insert tab**, and click either **Header** button or **Footer** button whatever you want to edit. Assume you are going to edit Header, so when you click Header button it will display a list of options including Edit Header option.



**Step (2):** Just click on it and word will display editable header for you as shown below.



**Step (3):** Now you can edit your document header and once you are done, click Close Header and Footer to come out of header edit mode.



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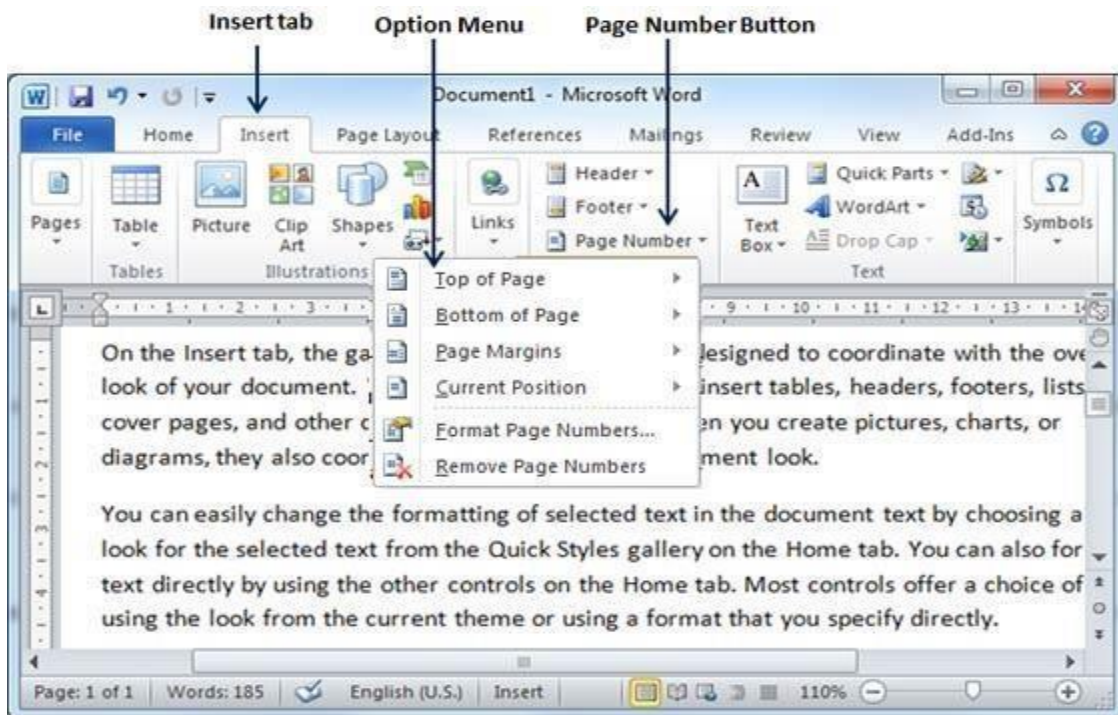
You can follow a similar procedure to edit footer in your document.

### 3) Page Number

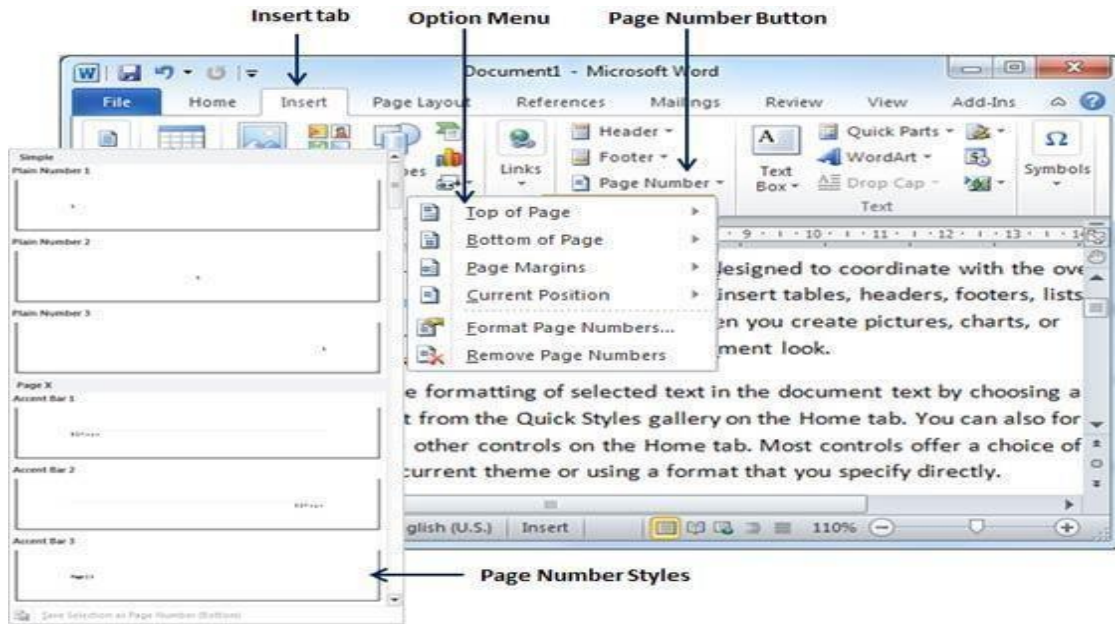
Microsoft Word automatically insert page numbers on the pages of your document. Typically, page numbers are printed either in header or footer but you have option also can display the page number in the left or right margins at the top or the bottom of a page.

Following are the simple steps to add page numbers in a word document.

**Step (1):** Click the **Insert tab**, and click **Page Number** button available in header and footer section. This will display a list of options to display page number at the top, bottom, current position etc.

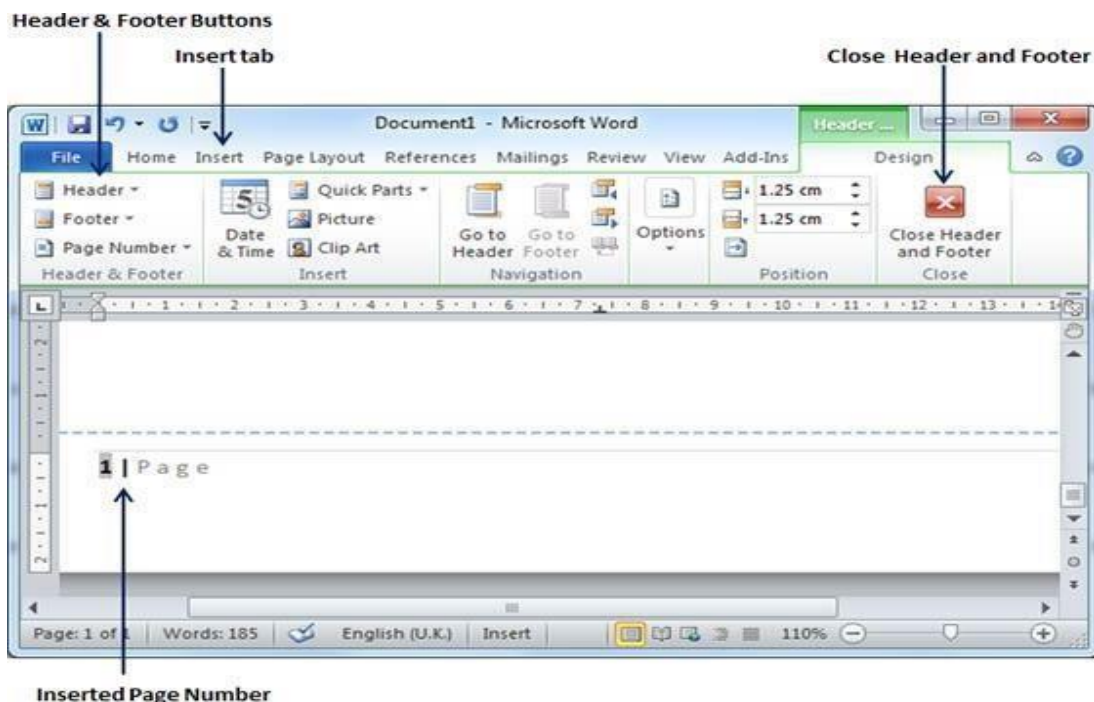


**Step (2):** When you move your mouse pointer over the available options, it displays further styles of page numbers to be displayed. For example when I take mouse pointer at Bottom of Page option it displays following list of styles.



**Step (3):** Finally select of the page number styles which you like most. I selected Accent Bar 1 style by clicking over it. After this step you will enter in Page Footer modification mode, so you would have to click Close Header and Footer button to come out of footer edit mode.

**You can format your page numbers using Format Page Numbers option available under the listed options.**



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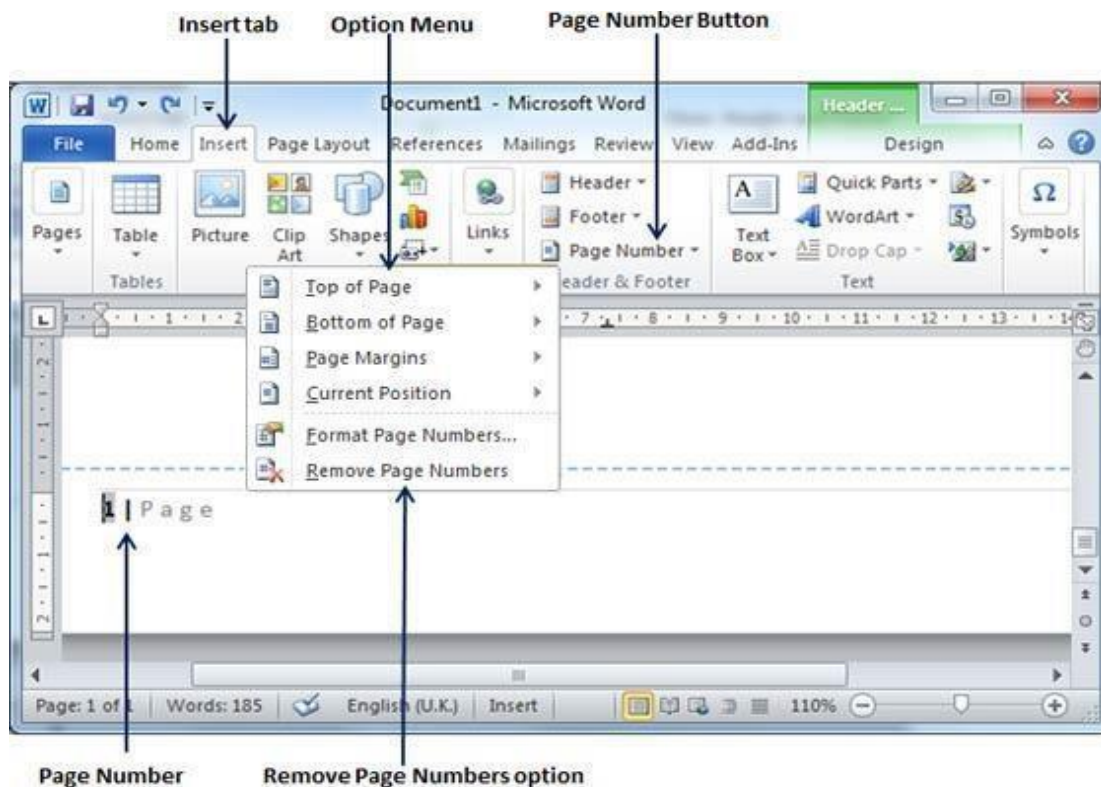
---

**Remove Page Numbers:**

Following are the simple steps to remove page numbering from a word document.

Step (1): Click the Insert tab, and click Page Number button available in header and footer section. This will display a list of options to display page number at the top, bottom, current position etc., and at the bottom you will have Remove Page Numbers option.

Step (2): click this option and it will delete your all the page numbers set in your document.





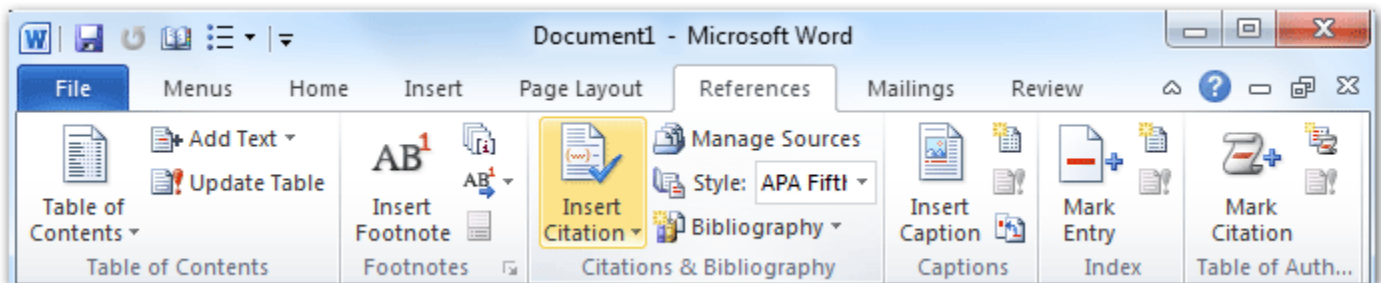
## Lecture 11 contain:

### ➤ References in MS-Word 2010 ( References Tab)

#### 1.4.6 References Tab

If you need to write a research paper, chances are you'll also be required to include a bibliography. Or you might be asked to include a works cited page or a list of references. These are all just different names for the same thing: a list of sources—such as books, articles, or even websites—that you used to research and write your paper.

Adding citations and references is essential for students for their academic projects. Failing to add relevant references can not only lead to a deduction of marks but might even result in the project being rejected by the teacher. Furthermore, it can be difficult to keep up with different types of referencing styles to meet the criteria set by your teachers. Fortunately, Microsoft Word makes it quite easy to add citations and references to your Word documents.



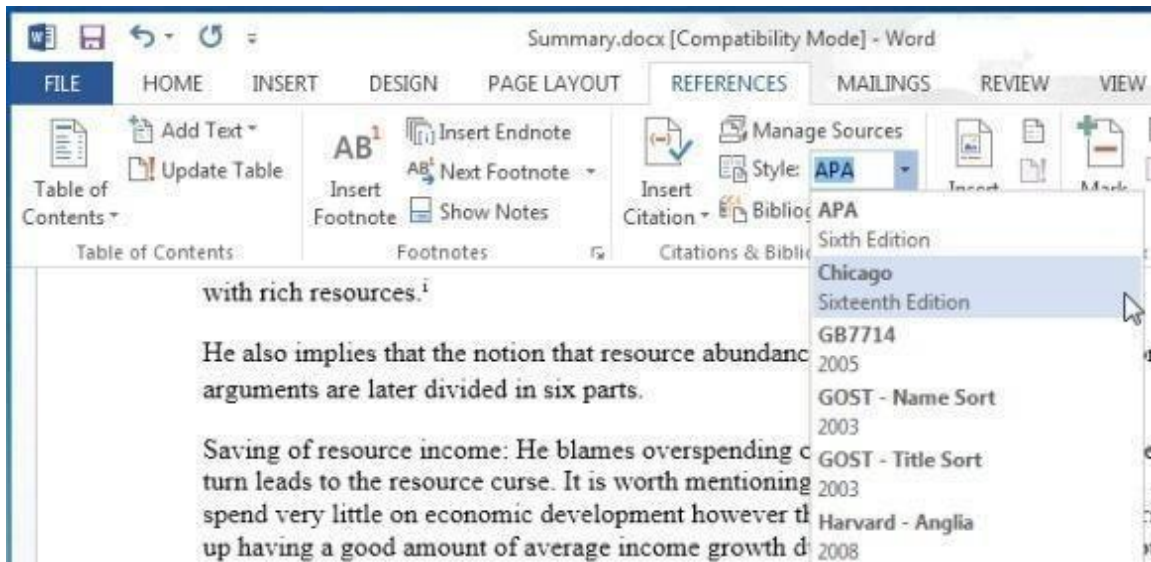
It's including six groups:

- 1) Table of Contents
- 2) Footnotes
- 3) Citations & Bibliography
- 4) Captions
- 5) Index
- 6) Table of Authorities

To create a references you can follow the steps below:

#### **Step 1: Choose a reference style**

To create a reference, head over to the References tab in MS Word and select a referencing style. By default Microsoft Word provides a variety of referencing styles, including the most commonly used styles like the Chicago and Harvard style of referencing. To do this, click the References tab, then select the desired style in the Citations & Bibliography group.

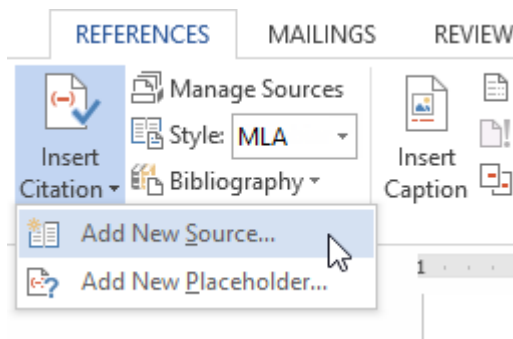


You can use this same method to change the reference style at any time.

### Step 2: Add citations and sources

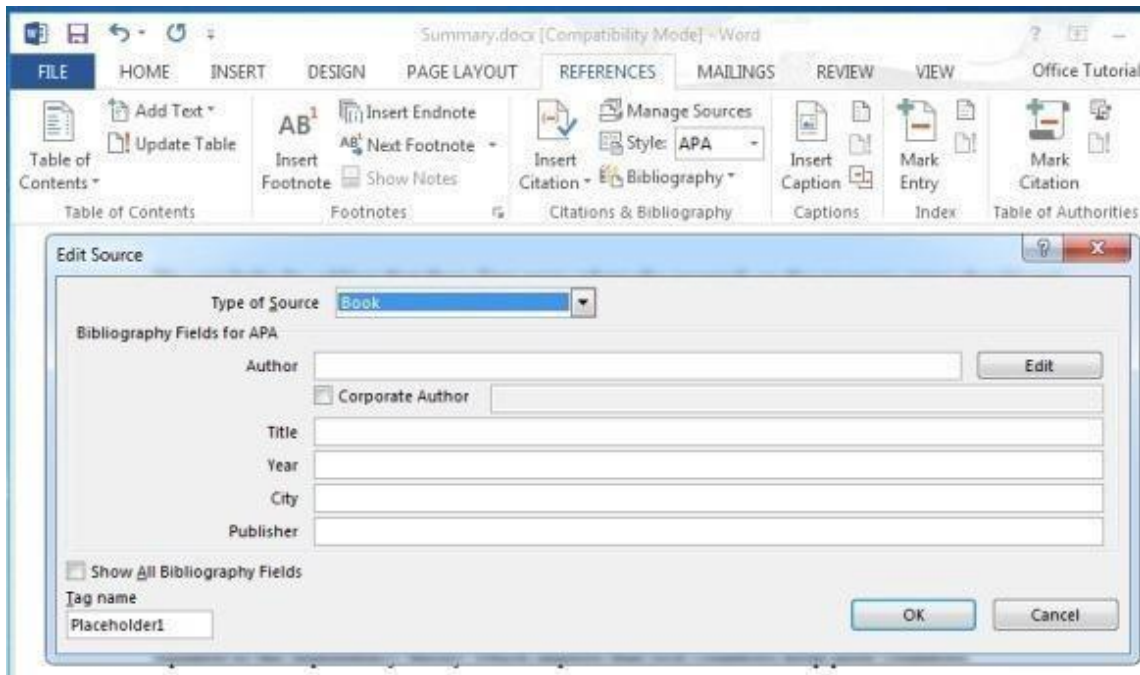
Whenever you use information from one of your sources, you'll need to give credit—or cite them. This is known as making a citation. You'll include citations whenever you use information from a source or when you quote a source directly.

To add a citation click Insert Citation and select Add New Source.

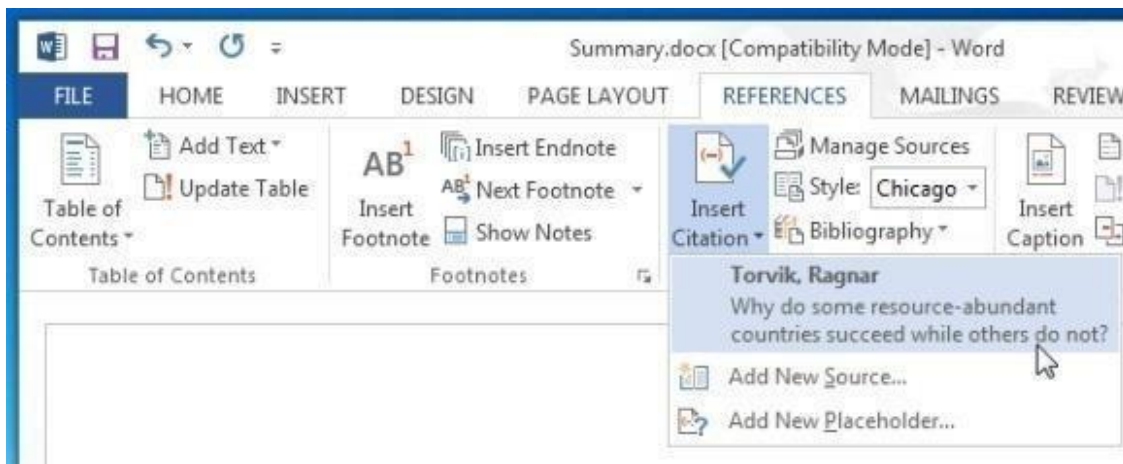


### Step 3:

This will open a dialog box where you can select a source type and add relevant details. The available source types include Book, Book Section, Journal Article, Article in a Periodical, Conference Proceedings, and Report.



**Step 4:** Once your reference has been created, go to Insert Citation and select it to add it as an online reference.



---

## **Picture Format Tab**

### **Introduction**



Once you have added pictures to your documents, you can format them in various ways. The **picture tools** in MS-Word make it easy to incorporate images into your documents and **modify these images** in interesting ways.

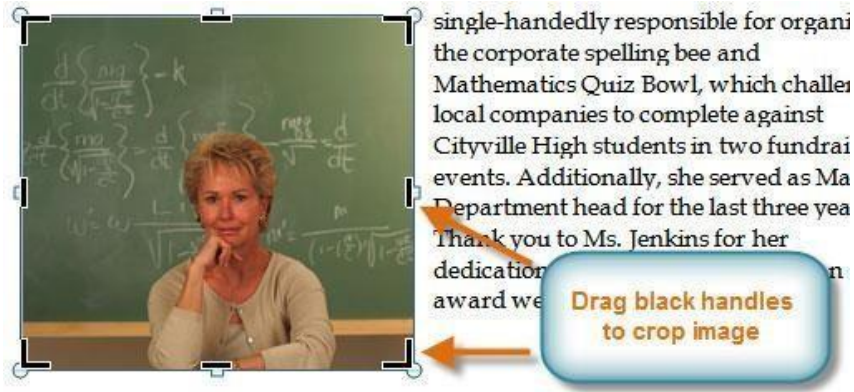
In this lesson, you will learn how to change the **picture style** and **shape**, add a **border**, **crop**, and **compress** pictures, and add **artistic effects**.

### **Basic image formatting**

Have you inserted a picture into your document that you want to trim or make appear smaller on the page? Perhaps you'd like to add an artistic effect or a border to the image to make it stand out. You can use Word's **picture tools** to help you modify the **picture style** and **shape**, add a **border**, **crop**, add **artistic effects**, and even **compress** pictures.

To crop an image:

1. Select an image. The **Format** tab will appear.
2. Select the **Format** tab.
3. Click the **Crop** command. Black cropping handles appear.

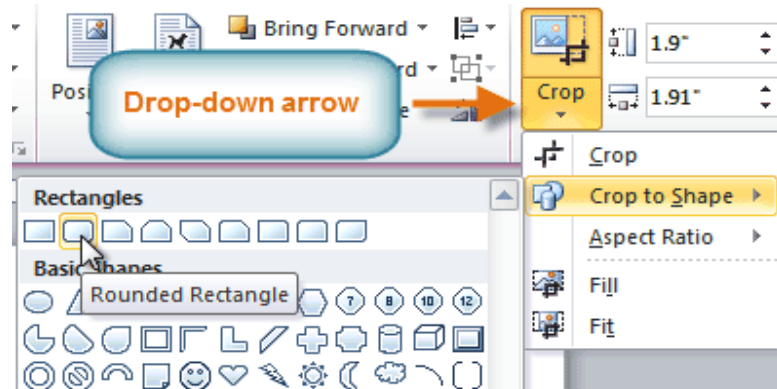


4. Click and drag a **handle** to crop an image.
5. Click the **Crop** command to deselect the crop tool.

Corner handles will allow you to simultaneously crop the image horizontally and vertically.

To crop an image to a shape:

1. Select the image. The **Format** tab will appear.
2. Select the **Format** tab.
3. Click the **Crop** drop-down arrow (below the Crop command). A drop-down menu will appear.



4. Select a shape from the drop-down menu.
5. The image will take the shape you have selected.

---

# Mary Jenkins Named Teacher of the Year

We are pleased to announce that the 2010 Cityville High teacher of the year is Ms. Mary Jenkins. Ms. Jenkins has worked as a high school math teacher for 16 years and has been with Cityville High for 12 years. In that time she has shown immense dedication to her students and the school. She is single-handedly responsible for

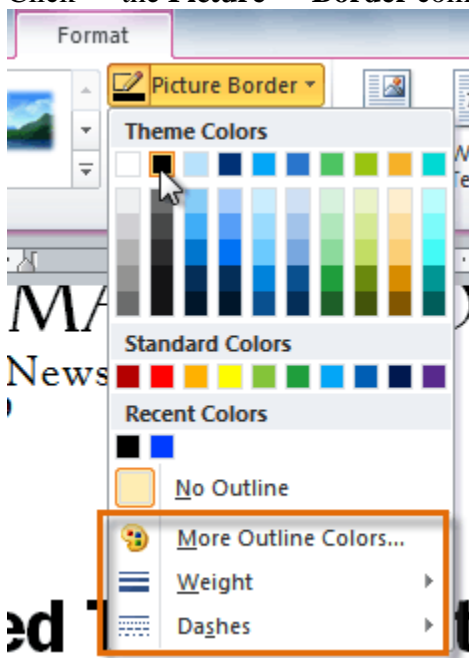


organizing the corporate spelling bee and Mathematics Quiz Bowl, which challenges local companies to complete against Cityville High students in two fundraising events. Additionally, she served as Math Department head for the last three years. Thank you to Ms. Jenkins for her dedication and congratulations for an award well earned!

You may want to crop the image to the desired size before cropping it to a shape.

To add a border to a picture:

1. Select the picture.
2. Select the **Format** tab.
3. Click the **Picture Border** command. A drop-down menu will appear.



4. From the drop-down menu, you can select a **color**, **weight** (thickness), and whether the line is **dashed**.





## Image adjustments

To make image corrections:

1. Select the image. The **Format** tab will appear.
2. Click the **Format** tab.
3. Click the **Corrections** command. A drop-down menu will appear.

A screenshot of the Microsoft Word ribbon interface. The 'Format' tab is selected, and the 'Corrections' button is highlighted. A 'Picture Corrections Options' task pane is open, showing 'Sharpen and Soften' and 'Brightness and Contrast' sections. The 'Sharpen and Soften' section has five thumbnails, with the third one selected. The 'Brightness and Contrast' section has a 5x5 grid of thumbnails, with the one in the third row and second column selected. To the right of the task pane, the text 'Named Teach' is visible, and below it is an image of the woman from the first image, which is selected with a blue border and handles. Below the image, the text 'PTA Bake Sale' and 'The Parent Teacher Associat' is visible.



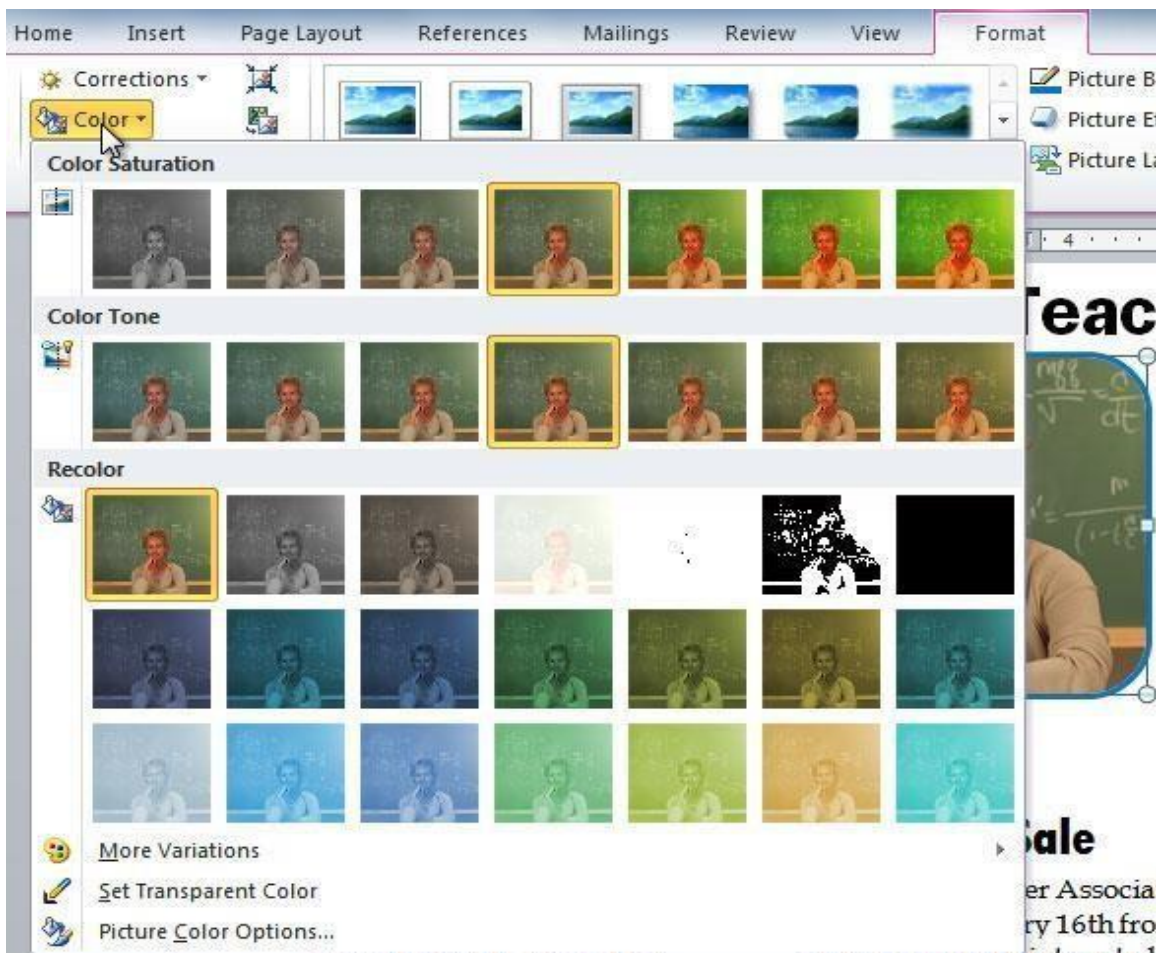
Lec. Tamara A. Anai

4. To sharpen or soften the image, hover over the **Sharpen and Soften** presets. You'll see a live preview of the preset in the document.
5. When you've found a preset you like, click it to select it.
6. Click the **Corrections** command again.
7. Hover over the **Brightness and Contrast** presets to see a live preview.
8. When you've found one you like, click it to select it.

You can also select **Picture Corrections Options** from the drop-down menu to refine the settings.

To adjust the color in an image:

1. Select the image. The **Format** tab will appear.
2. Click the **Format** tab.
3. Click the **Color** command. A drop-down menu will appear.



4. From the drop-down menu, you can choose a preset from each of the following three categories:

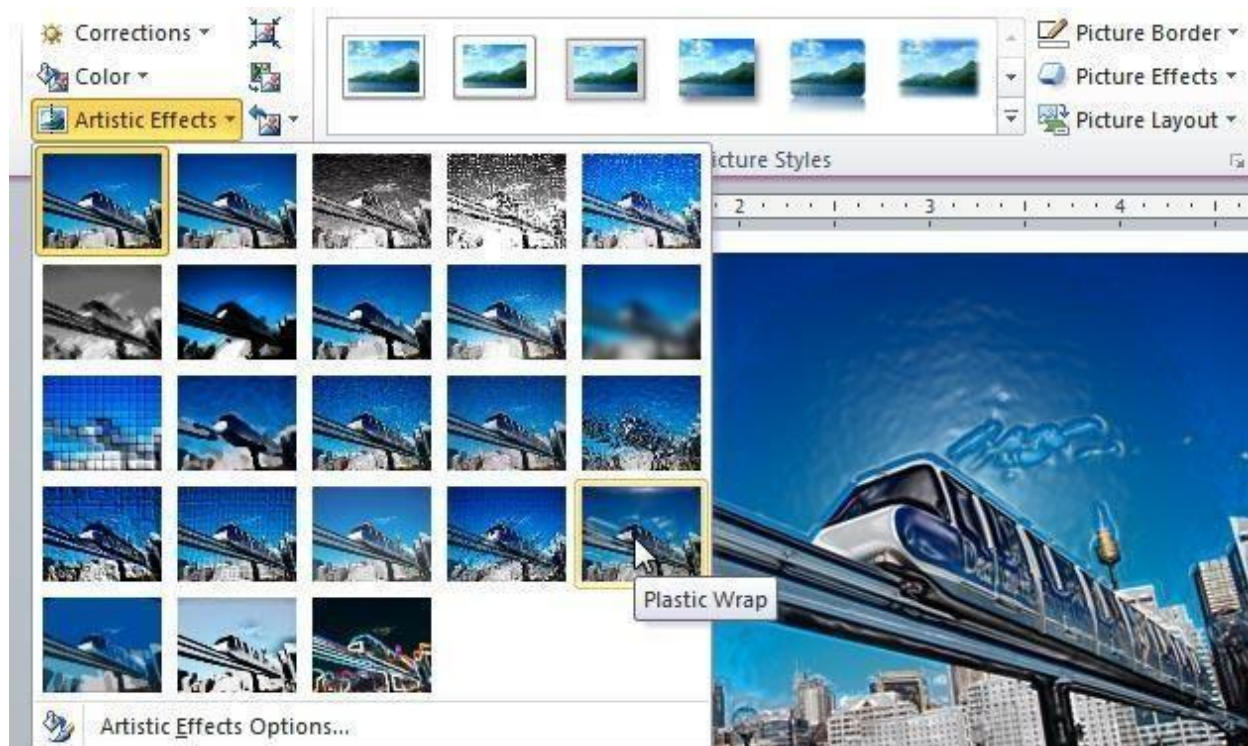
- **Color Saturation:** This controls how vivid the colors are in the image.
- **Color Tone:** This controls the temperature of the color, from **cool** to **warm**.
- **Recolor:** This controls the overall color of the image. Use this option to make the image **black and white** or **grayscale**, or to **colorize** it with a different color.

You can also select **Picture Color Options** from the drop-down menu to refine the settings.

### Artistic effects and styles

To apply an artistic effect:

1. Select the picture. The **Format** tab will appear.
2. Click the **Format** tab.
3. Click the **Artistic Effects** command. A drop-down menu will appear.



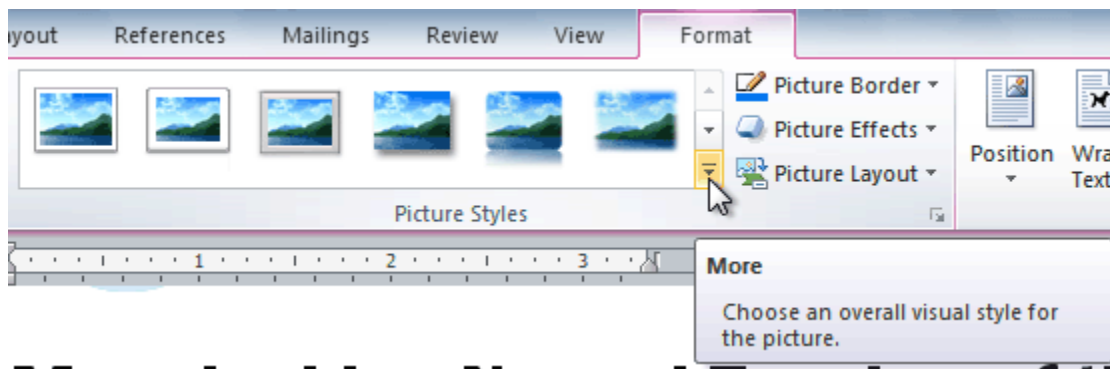
4. Hover over the different presets to see a live preview of each one.
5. When you've found a preset you like, click it to select it.

6. To adjust the settings for the effect, click **Artistic Effects** again, then select **Artistic Effect Options**.

Many **clip art** images do not allow you apply artistic effects. Generally speaking, the ones that look hand-drawn or painted do not work, while photographs do.

To apply a picture style:

1. Select the picture. The **Format** tab will appear.
2. Select the **Format** tab.
3. Click the **More** drop-down arrow to display all of the picture styles.



4. Hover over a picture style to display a live preview of the style in the document.

5. Select the desired style.



6. To refine the picture style, click the **Picture Effects** command to see the **Effects** drop-down menu. You may remember that the Effects menu was covered in our **Working with Shapes** lesson, which you can review for more information.



## Removing the background from an image

Removing the background from an image can give your images a cleaner appearance. If you're printing your document, it can also save ink.

### *About Background Removal*

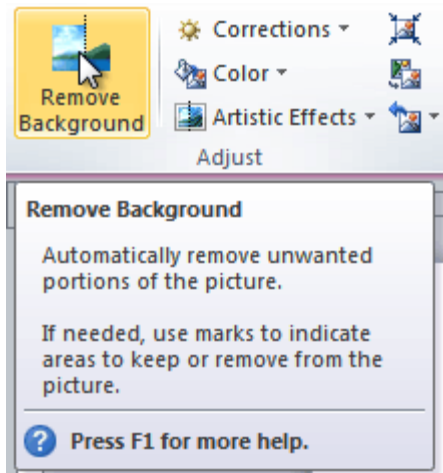
With **Background Removal**, Word uses special algorithms to determine which parts of the image are the background and then removes these areas from the image.





To remove the background from an image:

1. Click the image. The **Format** tab will appear.
2. Click the **Format** tab.
3. Click the **Remove Background** command.



4. Word will try to guess which part of the image is the background, and it will mark the area with a **magenta** fill. It will also place a box around the image with selection handles.



5. Drag the selection handles until all of the foreground is inside the box. After you do this, Word may readjust the background.
6. At this point, you may need to help Word decide which parts of the image are **foreground** and which parts are **background**. You can do this by using the **Mark Areas to Keep** and **Mark Areas to Remove** commands.
  - If Word has marked part of the foreground magenta, click **Mark Areas to Keep** and draw a line in that region of the image.
  - If part of the background has not been marked with magenta, click **Mark Areas to Remove** and draw a line in that region of the image.

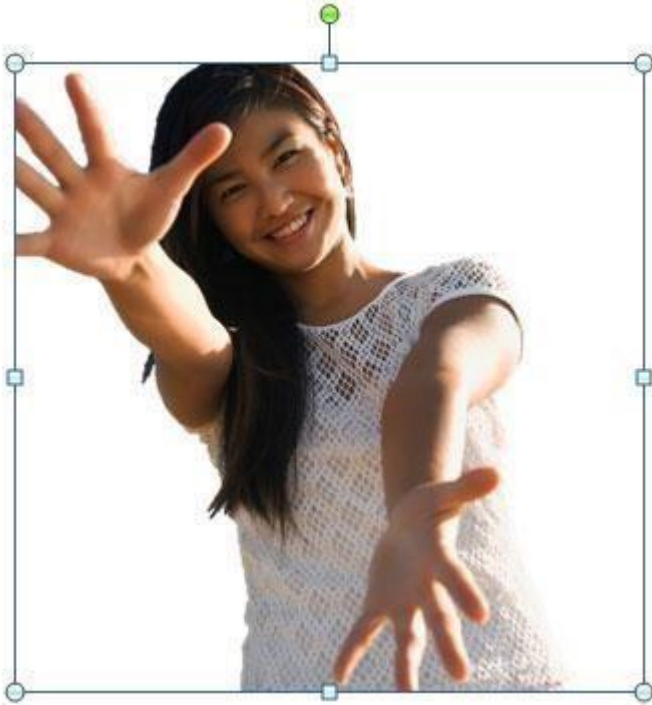


7. After you add your marks, Word will readjust the image.



8. When you're satisfied with the image, click **Keep Changes**. All of the magenta areas will be removed from the image.





9. You can adjust the image at any time by clicking the **Remove Background** command again.

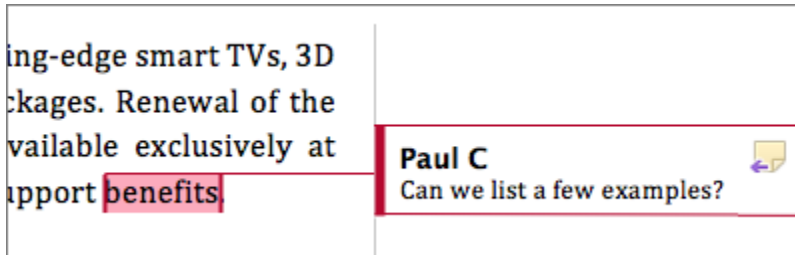
As with **artistic effects**, Background Removal will not work with some **clip art** images.

**Challenge!**

1. Create a **new** document.
2. Insert an **image from a file**.
3. **Resize** the image.
4. **Crop** the image.
5. **Remove the background** from the image.
6. Experiment with different **image corrections** and **color settings**.
7. Add an **artistic effect** to the image.
8. **Compress** the image.
9. **Save** the document.

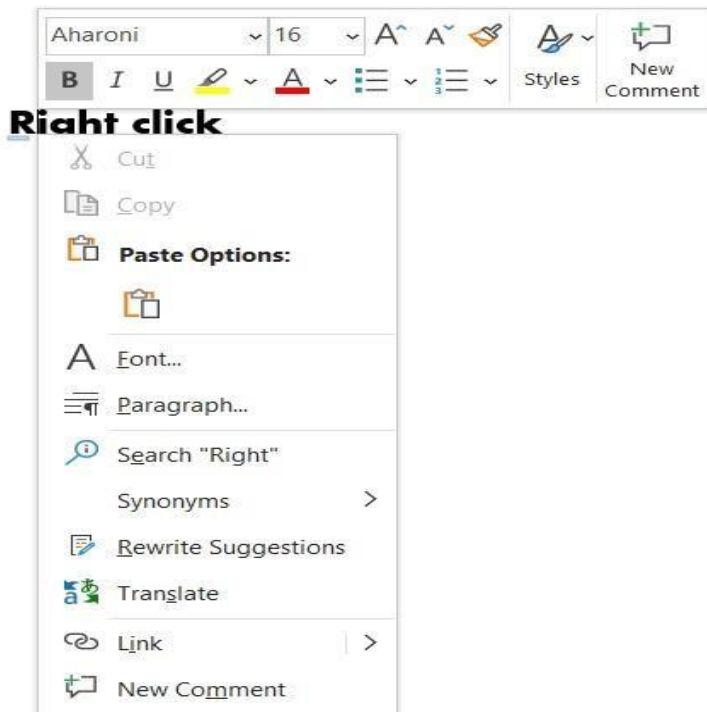
**Insert comment:** (Add a note about this part of the document).

1. Select the text you want to comment on.
2. On the **Insert** tab, click **New Comment**.



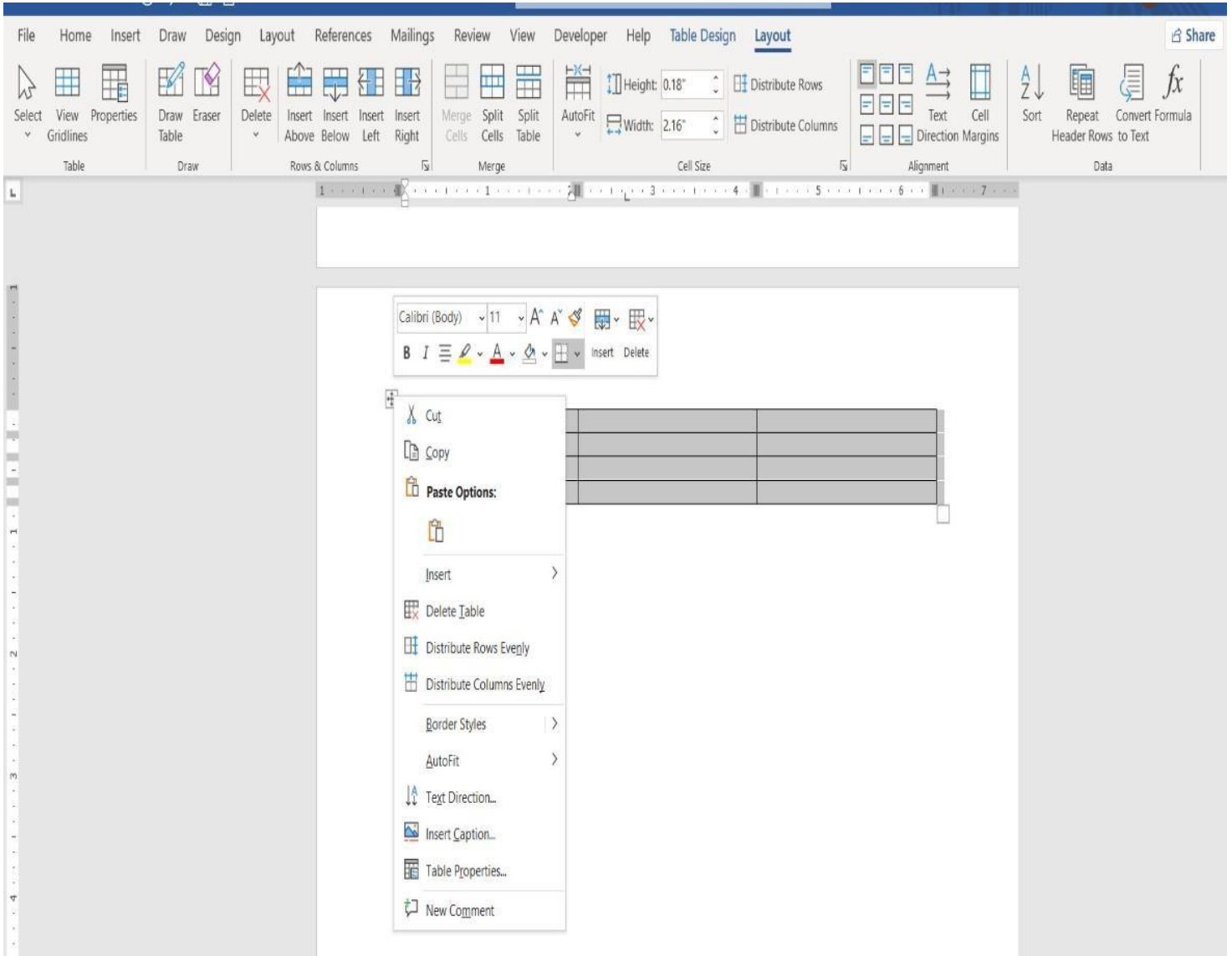
You can insert a comment by click on the text right-click and choose comment or remove the comment if you want to remove it.

**Right Click:**



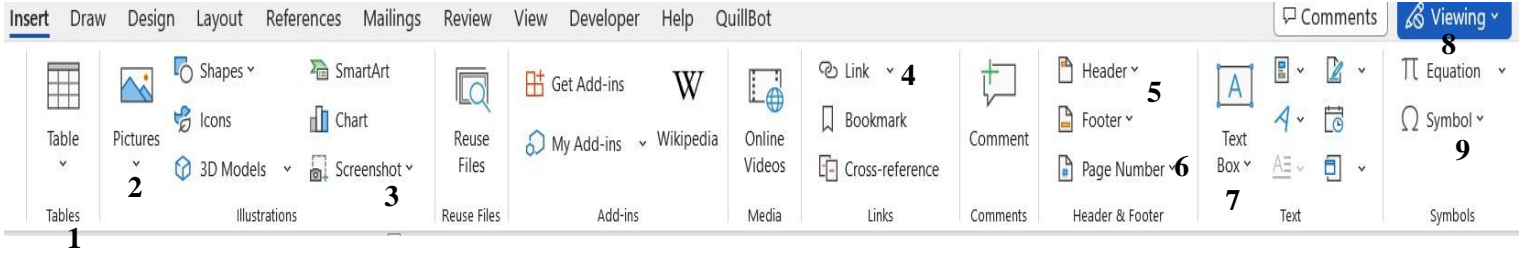
# Lec. Tamara A. Anai

## Tables options (right-click on table or layout tab):



---

## In Insert Tab



1- Insert Table.

2- Insert Pictures

3- Insert a screenshot or screen clipping.

Without leaving the app that you are working in; you can add a snapshot of the screen to your Office file to enhance readability or capture information. This feature is available in Excel, Outlook, PowerPoint, and Word.

4- Create or edit a hyperlink: The fastest way to create a basic hyperlink in a Microsoft 365 document is to press ENTER or the SPACEBAR after you type the address of an existing webpage, such as <http://www.contoso.com>. Microsoft 365 automatically converts the address into a link. In addition to webpages, you can create links to existing or new files on your computer, to email addresses, and to specific locations in a document. You can also edit the address, display text, and font style or color of a hyperlink.

5- Insert a header and footer:

Choose the header/footer style you want to use. To create your own, choose Blank and then edit it.

Select Edit Header/ footer to open the foot on the page you've selected. If you haven't selected a page, it'll open the first header. Choose Remove Header/ footer to delete all headers/ footers.

6- Insert or remove page numbers

6- Add text box.

8- Write an equation or formula

9- Add symbols that are not on your keyboard.

# In Design Tab



1- Add ghost text

2- Change the color of the page

3- Add or change the borders on the page.

# Computer Science – College of Dentistry

## Frist Class – Second Term

### Microsoft Excel



Ass.Lec Heba Hani Raheem

Microsoft Excel is the spreadsheet component of Microsoft Office Suite. It is used primarily to enter, edit, format, sort, perform mathematical computations, save, retrieve, and print numeric data.

Excel is a **spreadsheet program** that allows you to store, organize, and analyze information.

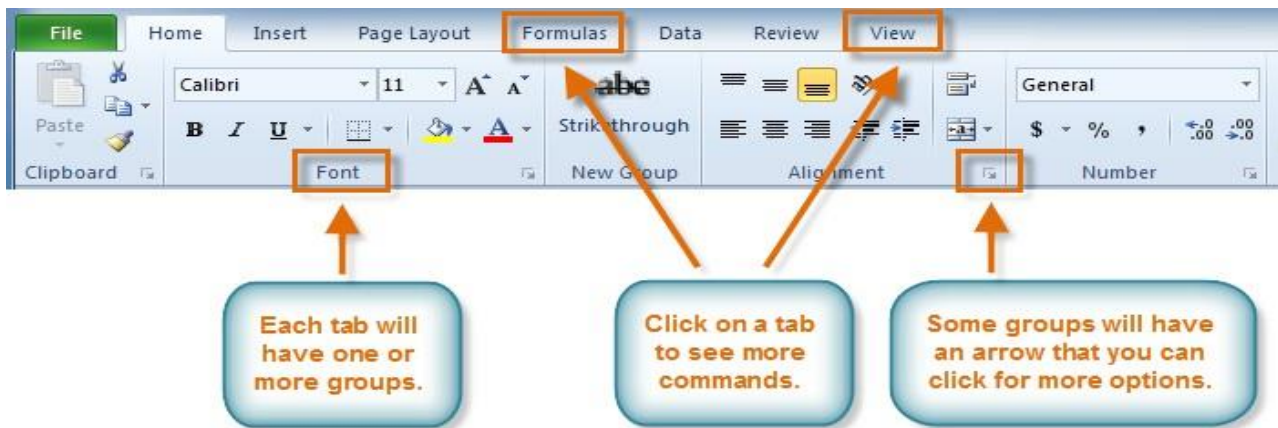
### Open Excel 2010

Click the buttons start in desktop select All Programs → Microsoft Office → Excel 2010

### The Excel interfaces.

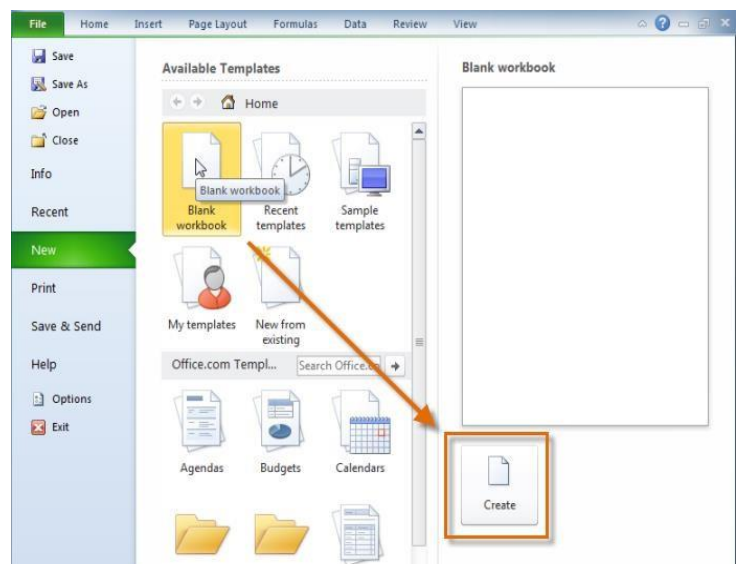
#### The Ribbon

The Ribbon contains multiple **tabs**, each with several **groups** of commands. You can add your own tabs that contain your favorite commands.



### To create a new blank workbook:

1. Click the **File** tab. This takes you to **Backstage view**.
2. Select **New**.
3. Select **Blank workbook** under **Available Templates**. It will be highlighted by default.
4. Click **Create**. A new blank workbook appears in the Excel window.



# Computer Science – College of Dentistry

## Frist Class – Second Term

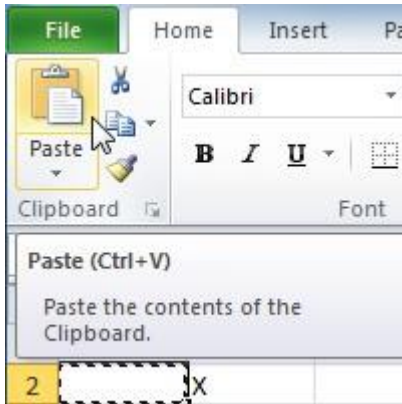
### Microsoft Excel



Ass.Lec Heba Hani Raheem

#### Cell Basics

#### Introduction

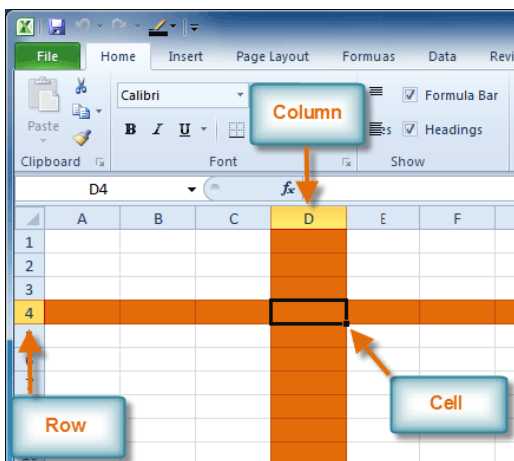


You will need to know the basic ways you can work with cells and cell content in Excel to be able to use it to calculate, analyze, and organize data. In this lesson, you will learn how to **select cells**, **insert content**, and **delete cells and cell content**. You will also learn how to **cut**, **copy**, and **paste cells**; **drag and drop cells**; and **fill cells** using the fill handle.

#### Introduction to cells and cell content

Cells are the basic building blocks of a worksheet. They can contain a variety of content such as **text**, **formatting attributes**, **formulas**, and **functions**. To work with cells, you'll need to know how to **select them**, **insert content**, and **delete cells and cell content**.

#### The cell




Each rectangle in a worksheet is called a **cell**. A cell is the intersection of a **row** and a **column**.

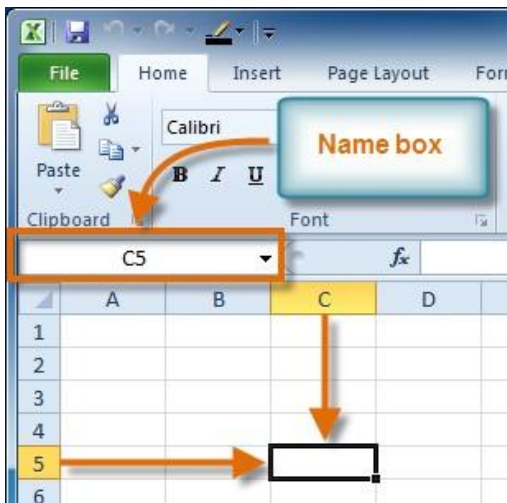
Each cell has a name, or a **cell address** based on which **column** and **row** it intersects. The **cell address** of a selected cell appears in the **name box**. Here, you can see that **C5** is selected.

You can also select **multiple cells** at the same time. A group of cells is known as a **cell range**. Rather than a single cell address, you will refer to a cell range using the cell addresses of the **first** and **last** cells in the cell range, separated by a **colon**. For example, a cell range that included cells A1, A2, A3, A4, and A5 would be written as **A1:A5**.

#### To select a cell:

1. **Click a cell** to select it. When a cell is selected, you will notice that the **borders** of the cell appear bold  and the **column heading** and **row heading** of the cell are highlighted.
2. Release your mouse. The cell will stay selected until you click another cell in the worksheet.

You can also navigate your worksheet and select a cell by using the **arrow keys** on your keyboard.





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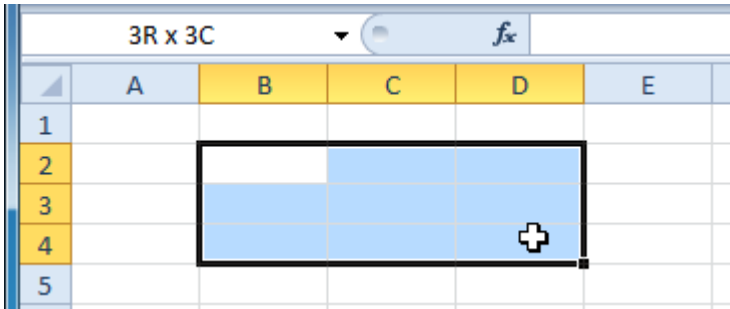
## Frist Class – Second Term

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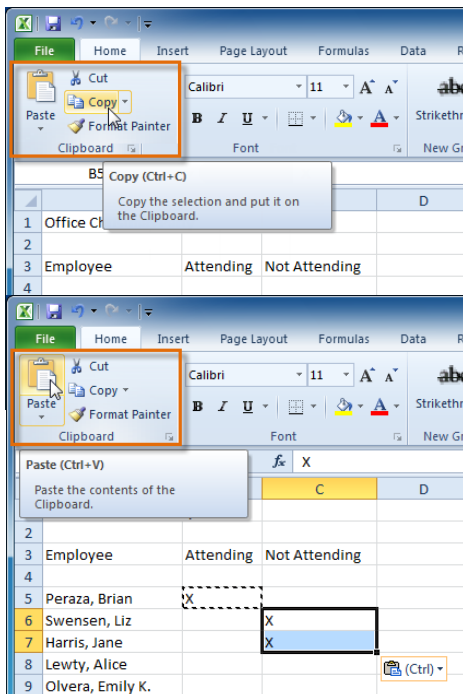
#### To select multiple cells:



1. **Click and drag your mouse** until all of the adjoining cells you want are highlighted.

2. Release your mouse. The cells will stay selected until you click another cell in the worksheet.

#### To copy and paste cell content:



1. Select the cells you want to copy.
2. Click the **Copy** command. The border of the selected cells will change appearance.
3. Select the cell or cells where you want to paste the content.
4. Click the **Paste** command. The copied content will be entered into the highlighted cells.

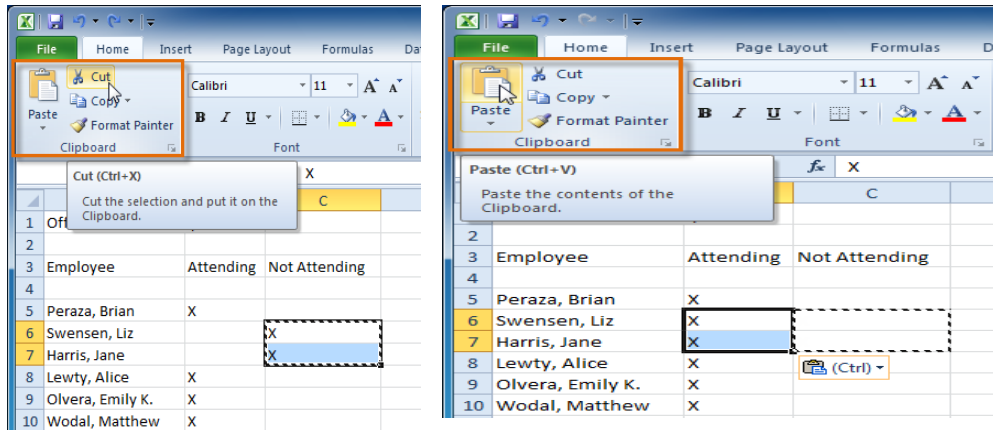
#### To cut and paste cell content:

1. Select the cells you want to cut.
2. Click the **Cut** command. The border of the selected cells will change appearance.

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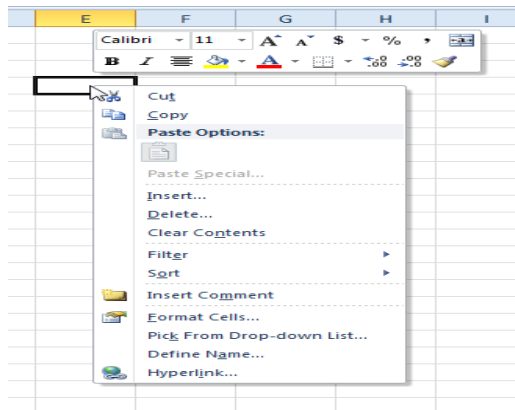


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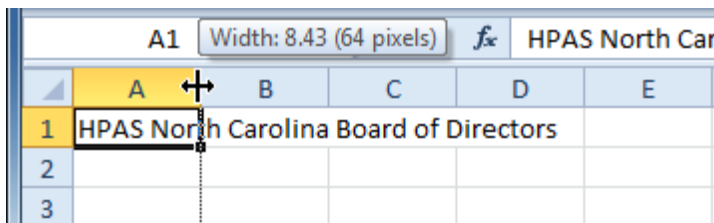
3. Select the cells where you want to paste the content.
4. Click the **Paste** command. The cut content will be removed from the original cells and entered into the highlighted cells.

**To access formatting commands by right-clicking:**

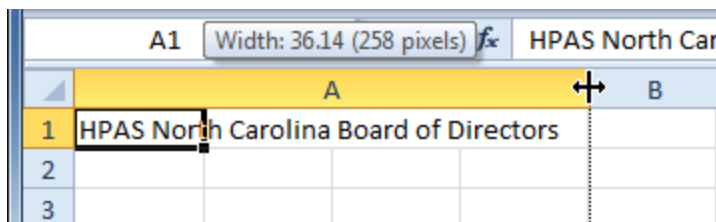


1. Select the cells you want to format.
2. **Right-click** the selected cells. A **dialog box** will appear where you can easily access many commands on the Ribbon.

**To modify column width:**



1. Position your mouse over the **column line** in the **column heading** so the **white cross** becomes a **double arrow**.



2. **Click and drag the column** to the right to increase column width or to the left to decrease column width.

3. Release the mouse. The column width will be changed in your spreadsheet.

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A1		HPAS North Car
	A	B
1	HPAS North Carolina Board of Directors	
2		
3		


If you see **pound signs** (#####) in a cell, it means the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

**To insert rows:**

A7				McBride, Rebecca
	A	B	C	
1	Ashberry, Jane	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>	
2	Davis, Garrett	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>	
3	Eberhardt, Elizabeth	252-985-3558	<a href="mailto:eberhardt@hpasnc.org">eberhardt@hpasnc.org</a>	
4	Everett, Carol	919-503-9560	<a href="mailto:everettc@hpasnc.org">everettc@hpasnc.org</a>	
5	Hepburn, Katie H.	704-882-5559	<a href="mailto:hepburnk@hpasnc.org">hepburnk@hpasnc.org</a>	
6	Lovlace, Deb	919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>	
7	McBride, Rebecca	828-357-0072	<a href="mailto:mcbriider@hpasnc.org">mcbriider@hpasnc.org</a>	
8	Mixon, Daniel	919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>	
9	Stevens, Kevin	919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>	

1. Select the row **below** where you want the new row to appear.
2. Click the **Insert** command on the **Home** tab.
3. The new row appears in your worksheet.

When inserting new rows, columns, or cells, you will see the **Insert Options** button  by the inserted cells. This button allows you to choose how Excel formats them. By default, Excel formats inserted rows with the same formatting as the cells in the row above them. To access more options, hover your mouse over the Insert Options button and click the drop-down arrow that appears.

A7				McBride, Rebecca
	A	B	C	
1	Ashberry, Jane	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>	
2	Davis, Garrett	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>	
3	Eberhardt, Elizabeth	252-985-3558	<a href="mailto:eberhardt@hpasnc.org">eberhardt@hpasnc.org</a>	
4	Everett, Carol	919-503-9560	<a href="mailto:everettc@hpasnc.org">everettc@hpasnc.org</a>	
5	Hepburn, Katie H.	704-882-5559	<a href="mailto:hepburnk@hpasnc.org">hepburnk@hpasnc.org</a>	
6	Lovlace, Deb	919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>	
7				
8	 McBride, Rebecca	828-357-0072	<a href="mailto:mcbriider@hpasnc.org">mcbriider@hpasnc.org</a>	
9	Mixon, Daniel	919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>	
10	Stevens, Kevin	919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>	

**To insert columns:**

1. Select the column to the **right** of where you want the new column to appear. For example, if you want to insert a column between A and B, select column B.

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	A	B	C
1	Ashberry, Jane	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>
2	Davis, Garrett	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>
3	Eberhardt, Elizabeth	252-985-3558	<a href="mailto:eberhardte@hpasnc.org">eberhardte@hpasnc.org</a>
4	Everett, Carol	919-503-9560	<a href="mailto:everettc@hpasnc.org">everettc@hpasnc.org</a>
5	Hepburn, Katie H.	704-882-5559	<a href="mailto:hepburnk@hpasnc.org">hepburnk@hpasnc.org</a>
6	Lovelace, Deb	919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>
7	Manning, Christopher L.	919-976-7569	<a href="mailto:manningc@hpasnc.org">manningc@hpasnc.org</a>
8	McBride, Rebecca	828-357-0072	<a href="mailto:mcbrider@hpasnc.org">mcbrider@hpasnc.org</a>
9	Mixon, Daniel	919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>
10	Stevens, Kevin	919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>

2. Click the **Insert** command on the **Home** tab.
3. The new column appears in your worksheet.

	A	B	C	D
1	Ashberry, Jane		919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>
2	Davis, Garrett		919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>
3	Eberhardt, Elizabeth		252-985-3558	<a href="mailto:eberhardte@hpasnc.org">eberhardte@hpasnc.org</a>
4	Everett, Carol		919-503-9560	<a href="mailto:everettc@hpasnc.org">everettc@hpasnc.org</a>
5	Hepburn, Katie H.		704-882-5559	<a href="mailto:hepburnk@hpasnc.org">hepburnk@hpasnc.org</a>
6	Lovelace, Deb		919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>
7	Manning, Christopher L.		919-976-7569	<a href="mailto:manningc@hpasnc.org">manningc@hpasnc.org</a>
8	McBride, Rebecca		828-357-0072	<a href="mailto:mcbrider@hpasnc.org">mcbrider@hpasnc.org</a>
9	Mixon, Daniel		919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>
10	Stevens, Kevin		919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>

**To delete rows:**

1. Select the rows you want to delete.

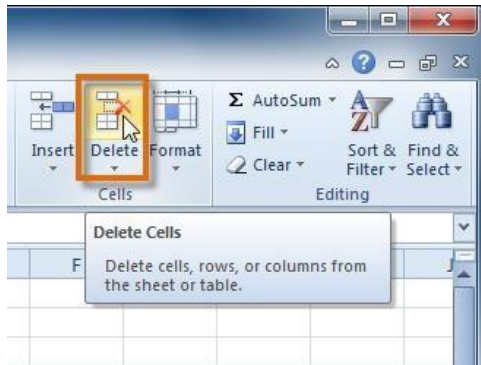
	A	B	C
1	Ashberry, Jane	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>
2	Davis, Garrett	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>
3	Eberhardt, Elizabeth	252-985-3558	<a href="mailto:eberhardte@hpasnc.org">eberhardte@hpasnc.org</a>
4	Everett, Carol	919-503-9560	<a href="mailto:everettc@hpasnc.org">everettc@hpasnc.org</a>
5	Hepburn, Katie H.	704-882-5559	<a href="mailto:hepburnk@hpasnc.org">hepburnk@hpasnc.org</a>
6	Lovelace, Deb	919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>
7	Manning, Christopher L.	919-976-7569	<a href="mailto:manningc@hpasnc.org">manningc@hpasnc.org</a>
8	McBride, Rebecca	828-357-0072	<a href="mailto:mcbrider@hpasnc.org">mcbrider@hpasnc.org</a>
9	Mixon, Daniel	919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>
10	Stevens, Kevin	919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>

2. Click the **Delete** command on the **Home** tab.

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3. The rows are deleted from your worksheet.

	A	B	C
1	Ashberry, Jane	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>
2	Davis, Garrett	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>
3	Lovelace, Deb	919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>
4	Manning, Christopher L.	919-976-7569	<a href="mailto:manningc@hpasnc.org">manningc@hpasnc.org</a>
5	McBride, Rebecca	828-357-0072	<a href="mailto:mcbriider@hpasnc.org">mcbriider@hpasnc.org</a>
6	Mixon, Daniel	919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>
7	Stevens, Kevin	919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>
8			
9			
10			

**To delete columns:**

1. Select the columns you want to delete.

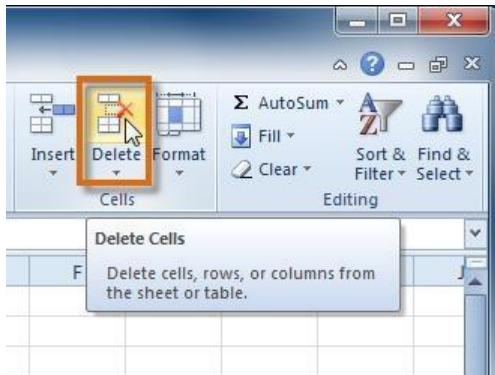
	A	B	C	D	E	F	G
1	Ashberry, Jane	Raleigh	27589	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>		
2	Davis, Garrett	Raleigh	27576	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>		
3	Eberhardt, Elizabeth	Louisberg	27079	252-985-3558	<a href="mailto:eberhardt@hpasnc.org">eberhardt@hpasnc.org</a>		
4	Everett, Carol	Chapel Hill	27051	919-503-9560	<a href="mailto:everettc@hpasnc.org">everettc@hpasnc.org</a>		
5	Hepburn, Katie H.	Cary	27057	704-882-5559	<a href="mailto:hepburnk@hpasnc.org">hepburnk@hpasnc.org</a>		
6	Lovelace, Deb	Newbern	24484	919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>		
7	Manning, Christopher L.	Raleigh	27587	919-976-7569	<a href="mailto:manningc@hpasnc.org">manningc@hpasnc.org</a>		
8	McBride, Rebecca	Cary	27054	828-357-0072	<a href="mailto:mcbriider@hpasnc.org">mcbriider@hpasnc.org</a>		
9	Mixon, Daniel	Raleigh	27086	919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>		
10	Stevens, Kevin	Durham	27054	919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>		

2. Click the **Delete** command on the **Home** tab.

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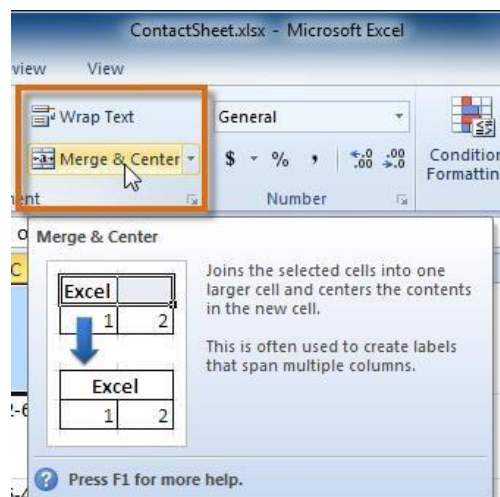
3. The columns are deleted from your worksheet.

	A	B	C	D	E	F	G
1	Ashberry, Jane	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>				
2	Davis, Garrett	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>				
3	Eberhardt, Elizabeth	252-985-3558	<a href="mailto:eberhardte@hpasnc.org">eberhardte@hpasnc.org</a>				
4	Everett, Carol	919-503-9560	<a href="mailto:everettc@hpasnc.org">everettc@hpasnc.org</a>				
5	Hepburn, Katie H.	704-882-5559	<a href="mailto:hepburnk@hpasnc.org">hepburnk@hpasnc.org</a>				
6	Lovelace, Deb	919-785-9656	<a href="mailto:lovelaced@hpasnc.org">lovelaced@hpasnc.org</a>				
7	Manning, Christopher L.	919-976-7569	<a href="mailto:manningc@hpasnc.org">manningc@hpasnc.org</a>				
8	McBride, Rebecca	828-357-0072	<a href="mailto:mcbrider@hpasnc.org">mcbrider@hpasnc.org</a>				
9	Mixon, Daniel	919-821-7425	<a href="mailto:mixond@hpasnc.org">mixond@hpasnc.org</a>				
10	Stevens, Kevin	919-783-8564	<a href="mailto:stevensk@hpasnc.org">stevensk@hpasnc.org</a>				

**To merge cells using the Merge & Center command:**

	A	B	C	D
1	HPAS North Carolina Board of Directors			
2	Ashberry, Jane	78-A Meadowview Lane Raleigh, NC 27589	919-882-6561	<a href="mailto:ashberryj@hpasnc.org">ashberryj@hpasnc.org</a>
3	Davis, Garrett	29 North Luke Court Raleigh, NC 27576	919-576-4562	<a href="mailto:davisg@hpasnc.org">davisg@hpasnc.org</a>
4	Eberhardt, Elizabeth	63-C Chapel Court Louisberg, NC 27079	252-985-3558	<a href="mailto:eberhardte@hpasnc.org">eberhardte@hpasnc.org</a>

1. Select the cells you want to merge.
2. Select the **Merge & Center** command on the **Home** tab.



3. The selected cells will be merged, and the text will be centered.

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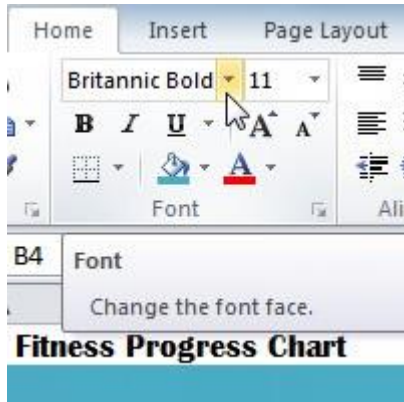
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#### Formatting Cells

#### Introduction



Spreadsheets that have not been formatted can be difficult to read. Formatted text and cells can draw attention to specific parts of the spreadsheet and make the spreadsheet more visually appealing and easier to understand.

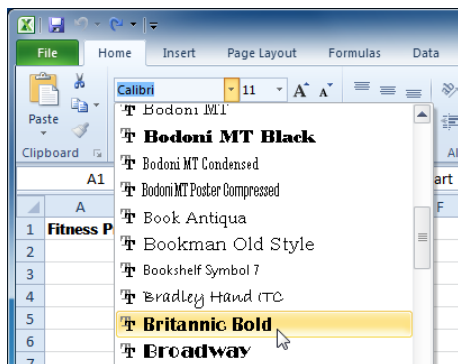
In Excel, there are many tools you can use to format text and cells. In this lesson, you will learn how to change the **color** and **style** of **text** and **cells**, **align text**, and apply special formatting to **numbers** and **dates**.

#### Formatting text

Many of the commands you will use to format text can be found in the Font, Alignment, and Number groups on the Ribbon. **Font** commands let you change the style, size, and color of text. You can also use them to add borders and fill colors to cells. **Alignment** commands let you format how text is displayed across cells both horizontally and vertically. **Number** commands let you change how selected cells display numbers and dates.

#### To change the font:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **Font** command on the Home tab. The font drop-down menu appears.
3. Move your mouse over the various fonts. A live preview of the font will appear in the worksheet.



4. Select the font you want to use.



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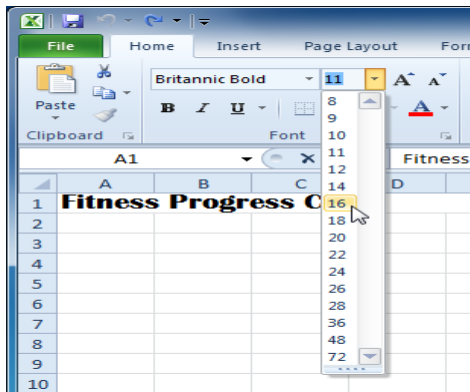
### Microsoft Excel



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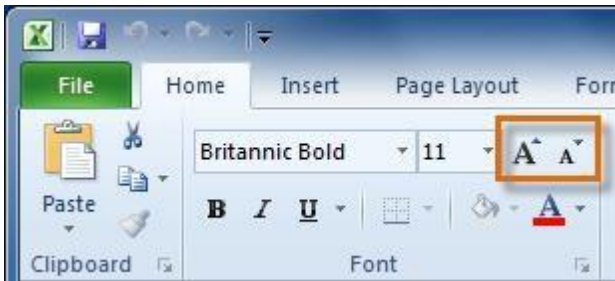
To change the font size:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **font size** command on the Home tab. The font size drop-down menu appears.
3. Move your mouse over the various font sizes. A live preview of the font size will appear in the worksheet.



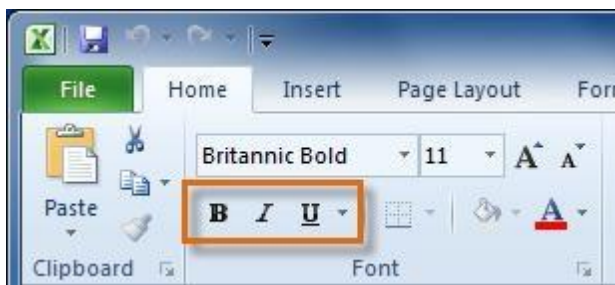
4. Select the font size you want to use.

You can also use the **Grow Font** and **Shrink Font** commands to change the size.



To use the bold, italic, and underline commands:

1. Select the cells you want to modify.
2. Click the **Bold**, *Italic*, or Underline command on the Home tab.



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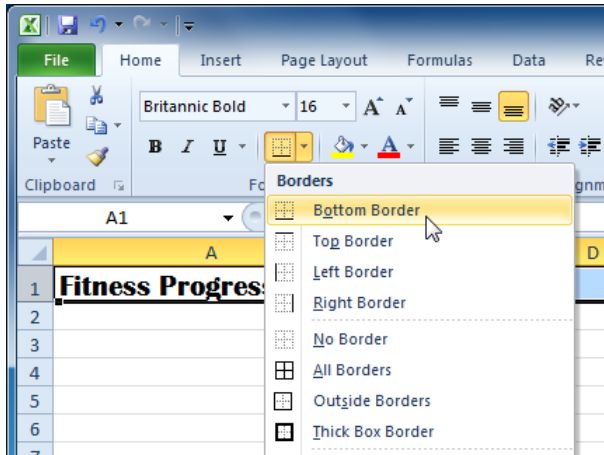
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To add a border:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **Borders** command on the Home tab. The border drop-down menu appears.

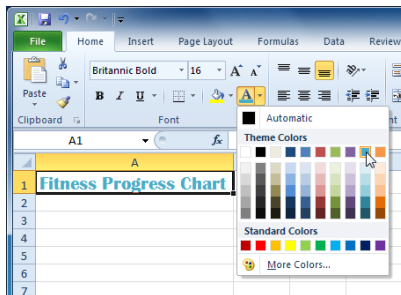


3. Select the border style you want to use.

You can draw borders and change the **line style** and **color** of borders with the **Draw Borders** tools at the bottom of the Borders drop-down menu.

To change font color:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **font color** command on the Home tab. The **color** menu appears.
3. Move your mouse over the various font colors. A live preview of the color will appear in the worksheet.



4. Select the font color you want to use.

Your color choices are not limited to the drop-down menu that appears. Select **More Colors** at the bottom of the menu to access additional color options.

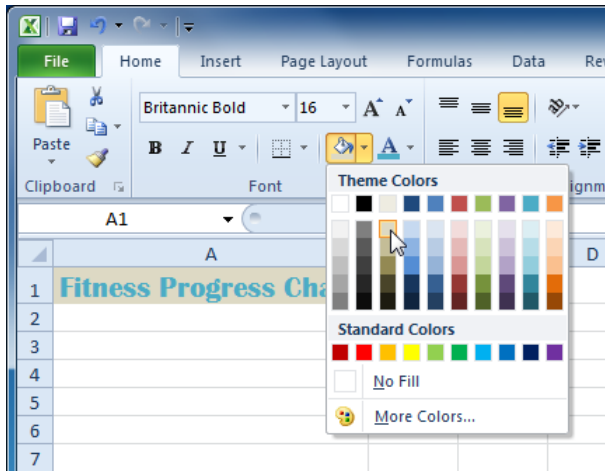
To add a fill color:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **fill color** command on the Home tab. The **color** menu appears.
3. Move your cursor over the various fill colors. A live preview of the color will appear in the worksheet.

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4. Select the fill color you want to use.

## Saving

### Introduction



Are you saving a workbook for the first time? Saving it as another name? Sharing it with someone who doesn't have Excel 2010? There are many ways you **share** and **receive workbooks**, which will affect how you need to save the file.

### Saving workbooks

When you create a new workbook in Excel, you'll need to know how to **save** it to access and edit it later. Excel allows you to save your documents in several ways.

#### To use the Save As command:

**Save As** allows you to choose a name and location for your workbook. Use it if you are saving a workbook for the first time or if you want to save a different version of a workbook while keeping the original.

1. Click the **File** tab.
2. Select **Save As**.

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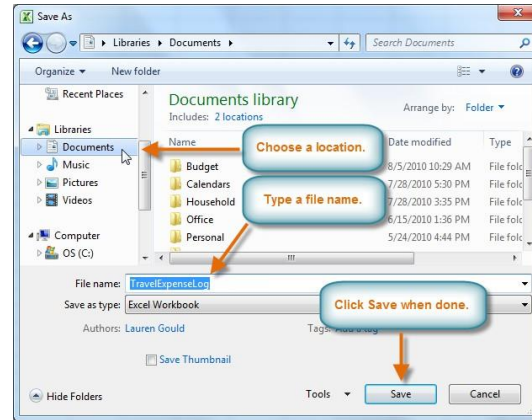
### Microsoft Excel



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3. The **Save As** dialog box will appear. Select the location where you want to save the workbook.
4. Enter a name for the workbook, then click **Save**.



#### To use the Save command:

1. Click the **Save** command on the **Quick Access toolbar**.



2. The workbook will be saved in its current location with the same file name.

If you are saving for the first time and select **Save**, the **Save As** dialog box will appear.

#### To save as an Excel 97-2003 workbook:

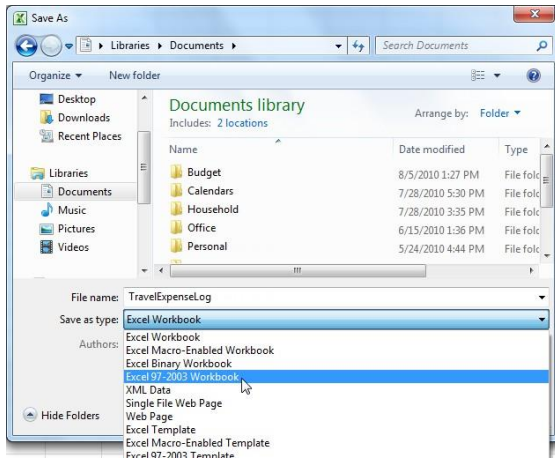
You can share your workbooks with anyone using **Excel 2010 or 2007** because they use the same **file format**. However, earlier versions of Excel use a different file format, so if you want to share your workbook with someone using an earlier version of Excel you will need to save it as an **Excel 97-2003 workbook**.

1. Click the **File** tab.
2. Select **Save As**.
3. In the **Save as type** drop-down menu, select **Excel 97-2003 Workbook**.

# Computer Science – College of Dentistry Frist Class – Second Term Microsoft Excel

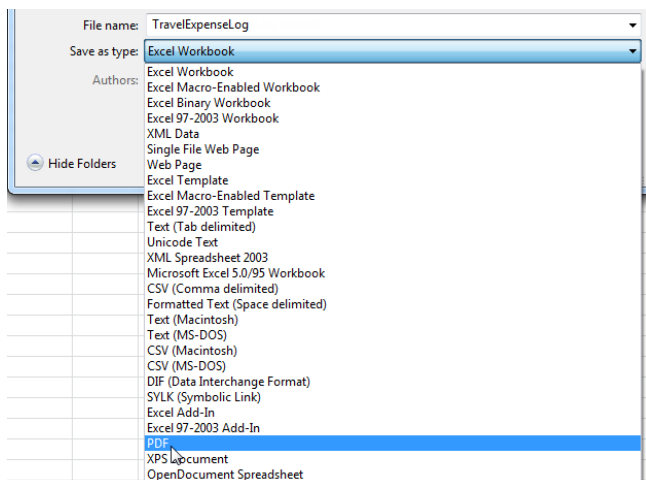


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4. Select the location where you want to save the file.
5. Enter a name for the file, then click **Save**.

## To save as a PDF:



Saving your workbook as an **Adobe Acrobat Document**—which is called a **PDF file**—can be especially useful when your recipients do not have Excel. A PDF will make it possible for recipients to view the content from your workbook, but they will not be able to edit anything. Click the **File** tab.

1. Select **Save As**.
2. In the **Save as type** drop-down menu, select **PDF**.
3. Select the location where you want to save the file.
4. Enter a name for the file, then click **Save**.

## Creating simple formulas

Excel uses standard operators for equations, such as a **plus sign** for addition (+), **minus sign** for subtraction (-), **asterisk** for multiplication (\*), **forward slash** for division (/), and **caret** (^) for exponents.

The key thing to remember when writing formulas for Excel is that all formulas must begin with an **equals sign** (=). This is because the cell contains—or is equal to—the formula and its value.

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Addition	+	=5+5
Subtraction	-	=5-5
Multiplication	*	=5*5
Division	/	=5/5
Exponents	^	=5^5

**To create a simple formula in Excel:**

1. Select the cell where the answer will appear (**B4**, for example).

	A	B	C
1	Estimated painting cost per square foot		
2	Total cost	\$75.00	
3	Square Feet	250	
4	Total/Sq Ft		
5			

2. Type the **equals sign (=)**.
3. Type in the formula you want Excel to calculate (**75/250**, for example).

	A	B	C
1	Estimated painting cost per square foot		
2	Total cost	\$75.00	
3	Square Feet	250	
4	Total/Sq Ft	=75/250	
5			

4. Press **Enter**. The formula will be calculated, and the value will be displayed in the cell.

If the result of a formula is too large to be displayed in a cell, it may appear as **pound signs (#####)** instead of a value. This means the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

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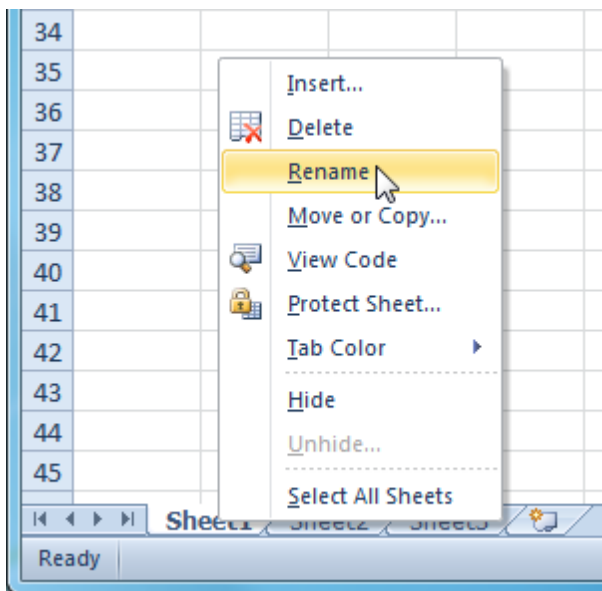
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**Introduction to worksheets**

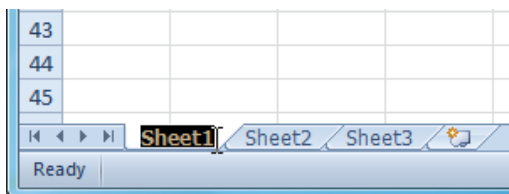
When you open an Excel workbook, there are **three worksheets** by default. The default names on the worksheet tabs are **Sheet1**, **Sheet2**, and **Sheet3**. To organize your workbook and make it easier to navigate, you can rename and even color code the worksheet tabs. Additionally, you can insert, delete, move, and copy worksheets.

**To rename worksheets:**

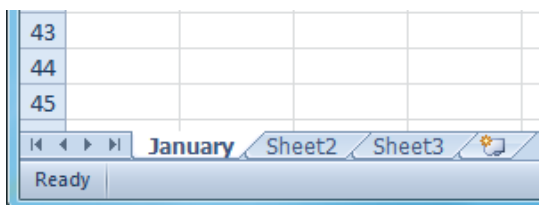
1. Right-click the **worksheet tab** you want to rename. The **worksheet** menu appears.
2. Select **Rename**.



3. The text is now highlighted by a black box. Type the name of your worksheet.



4. Click anywhere outside the tab. The worksheet is renamed.





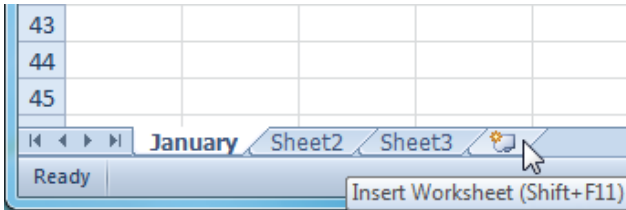
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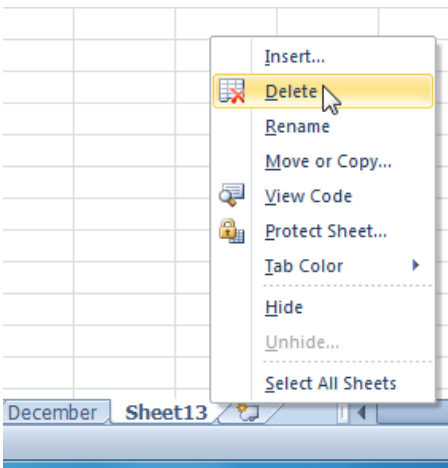
To insert new worksheets:

Click the **Insert Worksheet** icon. A new worksheet will appear.



You can change the setting for the default number of worksheets that appear in Excel workbooks. To access this setting, go into **Backstage view** and click **Options**.

To delete worksheets:



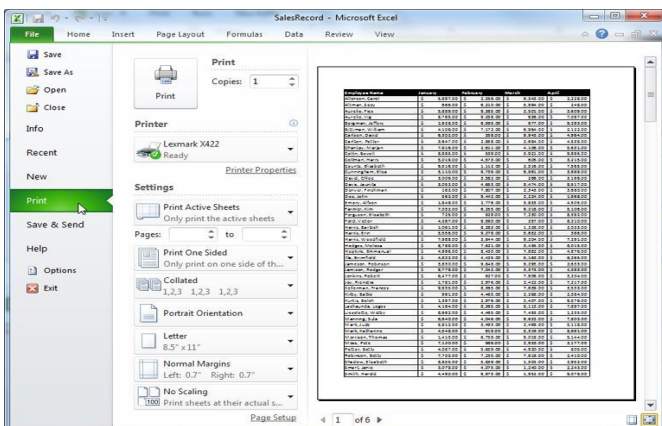
Worksheets can be deleted from a workbook, including those containing data.

1. Select the worksheets you want to delete.
2. Right-click one of the selected worksheets. The **worksheet** menu appears.
3. Select **Delete**. The selected worksheets will be deleted from your workbook.

## Printing

### Introduction

There are many choices you can make when printing an Excel workbook. You can choose what parts of a workbook to print and how the data fits on the page.



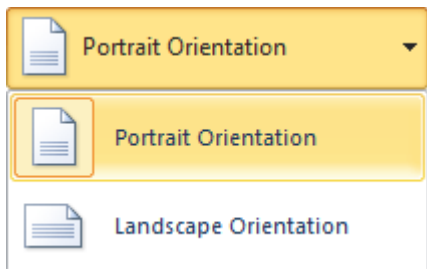


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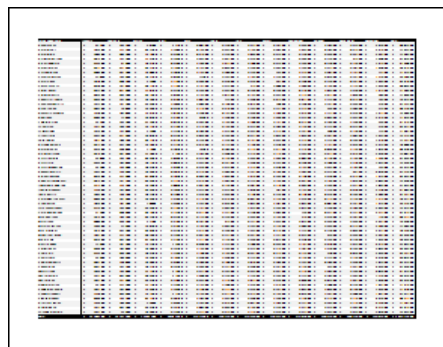
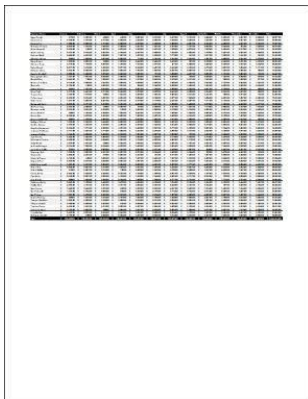
To change page orientation:

Change the page orientation to **portrait** to orient the page vertically and **landscape** to orient the page horizontally. Portrait is useful for worksheets needing to fit **more rows** on one page, while landscape is useful for worksheets needing to fit **more columns** on one page.

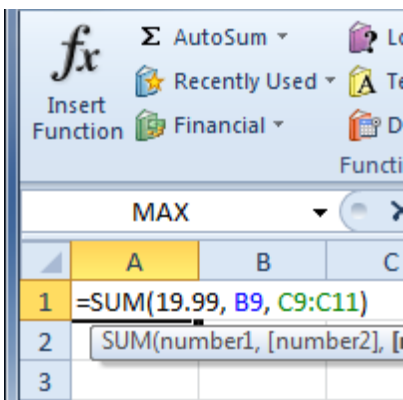
1. Click the **File** tab.
2. Select **Print** to access the **Print** pane.
3. Select either **Portrait Orientation** or **Landscape Orientation** from the **orientation** drop-down menu.



4. Your page orientation is changed.



## Working with basic functions



Figuring out formulas for calculations you want to make in Excel can be tedious and complicated. Fortunately, Excel has an entire library of **functions**—or **predefined formulas**—you can take advantage of. You may be familiar with common functions like **sum**, **average**, **product**, and **count**, but there are hundreds of functions in Excel, even for things like formatting text, referencing cells, calculating financial rates, and analyzing statistics.

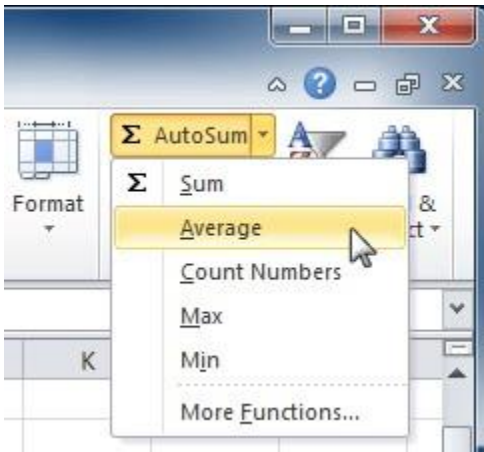
In this lesson, you'll learn the basics of inserting common functions into your worksheet by utilizing the **AutoSum** and **Insert Functions** commands. You will also become familiar with how to **search** and **find various functions**, including exploring Excel's



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Functions Library.

### Using AutoSum to select common functions



The **AutoSum** command allows you to automatically return the results for a range of cells for common functions like SUM and AVERAGE.

1. Select the cell where the answer will appear (**E24**, for example).
2. Click the **Home** tab.
3. In the **Editing** group, click the **AutoSum** drop-down arrow and select the function you want (**Average**, for example).
4. A formula will appear in **E24**, the selected cell. If logically placed, AutoSum will select your cells for you. Otherwise, you will need to click the cells to choose the argument you want.
5. Press **Enter**, and the result will appear.

Unit Price	Subtotal	Date Ordered	Date Received
\$12.03	\$36.09	18-Sep	26-Sep
\$15.95	\$31.90	18-Sep	26-Sep
\$5.87	\$58.70	8-Aug	14-Aug
\$8.83	\$88.30	8-Aug	14-Aug
\$13.54	\$27.08	22-Jul	29-Jul
=AVERAGE(E19:E23)			
AVERAGE(number1, [number2], ...)			
Subtotal			

### Sorting Data

**Sorting** is a common task that allows you to change or customize the order of your spreadsheet data. For example, you could organize an office birthday list by employee, birthdate, or department, making it easier to find what you're looking for. Custom sorting takes it a step further, giving you the ability to sort multiple levels—such as department first, then birthdate—to group birthdates by department.

To sort in alphabetical order:

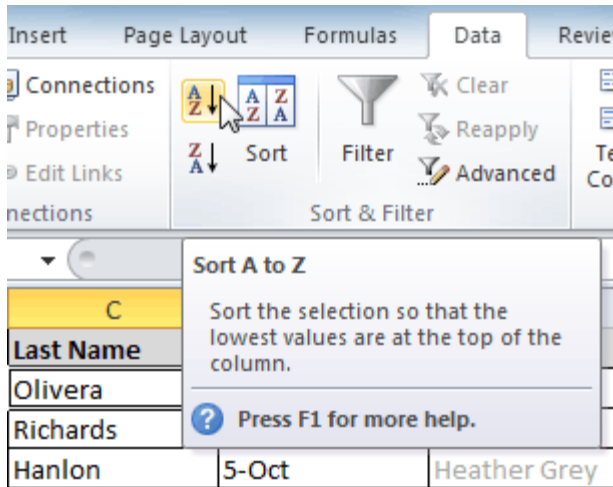
	C	D	E
1	Last Name	Payment	T-Shirt Color
2	Olivera	1-Oct	White
3	Richards	4-Oct	Dark Red
4	Hanlon	5-Oct	Heather Grey
5	Means	5-Oct	Dark Red

1. Select a cell in the column you want to sort by. In this example, we'll sort by **Last Name**.
2. Select the **Data** tab, then locate the **Sort and Filter** group.
3. Click the ascending command to **Sort A to Z** or the descending command to **Sort Z to A**.

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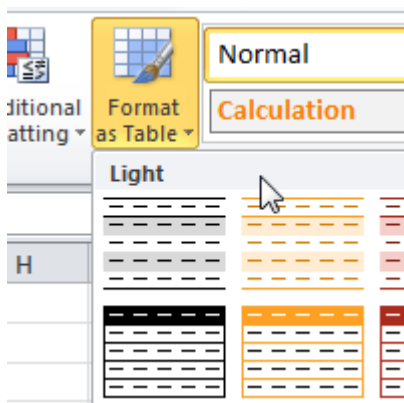


4. The data in the spreadsheet will be organized alphabetically.

	C	D	E
1	<b>Last Name</b>	<b>Payment</b>	<b>T-Shirt Color</b>
2	Ackerman	1-Oct	Heather Grey
3	Albee	13-Oct	Heather Grey
4	Bell	11-Oct	Dark Red
5	Benson	11-Oct	White
6	Chen	5-Oct	Dark Red
7	Del Toro	13-Oct	White
8	Ellison	Pending	Dark Red
9	Flores	6-Oct	White
10	Hanlon	5-Oct	Heather Grey
11	Kelly	11-Oct	Dark Red
12	Kelly	11-Oct	Heather Grey
13	Lazar	14-Oct	White
14	MacDonald	Pending	Dark Red
15	Means	5-Oct	Dark Red
16	Naser	14-Oct	Dark Red
17	Nichols	6-Oct	Dark Red

**Formatting Tables**

**Introduction**

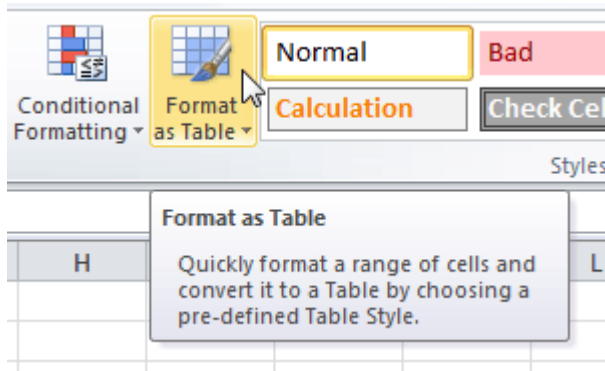


**To format information as a table:**

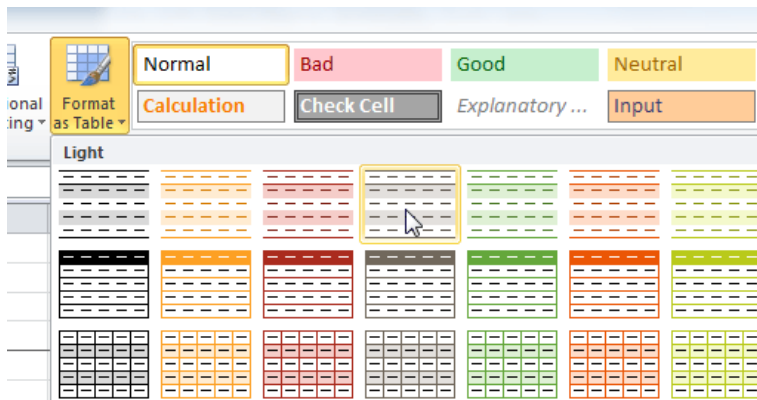
1. Select the cells you want to format as a table. In this example, an invoice, we'll format the cells containing the column headers and order details.
2. Click the **Format as Table** command in the **Styles** group on the Home tab.



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3. A list of predefined **table styles** will appear. Click a table style to select it.



## Working with Charts

### Introduction

A **chart** is a tool you can use in Excel to **communicate data graphically**. Charts allow your audience to see the **meaning behind the numbers**, and they make showing **comparisons** and **trends** much easier. In this lesson, you'll learn how to **insert** charts and **modify** them so they communicate information effectively.

### Charts

Excel workbooks can contain **a lot of data**, and this data can often be difficult to interpret. For example, where are the highest and lowest values? Are the numbers increasing or decreasing?

The answers to questions like these can become much clearer when data is represented as a **chart**. Excel has various types of charts, so you can choose one that most effectively represents your data.

### Types of charts

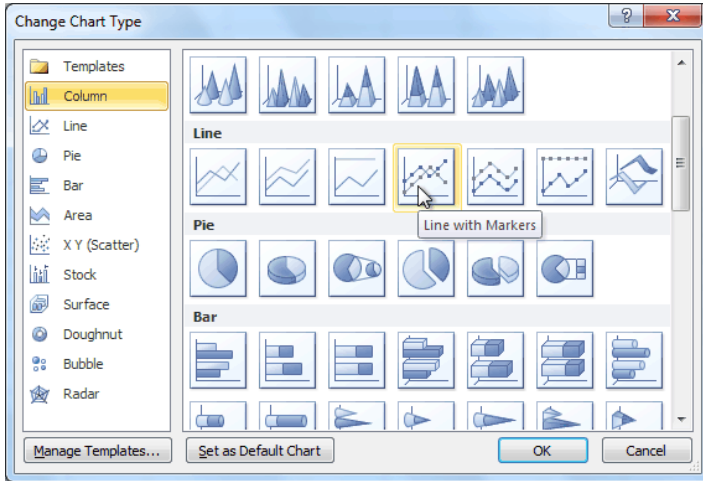
Click the arrows in the slideshow below to view examples of some of the types of charts available in Excel.

Excel has a variety of chart types, each with its own advantages. Click the arrows to see some of the different types of charts available in Excel.

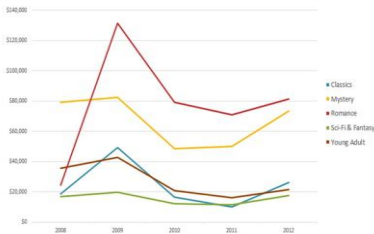
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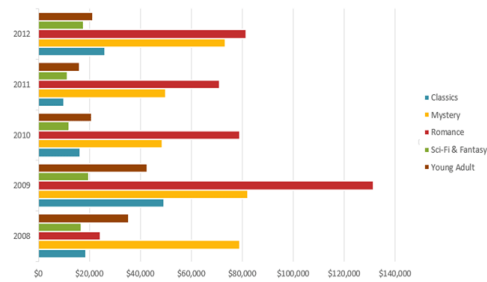
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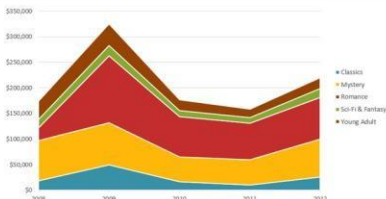
**Line**



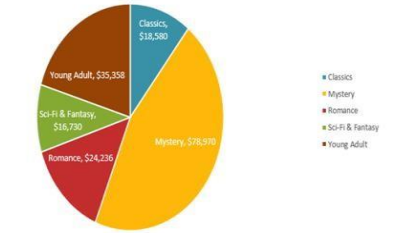
**Bar**



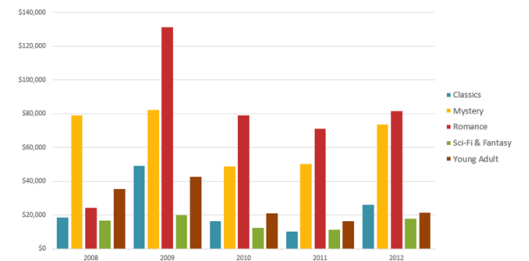
**Area**



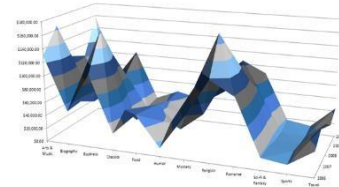
**Pie**



**Column**



**Surface**





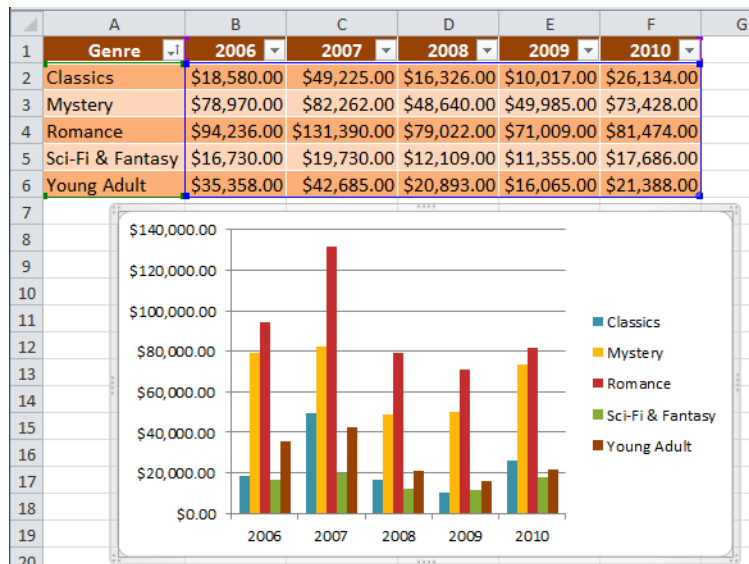
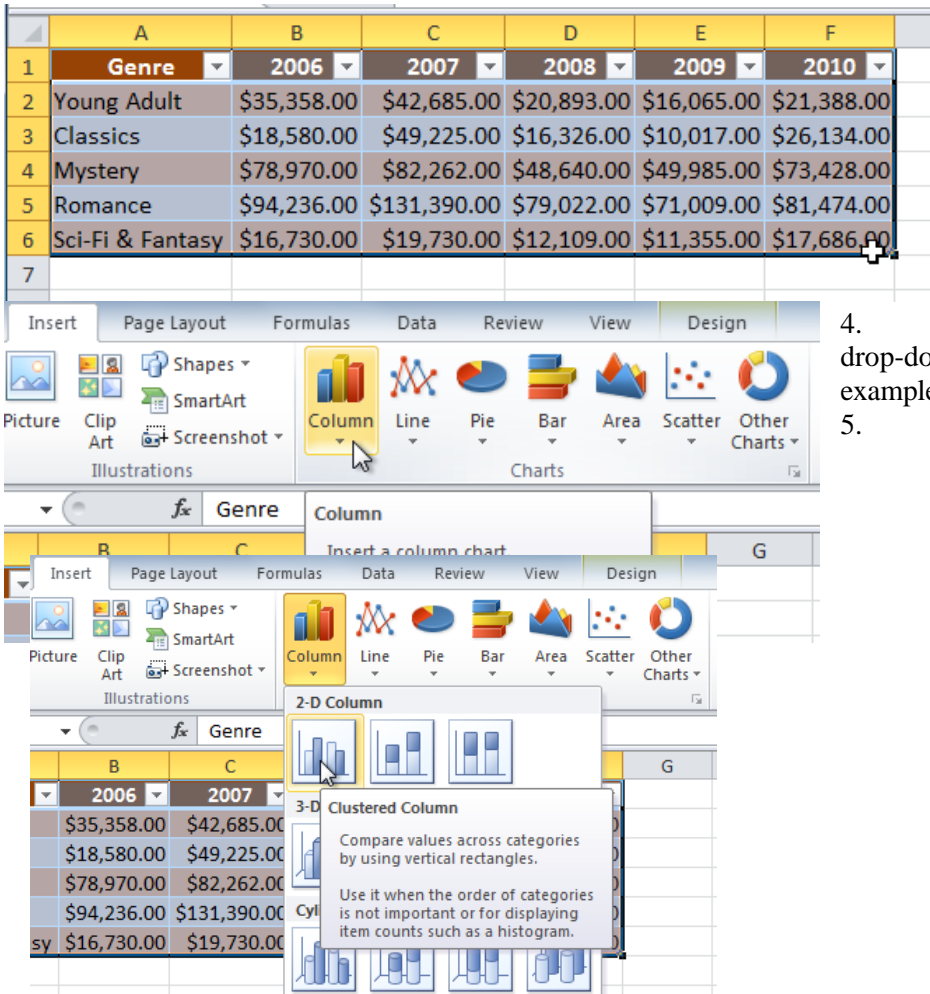
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**To create a chart:**

1. Select the **cells** you want to chart, including the **column titles** and **row labels**. These cells will be the **source data** for the chart.
2. Click the **Insert** tab.
3. In the **Charts** group, select the desired **chart category** (**Column**, for example).
4. Select the desired **chart type** from the drop-down menu (**Clustered Column**, for example).
5. The chart will appear in the worksheet.





## Microsoft Office Excel

### Introduction

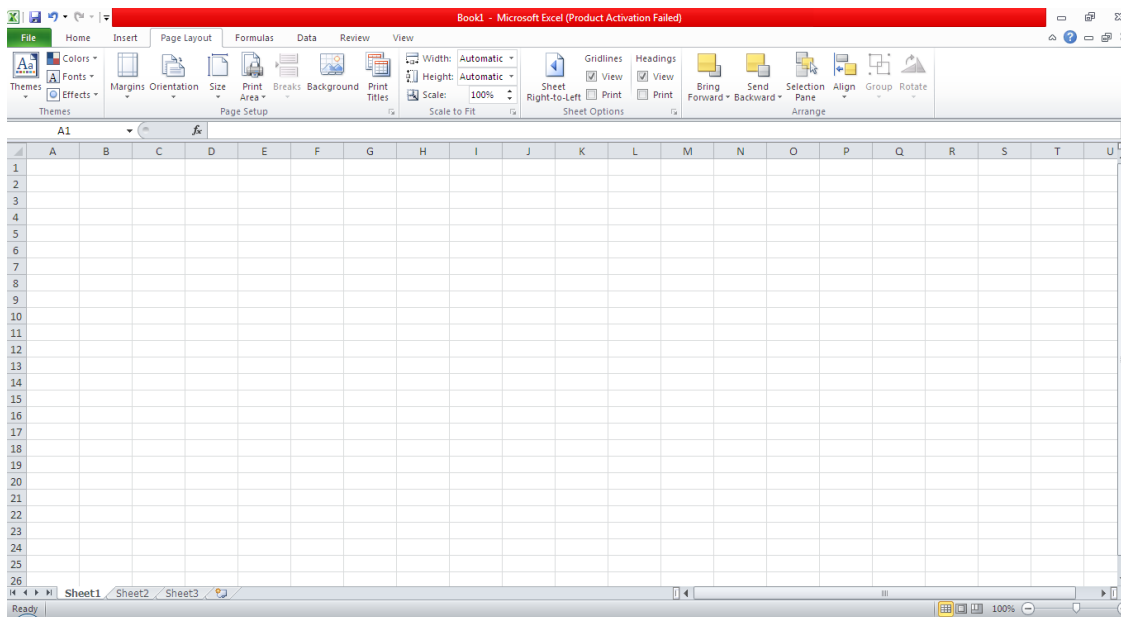
Microsoft Office Excel is a spreadsheet application written and distributed by Microsoft for Microsoft Windows for data analysis. It features calculation, graphing tools, pivot tables and a Visual Basic for Applications. It has been the most widely used spreadsheet application available for these platforms since version 5 in 1993. Excel forms part of Microsoft Office.

There are many uses for Excel. Businesses use it for crating financial reports and budgeting. School administrators can use it for preparing school budgets. Teachers use it to analyze data about student performance and adjust their teaching. Scientists use it analyze data. Economists use it for statistical analysis. Families use it to manage their investment portfolios. Microsoft Excel is by far the most widely used, most powerful spreadsheet program available.

### Working area

File of Excel application called Book or workbook. By default, Excel opens file with “book1” name. You can give workbook your own meaningful names by save or save as. Choose location and name of your own. Each excel workbook contains of sheets. By default, Excel opens with three worksheets. Each sheet has number. You can keep multiple worksheets together in a group (more than 3 sheets) in book. Excel file extension is **.XLS**, or **.XLSX** depend on version of Excel application.

**Starting Excel:** When you launch Excel, the program opens to a blank document that looks like the one below. The image shows the most important parts of the Excel workbook window. . Bars of Excel window similar to the other Microsoft office applications, but it has a unique bar called tools-bar will be explain later.

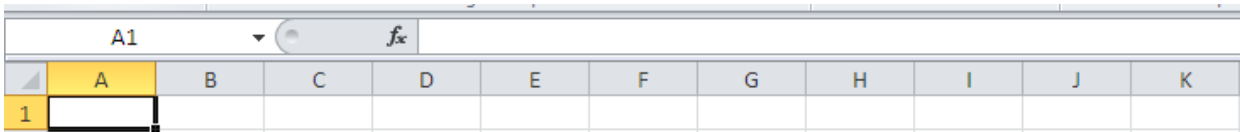


**Cell:** The most basic part of an Excel document is the box that holds a piece of data, called a *cell*. A cell is the box represented by the intersection of a column and a row. Rows are identified by the numbers down the left side and columns are identified by letters across the top. Each cell is indicated by a cell reference. The selected cell in sheet called **active cell**. For example, in the image above the active cell at the intersection of Column A and Row 1 is given the cell reference of A1.

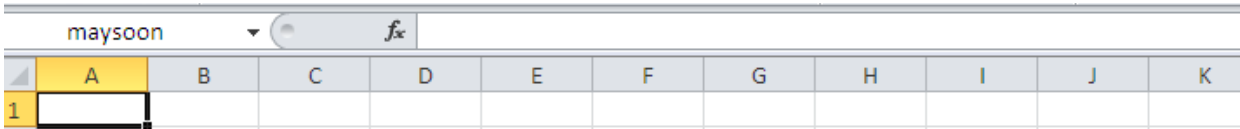
**Tools-bar:** contains of the following:

1. Name box,
2. Formula of active cell.

**Name Box:** displays the active cell address. For example, the selected (active) cell in the image below is at the intersection of column A and row 1. "A1" appears in the name box, indicating that the active cell is A1.



We can change name of cell by activating name box then type new name. to return back to standard name from menu bar go to Insert then Name then Define a window will appear choose the Name we need to change then Delete and Close.



**Formula Box (fx):** The Formula Bar allows you to view, enter, and edit data in the selected cell. If the cell contains a formula, it will be displayed here. If there is no formula then the content of the cell is displayed. Cell content can be edited directly in the cells or in the Formula bar.



The mathematical formula will appear in the Formula Bar when a cell that includes a formula is selected in the worksheet. In the example below, the formula is adding two values in cell H3. When cell H3 is selected, the formula appears in the Formula Bar. From this point, you can add data, change how it looks, have Excel perform mathematical calculations or summarize the data or find information in Excel's help files.

The image shows a screenshot of an Excel spreadsheet. The formula bar displays '=D3+C3'. The spreadsheet contains a table with the following data:

سعي السنوي نظمية المرحلة الاولى لمادة الحاسبات للعام الدراسي 2014/2013									
ب الثلاثي	فصل اول عملي %5	فصل ثاني عملي %5	فصل اول نظري 5%	فصل ثاني نظري 5%	درجة الكلية النظرية 10%	درجة الكلية العملية 10%	المجموع الكلي %20	الدرجة السعي السنوي % 20	الدرجة النهائي % 20
عبد الله	4.5	5	4.1	4.1	8.2	9.5	17.7	17.7	18

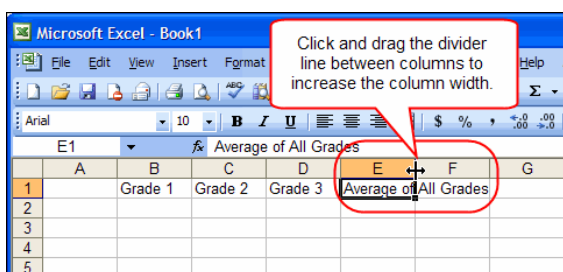
### Moving Around the Excel Worksheet

Before you start entering data into a worksheet, you need to learn how to move around in a worksheet. Before you can enter information into a cell, you must make the cell active by selecting it. Making a cell active by using the mouse and clicking on a cell or you can use the keyboard to move the cell pointer using the keyboard's arrow keys.




### Adjusting Column Widths and Row Heights

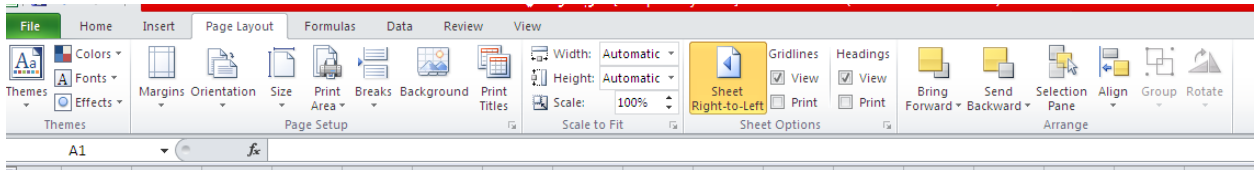
If you enter text or numbers into a cell and you find that it spans beyond the width of the cell, you can make the column wider by clicking and dragging the dividing line between the two columns. Place your cursor over the dividing line, click, and then drag it to the desired width and then release your mouse.



### Working with sheets

1. You can give worksheets your own meaningful names by:
  - Placing your cursor over the sheet name, **D.C.** and typing new name.
  - **R.C.** on sheet, window will appear go to **Rename**, and then give new name.
2. There are different methods to add sheet to book:
  - To add another sheet, **R.C.** on sheet name, window will appear, choose **Insert** then **Ok**.
  - Click on this icon  a new sheet will appear with its default name.
3. To remove sheet from book, press on sheet then **R.C.** on targeting sheet then from window appeared choose **Delete**.
4. To change colors of sheet name **R.C.** on **Sheet** then **color** choose require color then **Ok**.

- To change direction of sheet, right-to-left or left-to-right: from menu bar goto Page layout then press require icon as shown



## Selecting Cells in Excel

There are several ways to select cells in Excel.

- To select **one** cell simple click on required cell.
- To select **a column**, simply click on the letter of the column you wish to select.
- To select **a row**, click on the row number on the left side of the workspace. All of the cells in that row will be selected.
- You can also click and drag the mouse over the cells you wish to select. Selected cells in blue.

			10%	5%		%5	%5
7	17.7	9.5	8.2	4.1	4.1	5	4.5
3	13.8	8.5	5.3	2.9	2.4	5	3.5
5	10.65	6	4.65	0.85	3.8	4	2
5	7.35	4	3.35	1.75	1.6	2.5	1.5
5	10.75	6	4.75	1.25	3.5	2.5	3.5
	10.4	7	3.4	1	2.4	4	3
3	12.83	6.5	6.33	4.33	2	4	2.5

## Type of data Entered to an Excel Worksheet

Now that you've learned to navigate around an Excel spreadsheet, you're ready to start entering data. There are two basic types of information you can enter in a cell.

- Labels:** Labels are any type of text or information that is not used in any calculations. Labels are used for worksheet headings and make your worksheets organized and easy to read. They usually contain text, but can also contain numerical information not used for calculations, such as numbers or dates. See the sample headings below for Grades across the top row and Students down the first column.
- Values:** Any type of numerical data, such as numbers, percentages, fractions, divisors, dates, currencies, times, etc.

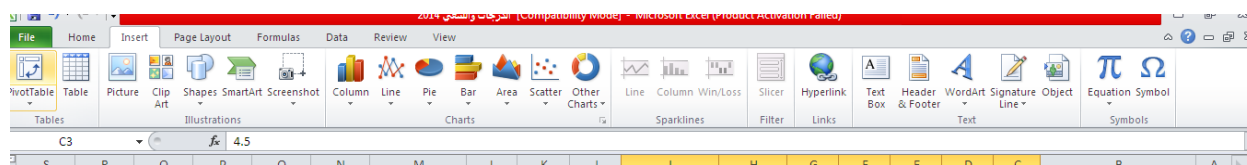
	A	B	C	D	E
1	student name	grade 1	grade 2	grade 3	
2	student 1	45	66	77	
3	student 2	87	56	54	
4	student 3	88	99	34	
5	student 4	65	87	54	
6					
7					
8					

This is what a basic spreadsheet may look like. Notice that numbers automatically align to the right, while text automatically aligns to the left. A row has been allowed at the top for column headings and a column has been allowed on the left for row headings. These have been placed in bold.

### Creating a Chart in Excel Worksheet

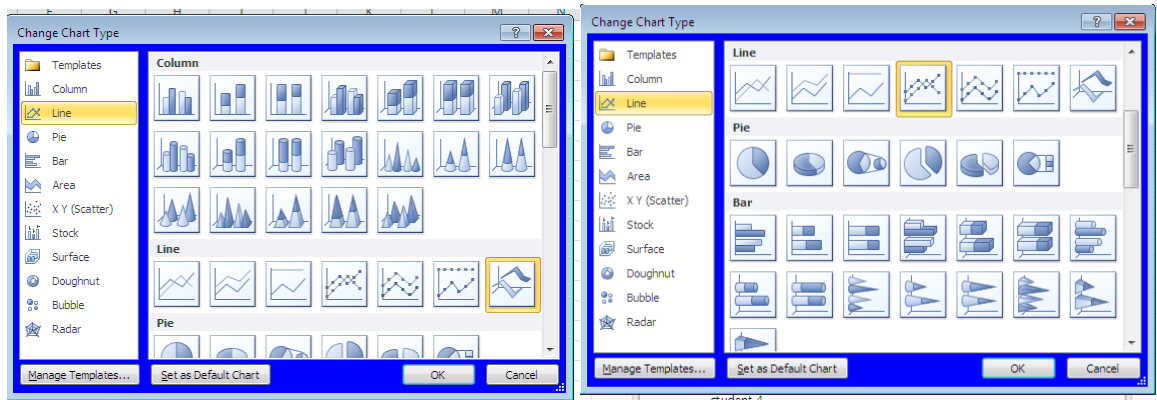
Before you create chart, you must enter data in the cells as mention early. For example to create three lines chart, do the following:

- Enter your data in cells,
- Select them then choose **Insert** function from **menu bar** the following sub menu will appears:



As you can see there are many kinds of charts typse to choose from:

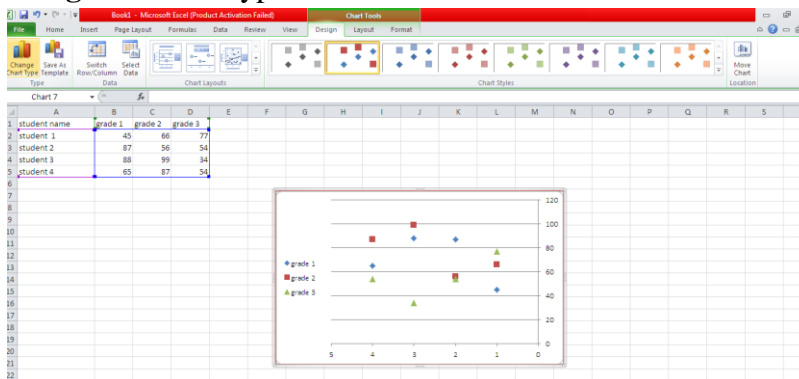
1. Column:
2. Line
3. Pie
4. Bar
5. Area
6. Scatter
7. Other Charts



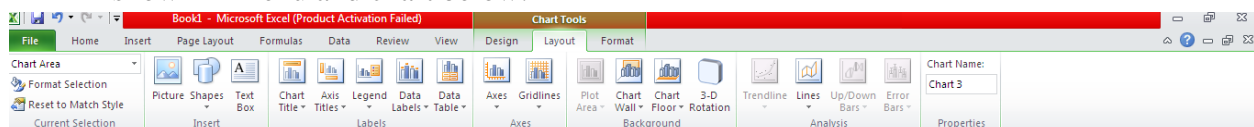
- And finally choose your prefer chart type, for this example choose **line type**, as shown. A chart tools bar will appear which contains three functions

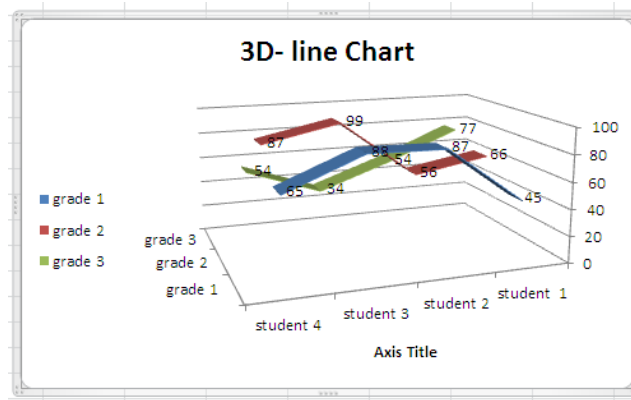
## Chart Tools bar

1. **Design:** contains types of charts mentioned above

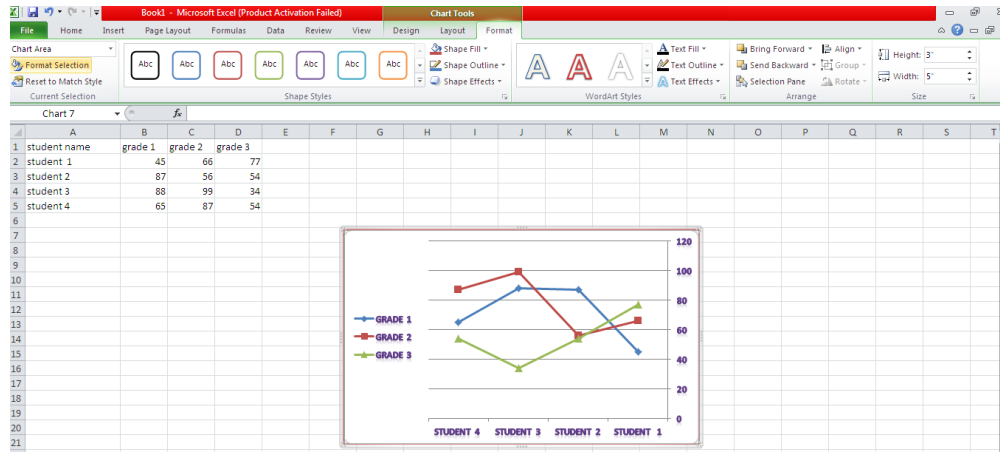


2. **Layout:** to add Labels to the chart like **chart title, Axis Titles, Legend and Date table** as shown in menu and chart below:





3. **Format:** to add format to the contain of chart, like Shape style, WordArt styles, as listed below:





## Introduction to Cloud Computing and Services

### Definition of Cloud Computing

Cloud computing is a model that enables on-demand access to a shared pool of configurable computing resources, such as networks, servers, storage, applications, and services. These resources can be rapidly provisioned and released with minimal management effort or interaction with the service provider. It represents a shift from traditional computing paradigms by delivering resources over the internet as a service.

### Historical Background

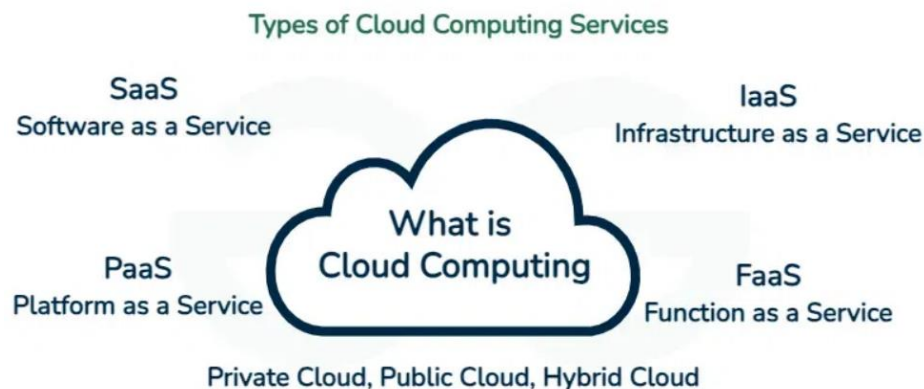
The concept of cloud computing has its roots in the 1960s with the idea of providing computing as a utility, similar to electricity. Over time, advances in virtualization, distributed computing, and high-speed internet have enabled the evolution of modern cloud computing.

### Characteristics of Cloud Computing

1. **On-Demand Self-Service** Users can provision resources like computing power and storage without requiring human intervention from the service provider. For example, a developer can deploy a virtual machine in minutes using a cloud provider's dashboard.
2. **Broad Network Access** Resources are accessible over the network through standard mechanisms, supporting a wide variety of client devices including mobile phones, laptops, and tablets. This ensures that users can work from virtually anywhere.

3. **Resource Pooling** Providers use multi-tenant models to pool resources dynamically. These resources are assigned and reassigned according to demand. For example, a cloud provider might allocate storage or compute capacity to multiple customers from a shared resource pool.
4. **Rapid Elasticity** Computing resources can be scaled up or down quickly, ensuring responsiveness to changes in demand. This is particularly valuable for businesses experiencing seasonal or unpredictable spikes in traffic.
5. **Measured Service** Resource usage is monitored, controlled, and reported, providing transparency for both the provider and consumer. This feature supports pay-as-you-go models, ensuring that customers only pay for what they use.

## Service Models in Cloud Computing



1. **Infrastructure as a Service (IaaS)** IaaS provides virtualized computing resources over the internet. Examples include Amazon EC2, Google Compute Engine, and Microsoft Azure. Businesses can use IaaS to avoid the complexity of managing physical servers.

2. **Platform as a Service (PaaS)** PaaS offers a platform allowing customers to develop, run, and manage applications without dealing with infrastructure complexities. Examples include Google App Engine and Microsoft Azure PaaS. PaaS solutions often include tools for software development, databases, and analytics.
3. **Software as a Service (SaaS)** SaaS delivers software applications over the internet. Users access applications through web browsers without installation. Examples include Dropbox, Salesforce, and Zoom. SaaS is ideal for organizations seeking ready-to-use applications.

## Cloud Deployment Models

1. **Public Cloud** Services are offered over the public internet and shared among multiple organizations. Examples include Amazon Web Services (AWS) and Google Cloud Platform.
2. **Private Cloud** A private cloud is dedicated to a single organization, providing greater control and security. It can be hosted on-premises or by a third-party provider.
3. **Hybrid Cloud** Combines public and private clouds, allowing data and applications to be shared between them. This model offers flexibility and scalability while maintaining security for sensitive workloads.
4. **Community Cloud** A community cloud is shared by several organizations with similar requirements. It is often used by industries with specific compliance or regulatory needs.

## Cloud-Based Office Suites

Cloud-based office suites are productivity tools hosted on cloud platforms. These suites enable real-time collaboration, access from multiple devices, and scalability.

### Microsoft Office 365

1. **Overview** Microsoft Office 365 is a cloud-based productivity suite offering tools like Word, Excel, PowerPoint, and Outlook. It also includes OneDrive for cloud storage and Teams for collaboration.

#### 2. Features

- **Integration:** Seamless integration with other Microsoft products and services.
- **Collaboration:** Real-time co-authoring and communication via Teams.
- **Security:** Advanced security features, including multi-factor authentication and compliance with various industry standards.

#### 3. Additional Tools

- **Power BI:** For business analytics and data visualization.
- **SharePoint:** For content management and collaboration.

#### 4. Benefits

- Accessible from anywhere on any device.
- Regular updates and feature enhancements.

## Google Workspace

- 1. Overview** Formerly known as G Suite, Google Workspace is a collection of cloud-based productivity tools, including Google Docs, Sheets, Slides, and Gmail. It is designed to facilitate seamless collaboration and integration with other Google services.
- 2. Features**
  - **Collaboration:** Real-time editing and sharing capabilities.
  - **Cloud Storage:** Google Drive for storing and sharing files.
  - **Integration:** Works well with a range of third-party applications and services.
- 3. Additional Tools**
  - **Google Meet:** For video conferencing and virtual meetings.
  - **Google Forms:** For surveys and data collection.
- 4. Benefits**
  - User-friendly and widely accessible.
  - Cost-effective plans suitable for businesses of all sizes.

## Comparison: Office 365 vs. Google Workspace

Feature	Office 365	Google Workspace
Collaboration	Real-time co-authoring via Teams	Real-time editing in Google Docs, etc.
Integration	Best with Microsoft products	Seamless with Google services

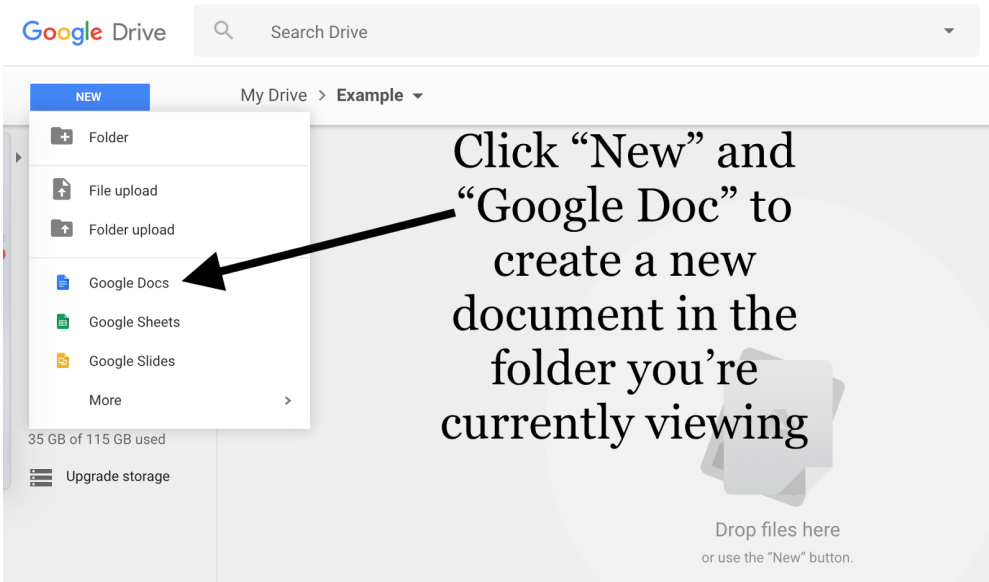
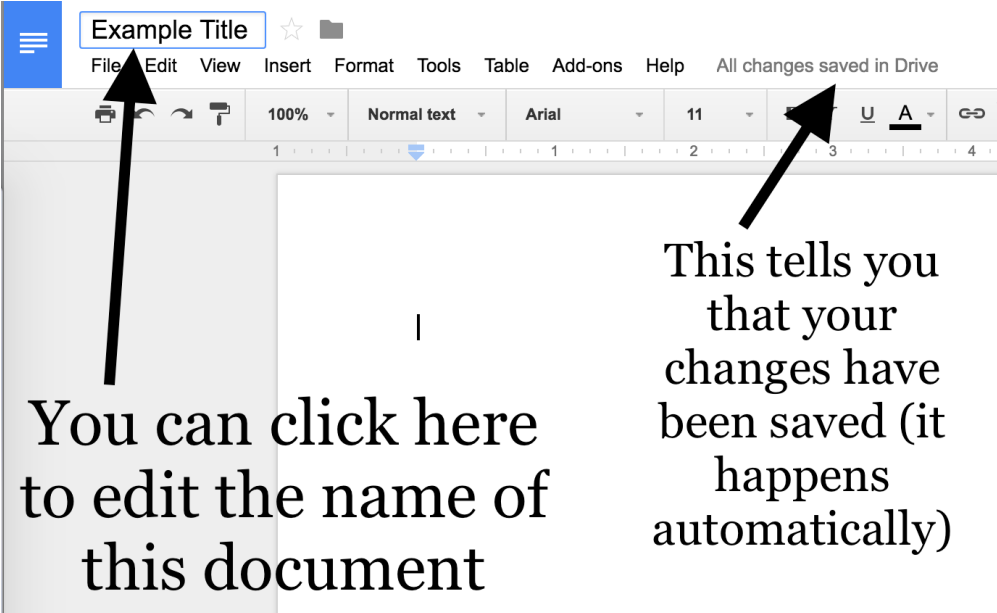
<b>Feature</b>	<b>Office 365</b>	<b>Google Workspace</b>
Pricing	Flexible plans	Competitive, scalable pricing
Security	Advanced features for enterprise users	Robust with regular updates
Video Conferencing	Microsoft Teams	Google Meet
Storage Capacity	1TB per user (OneDrive)	30GB to unlimited (Google Drive)

# Basics of Google Docs

Google Docs gives users the ability to create and store documents and files using any web browser (in “the cloud”), access them from any device, and give multiple people simultaneous access. “The Cloud” is a phrase that means being able to access information through a web browser that are stored on a company’s computers. This gives you the ability to access them anywhere and share them with others. Heads-up: Google Docs works best in Google Chrome, but you can usually use it in any web browser (Safari, Internet Explorer, Firefox).

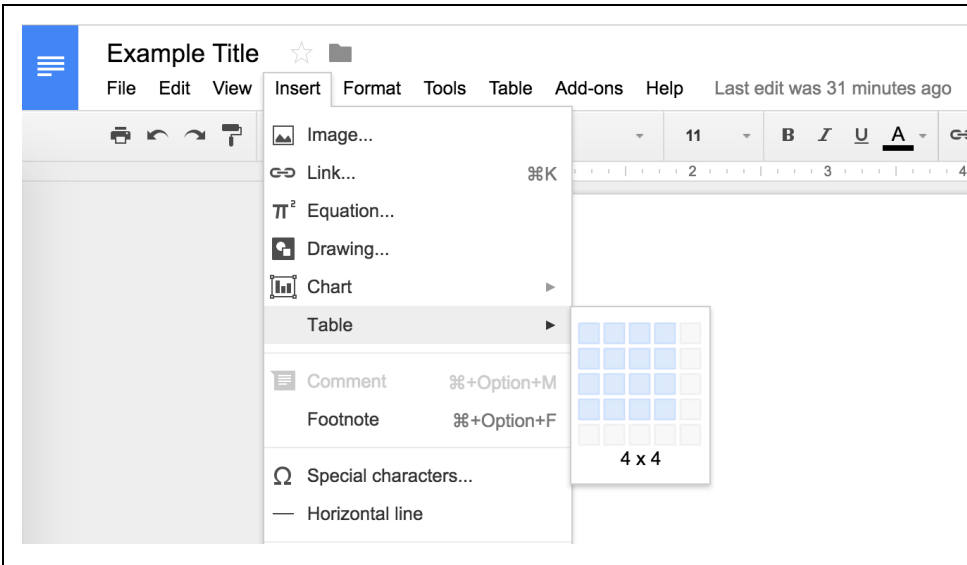
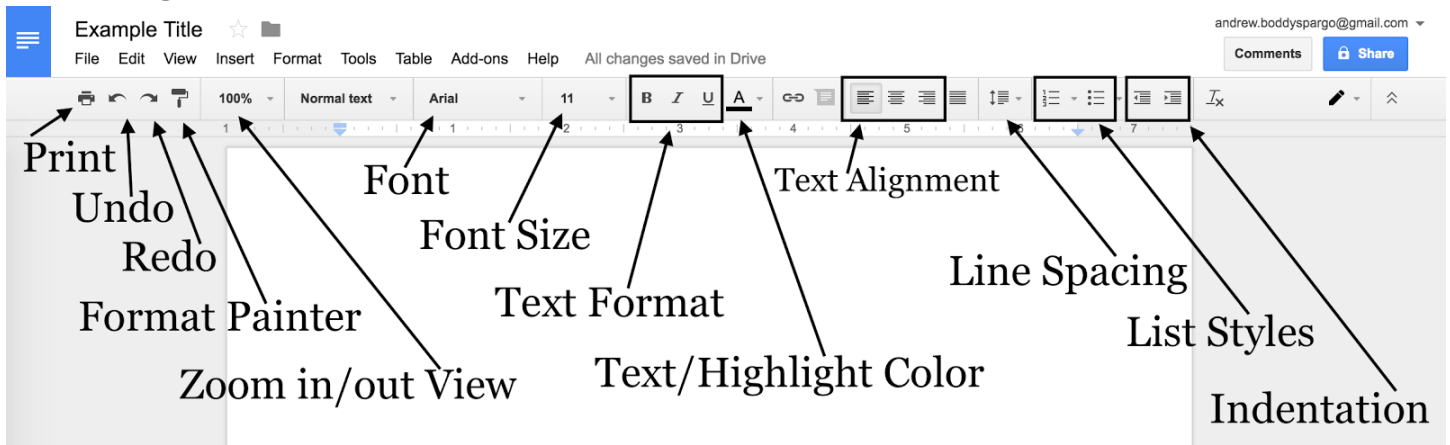
To get started, go to [drive.google.com](https://drive.google.com) and log in to a Google account OR login to a Gmail account, click on the little grid in the upper-right of the screen (looks like ) and choose ‘Drive’

## Create a Google Doc

 <p>Click “New” and “Google Doc” to create a new document in the folder you’re currently viewing</p>	<p>Once you’re in your Google Drive account, click on the ‘New’ button and click on ‘Google Docs’ to create a new Google Doc.</p>
 <p>You can click here to edit the name of this document</p> <p>This tells you that your changes have been saved (it happens automatically)</p>	<p>To change the name of the document, click on the ‘Untitled document’ name in the upper-left corner of the screen and replace it. Press ‘Enter’ or click in the document to save. Your document is constantly automatically saving as long as you are connected to the internet, and it will tell you as much if you look to the right of the ‘Help’ menu.</p>

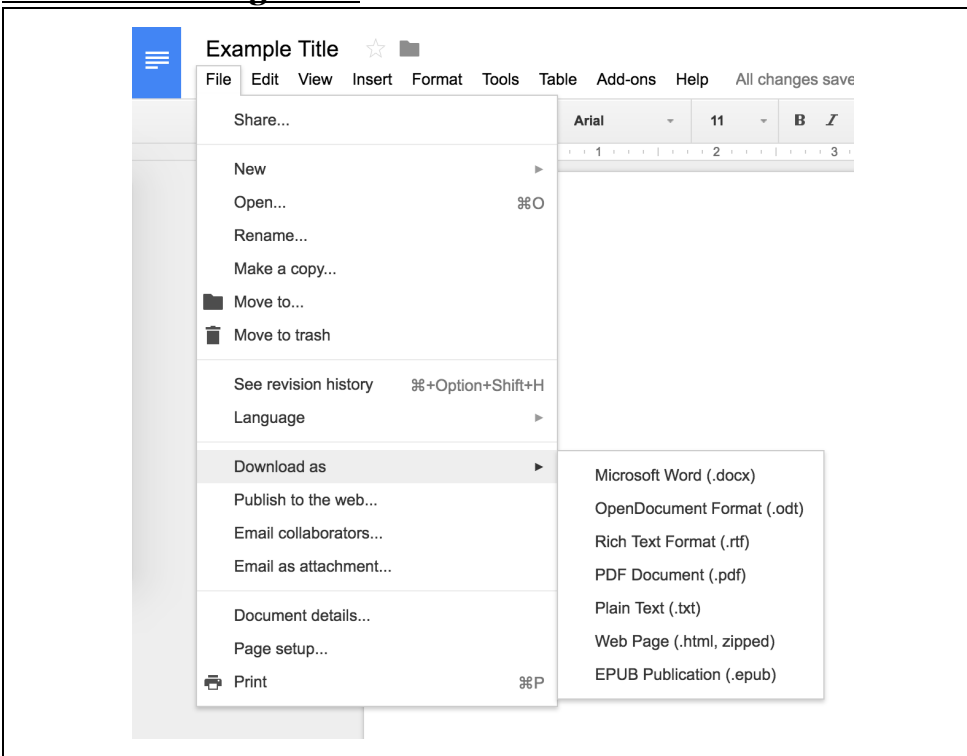


## Edit a Google Doc



To insert a picture, click on the 'Insert' menu and select 'Image.' You can upload a picture from your computer or click on the heading that says 'Search' to use a Google Image. To insert a table, click on the 'Insert' menu, hover over the 'Table' option, and use your cursor to indicate the dimensions of your table.

## Download a Google Doc



To download your document as a Microsoft Word document or as a PDF, click the 'File' menu and hover over the 'Download As' option. Once you click on the desired file type, your computer will either download it to your downloads folder or it will ask you where you want to save it (depending on your browser settings). Once you download it, you can open it in another program or attach it to an e-mail.

## Share a Google Doc

Share with others Get shareable link

People

example@gmail.com × Add more people...  Can edit ▾

This will share the document with the person whose email is "example@gmail.com" and will allow them to edit the document. To send it, click "Send" below.

Send Cancel Advanced

**Method 1 - send invite**

To share a Google Doc, locate the blue ‘Share’ button in the upper-right corner of your browser window and click on it. You can then type the email address(es) of the person(s) you want to share the document with. You can also select what TYPE of access they get (change the “Can edit” option) and type a little message for them. Then you can click ‘Send’ and they will get an email with an invitation to access the document.

Are you sure?

You are sending an invitation to andrew.boddyspargo@marquette.edu. Since there is no Google account associated with this email address, anyone holding this invitation will have access without signing in.

Yes No

IF you share a document this way with an email address that is not a Google account, then you will get this warning. The person you share it with will be able to view it, but unless they have a Google Account, they won’t be able to edit it.

Share with others Link sharing updated Get shareable link

Link sharing on [Learn more](#)

Anyone with the link can edit ▾ Copy link

[https://docs.google.com/document/d/1maAROIB91EOo\\_qzHuJOTjHOCd2rxEERNV](https://docs.google.com/document/d/1maAROIB91EOo_qzHuJOTjHOCd2rxEERNV)

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People

Can edit ▾

Done Advanced

**Method 2 - use a link**









Instead of typing the e-mail addresses of specific people, you can click the “Get shareable link” option and it will generate a URL that you can copy and paste into an email to share with others. ANYONE who gets that link can access the Google Doc, so be careful with this option. You can change the type of access associated with the link by clicking the down arrow next to ‘can edit’ in the picture to the left and choosing a different type of access. Then click ‘Copy link’ and paste it into any email.

## Access a Google Doc

 <p>The screenshot shows an email titled "Example Title - Invitation to edit" from Andrew BoddySpargo (via Google Docs). The email content states: "Andrew BoddySpargo has invited you to edit the following document: Example Title". Below this, there is a profile picture of Andrew and the text "This is a test to see what the sharing email looks like." with a blue "Open in Docs" button. At the bottom, it says "Google Docs: Create and edit documents online. Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA. You have received this email because someone shared a document with you from Google Docs."</p>	<p>If someone sends you a Google Doc invitation, this is what the email looks like. It grants only your specific Google Account access to it. Click on the name of the document or the blue button that says “Open in Docs” to access the document. In this example, Andrew has given me editing access to the document, so I can make changes.</p>
 <p>The screenshot shows an email titled "Example Title" from Andrew BoddySpargo. The content states: "Andrew BoddySpargo has invited you to edit the following document: Example Title". Below this, there is a profile picture of Andrew and the text "This is a test to show how it doesn't work to share it with non-Google email addresses." with a blue "Open in Docs" button. A yellow highlighted box contains the text: "This email grants access to this item without logging in. Only forward it to people you trust." At the bottom, it says "Google Docs: Create and edit documents online. Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA. You have received this email because someone shared a document with you from Google Docs."</p>	<p>If someone sends an invitation to access a Google Doc to a non-Google email address, this is what it looks like. Because the email address doesn't have a Google account, it grants them access to view it. If they happen to be logged into a Google account, then they will be able to edit the document with that Google account, even though it was shared with the non-Google address. This type of sharing is slightly less secure because if the invitation is forwarded on to someone else, then they could get access, too. It's still slightly more secure than just generating a link, though.</p>
<p>If someone emails you a link to their Google Doc, then generally they will send the whole URL in the body of an email, or they will type an email and create a <a href="#">hyperlink</a> using some of the email text to link to the Google Doc that they're sharing with you.</p>	

## GOOGLE DRIVE

### Google APPS

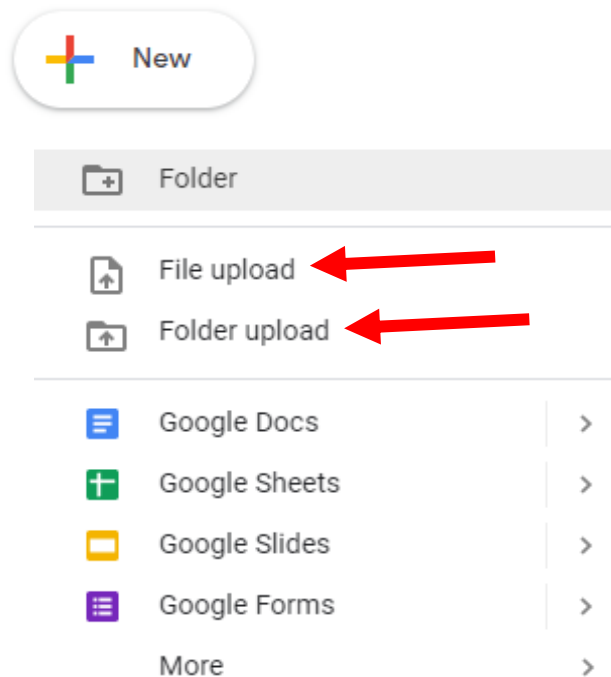
 Gmail	<p><b>Gmail:</b> Free email service you can use if you set up a Google account.</p>
 Drive	<p><b>Drive:</b> It is the home of many free products (Google Docs – similar to Microsoft Word; Google Sheets – similar to Microsoft Excel, etc.) Most importantly, Google Drive is a Cloud Storage that one can use free for up to 15GB. That means you can save documents, pictures, etc. on Google Drive and retrieve that information from anywhere in the world as long as you can get access to the internet.</p>
 Calendar	<p><b>Calendar:</b> Once you set up a Google account, you can set up an online Google calendar. It is free and makes your life easy to keep track of life's important events all in one place. If your device (such as phone) is connected to your Google account, you can also get to your calendar from your phone and maintain your calendar.</p>
 Photos	<p><b>Photos:</b> This is also another useful tool you can use to save your pictures on your online google account. You can retrieve your photos from anywhere in the world through your Google account.</p>
 Docs	<p><b>DOCS:</b> Brings your documents to life with smart editing and styling tools to help you easily format text and paragraphs. Choose from hundreds of fonts, add links, images, and drawings. (<a href="http://google.com/docs/about">google.com/docs/about</a>)</p>
 Sheets	<p><b>SHEETS:</b> Makes your data pop with colorful charts and graphs. Built-in formulas, pivot tables and conditional formatting options save time and simplify common spreadsheet tasks. (<a href="http://google.com/sheets/about">google.com/sheets/about</a>)</p>
 Meet	<p><b>MEET:</b> Real-time meetings by Google. Using your browser, share your video, desktop, and presentations with teammates and customers. Google is making enterprise-grade video conferencing available to everyone. Create an online meeting with up to 100 participants and meet for up to 60 minutes per meeting. (<a href="http://apps.google.com">apps.google.com</a>)</p>
 Keep	<p><b>KEEP:</b> Capture ideas with your voice, add images to notes, check tasks off your to-do list, and much more. With <b>Google Keep</b>, you can create, share, and collaborate with people on notes and lists. <b>Keep</b> synchronizes across all your devices, so your notes and lists go with you, wherever you are. (<a href="http://support.google.com">support.google.com</a>)</p>

## WHAT CAN YOU DO WITH GOOGLE DRIVE?

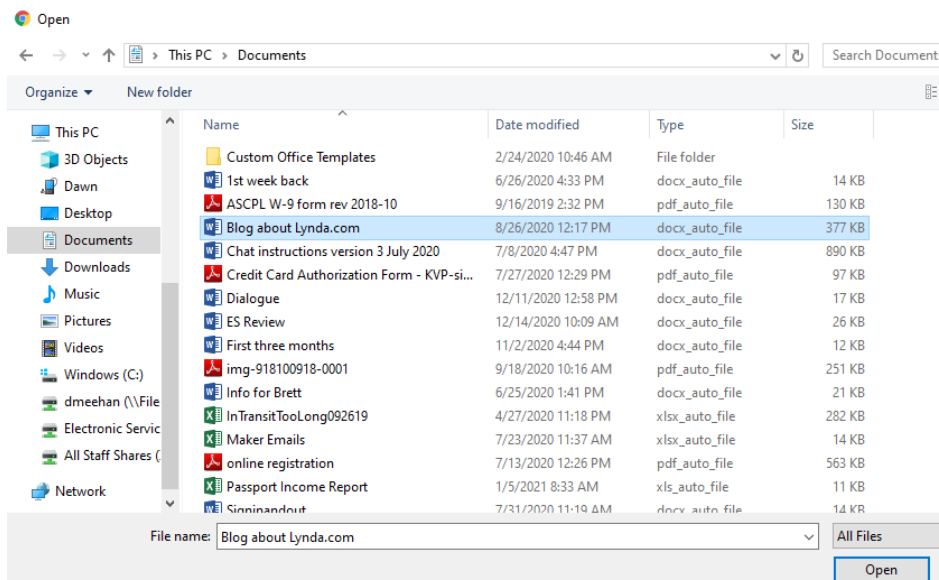
You can use Google Drive to store documents online so that they are accessible from any computer or any compatible mobile device. All you have to do is log into Google with your username and password and you can see your documents.

1. Uploading documents from your computer to Google Drive:

- Click on the **NEW** button. You will get the option to either upload a file or folder.
  - Choose **Folder upload** if you want to upload an entire folder from the computer
  - Choose **File upload** if you only want to upload one item from the computer.



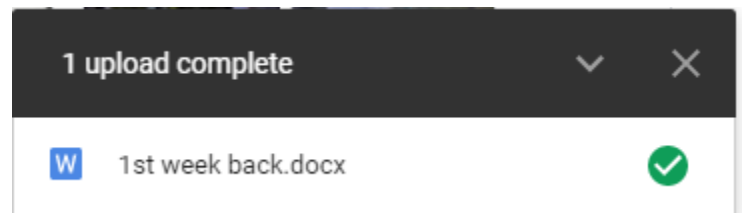
- After clicking on **File upload**, click on the file you would like to upload.
  - You will see the files listed in your file explorer on your computer.
- You will see the file at the bottom and it will also be highlighted blue at the top.
- Click open.



- You can upload multiple files by doing one of two things.
  - You can click on the first file you would like to select and then click on the last file while holding your shift key down.
    - This will highlight all the files between the first and the last file.
  - If the files you want to upload are not adjacent to each other, you can click on the first file, hold your **ctrl** key down and continue to select the other files as shown below.
    - There is one folder and eight files show below. I have highlighted five of those files to be uploaded.
    - Using the ctrl key gives you control of what you select.
  - Then click **open**.

	Custom Office Templates	2/24/2020 10:46 AM	File folder	
	1st week back	6/26/2020 4:33 PM	docx_auto_file	14 KB
	ASCPL W-9 form rev 2018-10	9/16/2019 2:32 PM	pdf_auto_file	130 KB
	Blog about Lynda.com	8/26/2020 12:17 PM	docx_auto_file	377 KB
	Chat instructions version 3 July 2020	7/8/2020 4:47 PM	docx_auto_file	890 KB
	Credit Card Authorization Form - KVP-si...	7/27/2020 12:29 PM	pdf_auto_file	97 KB
	Dialogue	12/11/2020 12:58 PM	docx_auto_file	17 KB
	ES Review	12/14/2020 10:09 AM	docx_auto_file	26 KB
	First three months	11/2/2020 4:44 PM	docx_auto_file	12 KB

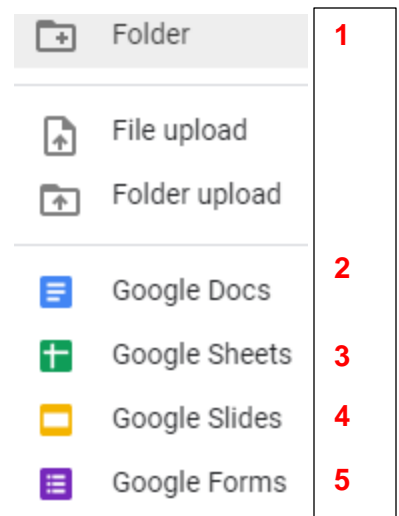
- A pop up box will appear in the lower right hand lower corner which will allow you to see the upload process and when it is complete.



When you open Google Drive and click the **New** button, you will see a list of options for the different things you can create.

All of these options are similar to what you may already know how to do in Microsoft Office. For example:

1. **Folder** is used to create a folder if you want to keep your items organized
2. **Google Docs** is similar to Word. You would use this to write a paper or a letter.
3. **Google Sheets** is similar to Excel. This would be used to create a spreadsheet with graphs.
4. **Google Slides** is similar to PowerPoint. It is used to create a slide presentation.
5. **Google Forms** is similar to paid survey sites. It can be used to help you plan events, send a survey, give students a quiz, or collect other information.












If you click on **Docs, Sheets, Slides, or Forms**, a new tab will open with a blank doc, spreadsheet, presentation, or form on your screen.

If you rest your mouse on Docs, Sheets, Slides, or Forms, you will have the option to click on either a blank file or a template.

We will take a look at Docs and Sheets in a later classe.

Once you start using Google Drive you will accumulate documents in “My Drive”. The library will look like this:

Name ↑	Owner	Last modified	File size
 Beverly Fincher.docx	me	May 21, 2020 me	12 KB
 Condos in TN	me	Aug 15, 2020 me	–
 es schedules UPDATE 2020 	me	Jan 4, 2021 me	–
 Expectations	me	Feb 11, 2020 me	–
 Kittaning History	me	May 16, 2020 me	–
 Library App.docx	me	Dec 26, 2019 me	20 KB
 Menards	me	Sep 29, 2020 me	–
 New Visions for TechZone and ES	me	Jan 28, 2020 me	–

These buttons will allow you to decide whether you want your files show in a **List view** or **Grid view**. The above picture shows list view, which will allow you to sort your files by Name, Owner, Last Modified, or File Size. Grid view will allow you to sort by Name, Owner, etc.



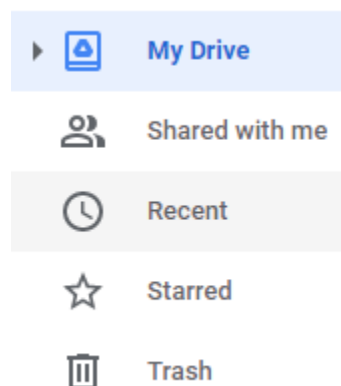


## Folders:

If you want to get rid of a file or folder, click on the item to select it and then press the delete key on your keyboard, or right click and select delete.

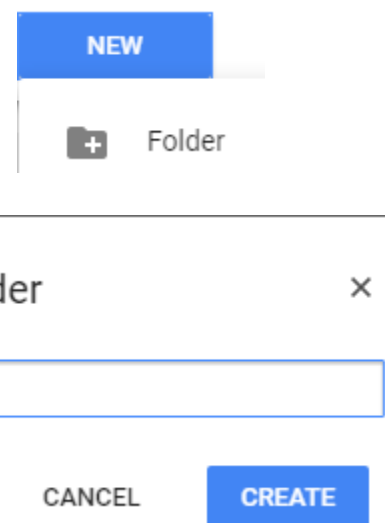
Any folders you create in My drive will be found under the **My Drive** folder on the left that you can access by clicking on it.

- Shared with me folder houses items that someone else created and is allowing you access to view and edit.
- Recent folder is for files you have worked on recently.
- Starred folder is for files that you want to easily find later. If you want to start a file or folder, you can right click on it and choose add to starred.
- Trash folder stores any item you have deleted either using the delete key or by right clicking with your mouse.
  - Your trash folder will be emptied every thirty days.



## To Create a Folder:

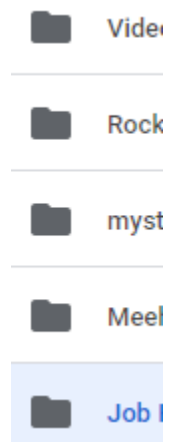
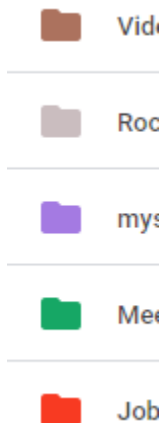
- Click on the **New** button.
- Click on **Folder** button and a pop up box will appear which will allow you to name your folder.
- Type in a new name and then click the **Create** button.
- **Folders** are separate from the **files**.
- Your **Quick Access** is the last few things you have opened.
- You can drag and drop items into your folder **OR** you can **right click**, then click on **move to**, a drop down menu will appear below what you are moving so you can **choose the folder** you want to put the item in, and lastly click **move** button.
- You can also open a specific **folder** and create a new document directly in that specific folder.



## Color coding folders

This can be a tool for organizing the information stored in your Google Drive.

- By default, all folders are gray but if you want to make it easier to find a folder visually then you can change the color of each folder.
- The color coding all depends on what colors you would like to use.
- To color code,
  - Right click on a folder.
  - Rest your mouse on change color.
  - A drop out menu will appear with colors to pick from.
- So instead of seeing a bunch of folders that look like this picture on the right.
- You can see a group of folders that have been color coded for visual cues.




## Searching for Files in Google Drive

- You can type in the search box at the top whatever you are looking for.
  - By title, type, owner, date, etc.
- If you click on the drop down arrow in the search box, you can filter for various categories.
- Whatever choices you make; Google will bring back a list of files that match your criteria.

## Sharing/Collaborating

Google Drive is great for sharing information or collaborating on projects. We will look at collaborating in one of the other classes. Why would you share something though? Is it only for business or if you belong to an organization. The answer is most definitely no. Sharing in Google Drive will allow you to share something that is too big for an email, text message, etc. I could share with my friends all the pictures and videos I took on vacation. I could share my child's concert that extended family was unable to attend etc.

- Find the file you want to share.
- Right click on that file.
- Click on  Share .
- A pop up box will appear where you can add people or groups from your contacts.
- Once you have added people or a group, you can choose whether they are to be an editor, a viewer or a commenter.
  - Editor can make changes to the document.
  - Viewer will only be able to read the document.
  - Commenter will be able to make comments on the document only.
- You could also get a link to send to people if you do not know their email address at this time.

## Working Offline

Sometimes you may need to access your Google Drive files when you are not connected to the Internet.

- While connected to the Internet, open your **browser**.
- Click on the **Google Drive** settings button.
- Click on **Settings**.
- Click the box directly across from **Offline**.



- Create, open and edit your recent Google Docs, Sheets, and Slides files on this device while offline  
Not recommended on public or shared computers. [Learn more](#)

## Scanning Handwritten Document

What happens if you upload a document that is handwritten or an image of something instead of a PDF? You can open an image using Google Docs and Docs will attempt to put it into word so you can edit it. It isn't always perfect that's for sure but it will at least get your started instead of you having to type it.

- Right click on the image.
- Choose open with Google Docs.
- Google will do the rest.
- It will insert the image at the top and the text it pulled out to follow.
- You are definitely going to have to edit your font. When you see this image in docs, it reminds one of rich text format. Where almost all of the formatting has been removed.
- Written text if it is simple and clean works okay.

## Keyboard shortcuts

If you are interested in Google Drive keyboard shortcuts. Using your keyboard, press the ctrl key and the forward slash key (/) this will open a pop up box with a lot of keyboard shortcuts.

## Help

In the right hand corner next to the settings button, you will see the help button which offers Help, Training, and Updates.

- Help will open a search box to search for whatever you need help with.
- Training will open a new tab and take you to Google Workspace Learning Center to get training on Google Drive.
- Updates will open a box that you can search or read through updates that are listed in reverse chronological order.

## What Is Google Meet?

Google Meet is a video conferencing service that lets you connect with people virtually through video calls. It's part of the suite of communication tools offered by Google, along with Google Chat, which replaced the older Google Hangouts platform.

Here's a breakdown of what Google Meet offers:

- **Video calling:** Hold face-to-face meetings with colleagues, family, or friends.
- **Accessibility:** Join meetings from your web browser or download the app for mobile devices.
- **Free and paid plans:** Basic features are free, allowing up to 100 participants for meetings lasting up to 60 minutes. Paid plans through Google Workspace offer extended meeting times, recording capabilities, and other features for businesses and organizations.

## How To Create A Google Meet

You can create a Google Meet in three main ways: via Google Calendar, directly through Google Meet, or from Gmail.

Using Google Calendar, you can schedule a meeting by creating an event, adding guests, and selecting "Add Google Meet video conferencing," which generates a meeting link.

Directly from the Google Meet website or app, you can start an instant meeting by clicking "New meeting" and sharing the provided link.

In Gmail, you can start a meeting from the "Meet" section on the sidebar by initiating a meeting or getting a link to share with others.

## How To Join A Meeting

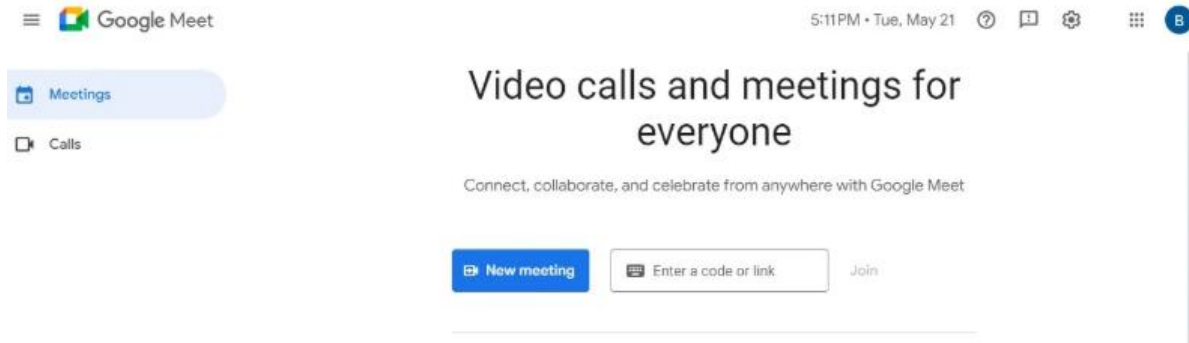
There are a few ways you can join a meeting, here are different meeting access options to join using the following methods:

### Begin video conferencing from Meet

Here are the basic steps to begin video conferencing using Google Meet:

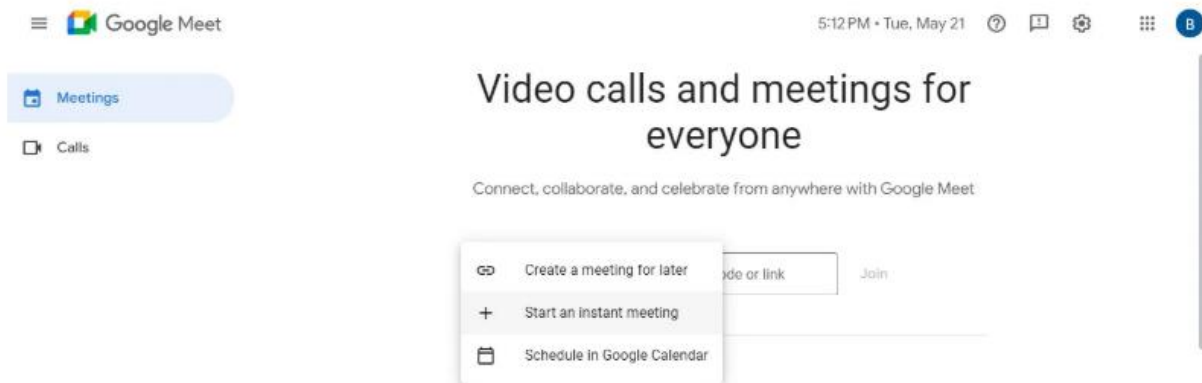
## 1. Open Google Meet :

Go to Google Meet or open the Google Meet app on your mobile device.



## 2. Join or start a meeting:

- Click on "Join or start a meeting."
- Enter a meeting code or nickname if joining a specific meeting, or click "Start an instant meeting" to begin a new one.



## 3. Join the meeting:

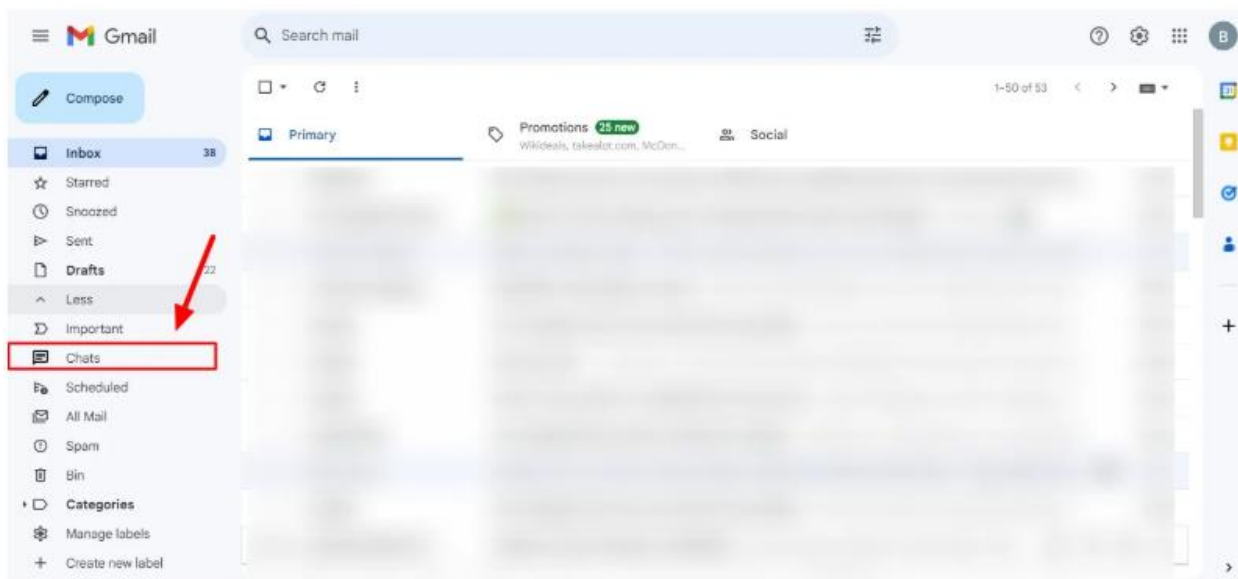
- Once you're ready, click "Join now" to enter the meeting.
- If you're the meeting organizer, you'll see options to invite others or copy the meeting link to share with participants.

## Start a meeting directly from Gmail or chat

Starting a video meeting directly from Gmail or Google Chat is quick and convenient if you have a Google Account.

In Gmail, locate the "Meet" section in the left sidebar and click "Join" Enter the meeting code or link provided by the organizer, then click "Join."

Alternatively, simply click on the meeting link shared in the conversation in Google Chat for new meetings.



This action will open Google Meet in a new tab or window, allowing you to join the meeting seamlessly. Once in Meet, review your audio and video settings, then click "Join now" to enter the meeting and engage with other participants.

## Schedule a video meeting from Google Calendar

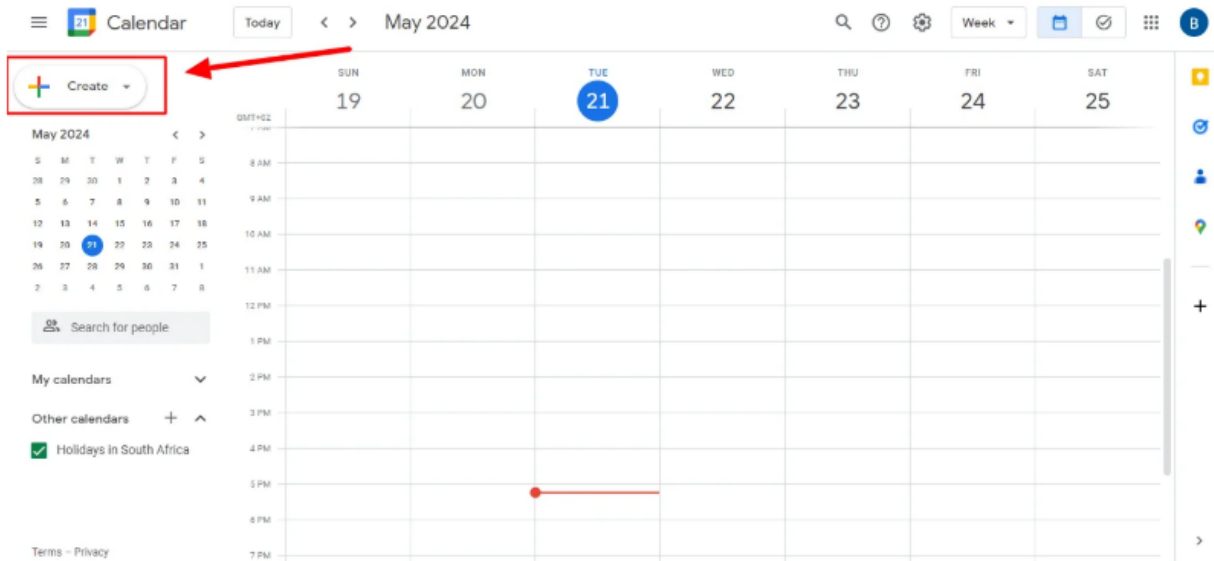
Here are the basic steps to schedule in Google Calendar:

### 1. Open Google Calendar:

- Go to Google Calendar and sign in with your Google account.

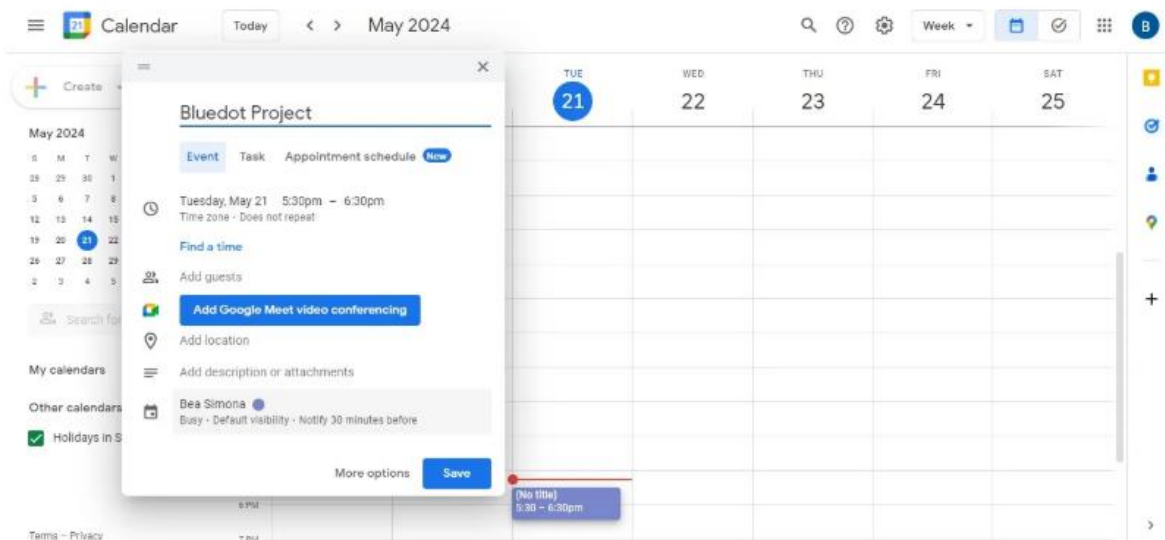
## 2. Create a Google Calendar event:

- Click on the "+ Create" button in the top left corner.



## 3. Enter meeting details:

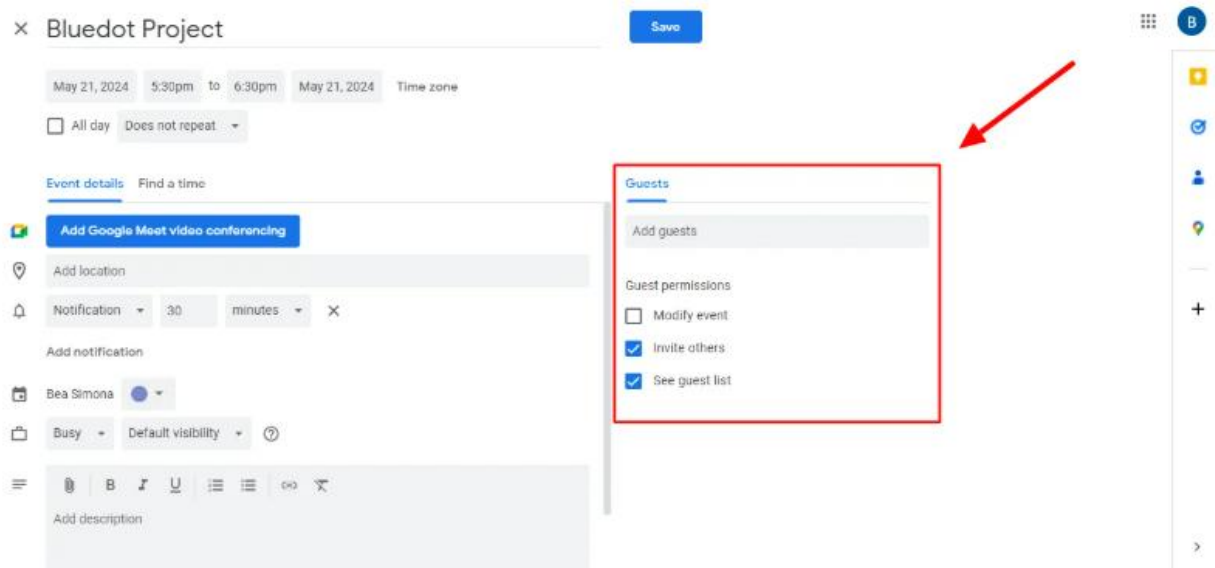
- Add a title for your Google Calendar event.
- Set the date and time.





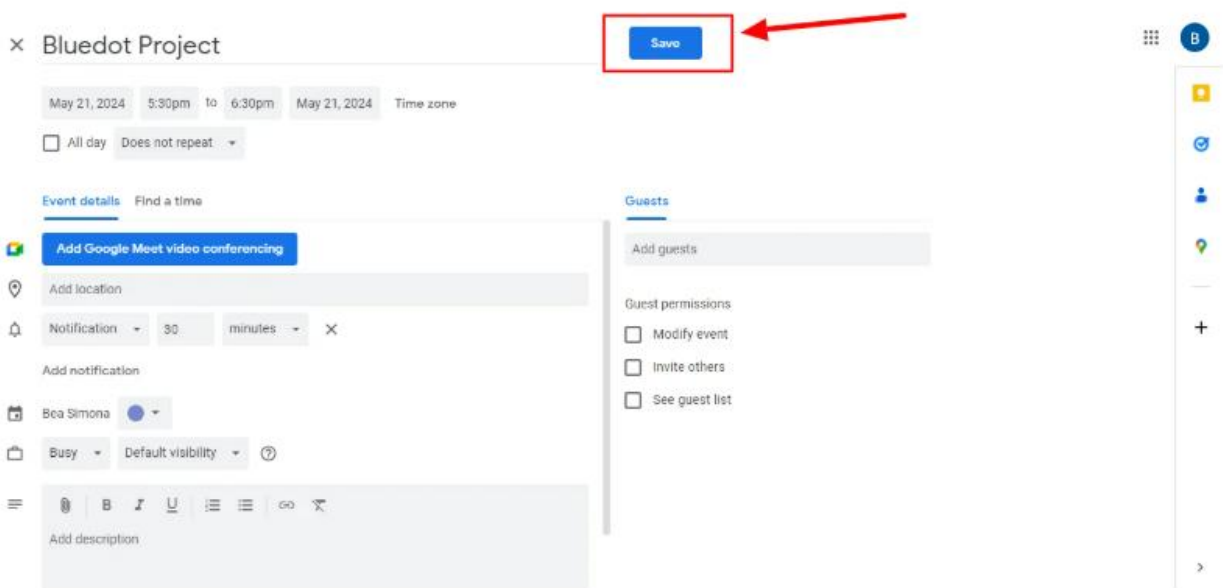
#### 4. Add guests:

- Enter the email addresses of the people you want to invite in the "Add guests" field.
- Click "Add video conferencing" to generate a link.



#### 5. Save and send invitations:

- Click "Save" and send your Google Calendar Invite.



You can also use this method for recurring meetings, it will be added as a calendar event on your team's schedule so different meetings don't clash with a new meeting.

## **How To Use Google Meet**

Google Meet offers a range of features to facilitate seamless virtual meetings, whether for work, education, or personal use. Here are a few features you might not be familiar with:

### **Customizing your settings**

Customizing your settings in Google Meet allows you to tailor the meeting experience to your preferences for your first meeting.

You can choose which camera and microphone to use, adjust your audio input and output levels, and test your audio and video before joining a meeting to avoid the same settings that might give you glitches.

Additionally, you can enable captions for better accessibility, change your layout preference, and configure other meeting options such as noise cancellation and low-light mode. By customizing your settings, you can ensure that your Google Meet experience is optimized for your needs and preferences.

### **How to chat and present in Google Meet**

In Google Meet, you can chat with participants and present content to enhance your meetings. To chat during a meeting, click on the speech bubble icon located in the bottom right corner of the screen.

This opens the chat sidebar, where you can type messages to individual participants or the entire group. You can also share files, links, or emojis to enrich the conversation.

To present content, click on the "Present now" button in the bottom center of the screen. Choose whether to present your entire screen, a specific window, or a Chrome tab.

Once you've selected what to present, click "Share" to start presenting. This allows you to share documents, slideshows, or other materials with participants in real time, making collaboration seamless and engaging.

## Record a meeting

Recording a meeting in Google Meet is a feature available to users with a paid Google Workspace account.

For those who do not have access to the paid version of Google Workspace, Bluedot is an excellent alternative for recording Google Meet sessions. Bluedot is a third-party screen recording tool that can be used to record your meetings with ease. It offers high-quality recordings, intuitive controls, and the ability to save recordings in various formats.

## Additional Google Meet Settings

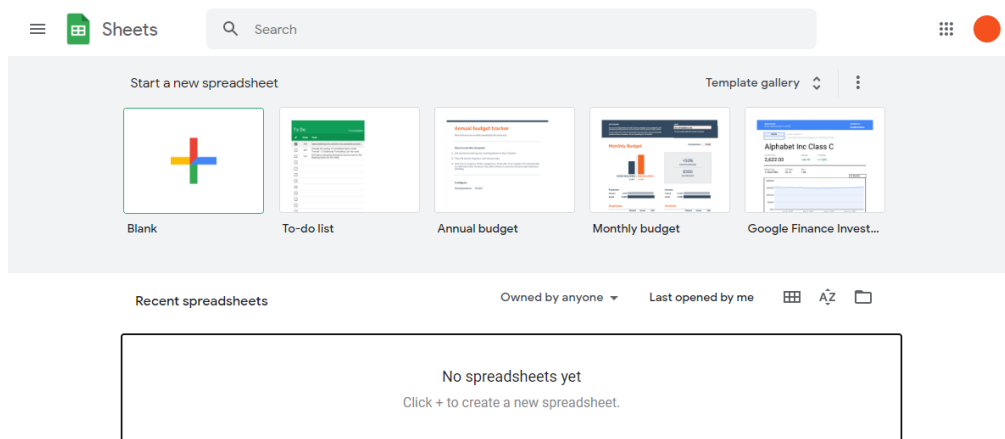
Meet offers a variety of additional settings to enhance your meeting experience, ensuring it is tailored to your specific needs. To access these settings, click on the three-dot menu in the bottom-right corner of the meeting screen and select "Settings." Here are a few settings you'll find:

- **Audio and video settings:** Adjust your microphone and camera settings to select the preferred devices. You can test your [audio](#) and [video](#) to ensure they are functioning correctly. Google Meet also offers noise cancellation to reduce background noise and a low-light mode to improve video quality in dim environments.
- **Change layout:** Meet allows you to customize the layout of your screen to suit your preferences. You can choose between different viewing options such as Auto, Tiled, Spotlight, or Sidebar. This can help you focus on the speaker or see more participants at once.
- **Background blur and virtual backgrounds:** To maintain privacy or reduce distractions, you can [change your background](#) or choose a virtual background. This feature helps to keep the focus on you rather than what's happening behind you.
- **Host controls:** If you are the meeting organizer, you have additional controls such as muting participants, removing participants, and managing who can share their screens. These controls help you maintain order and security during your meeting.

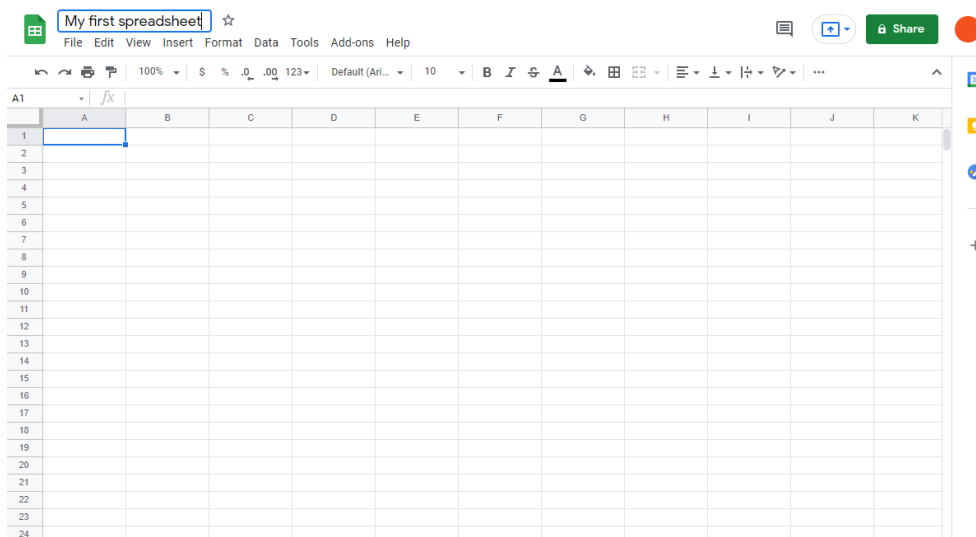
## Google Sheets

This lecture gives an overview of Google Sheets. Google Sheets does not require downloading and installation of the program. It simply runs in your browser.

Once you have successfully logged in, you will land in Google Sheets' start Page. Click on the Blank button to get started with a new **workbook**.



Enter a name for your workbook, and hit the Enter button on your keyboard:



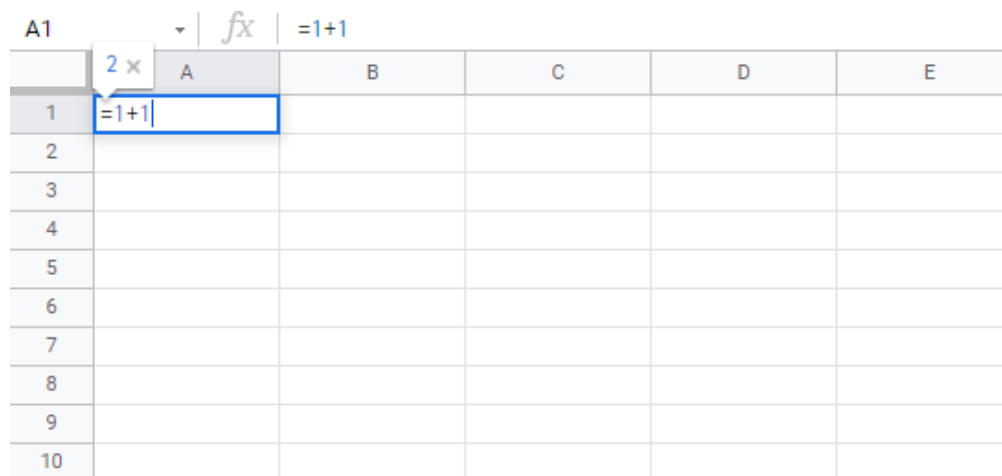
Google Sheets has columns and rows, similar to a squared math exercise book.

Do not worry if the functionality looks overwhelming at first. You will get comfortable as you learn more in the chapters to come.

For now focus on the rows, columns, and the cells.

Ok. Let's make a function!

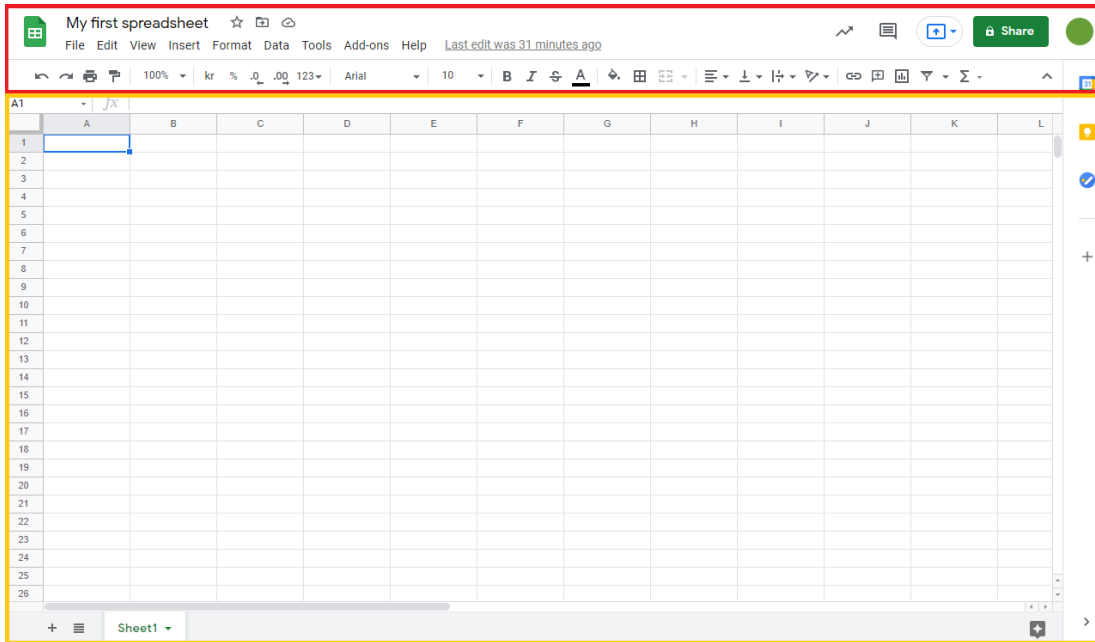
- First, click the cell A1, the one that is marked with the blue rectangle in the picture
- Second, type =1+1.
- Third, hit the **Enter** button:



## Ribbon and the Sheet

Google Sheets are made of two pieces, the **Ribbon** and the **Sheet**.

Have a look at the picture below. The **Ribbon** is marked with a red rectangle and the **Sheet** is marked with a yellow rectangle:

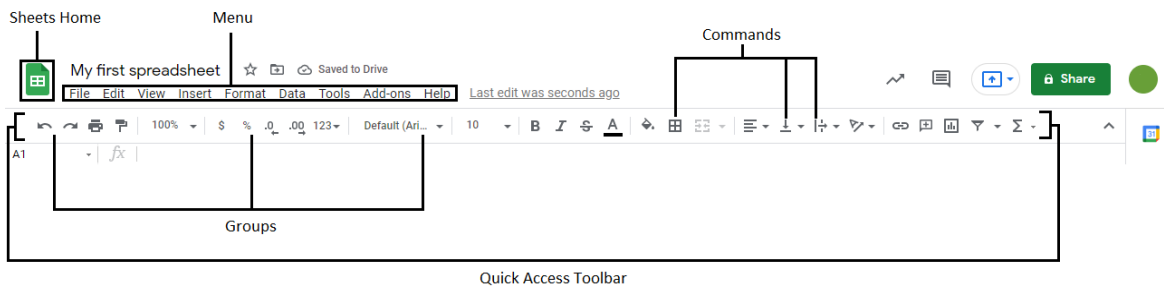


First, let's start with explaining the **Ribbon**.

## The Ribbon explained

The **Ribbon** provides shortcuts to Google Sheets commands. A command is an action that allows you to make something happen. This can for example be to: insert a chart, change the font size, or to change the color of a cell.

The **Ribbon** is made up of the **Sheets Home**, **Menu bar**, **Quick Access Toolbar**, **Groups** and **Commands**. In this section we will explain the different parts of the **Ribbon**.



## Sheets Home

The Sheets Home button takes you to Google Sheets start page where you can create new workbooks or visit your Previous workbooks.

## Menu Bar

The menu bar allows you to perform different actions on your workbook.

## Quick Access Toolbar

The quick access toolbar has the most popular actions from the menu.

## Groups

The groups are sets of related commands on the quick access toolbar. The groups are separated by the thin vertical line break.

## Commands

The commands are the buttons that you use to do actions.

Now, let's have a look at the **Sheet**. Soon you will be able to understand the relationship between the **Ribbon** and the **Sheet**, and you can make things happen.

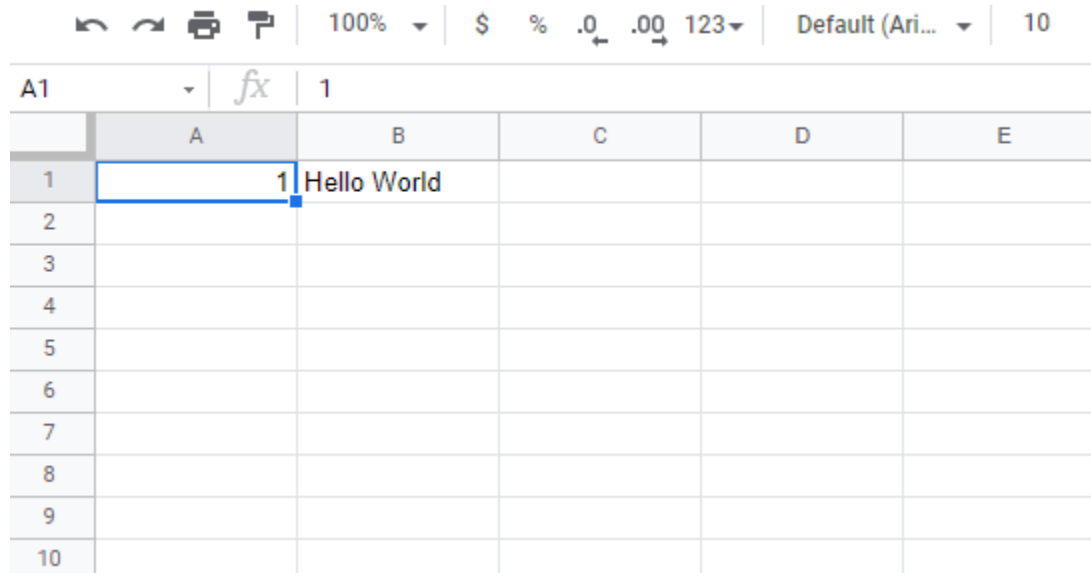
## The Sheet explained

The **Sheet** is a set of rows and columns. It forms the same pattern as we have in math exercise books, the rectangle boxes formed by the pattern are called **cells**.

Values can be typed to cells.

Values can be both numbers and letters:

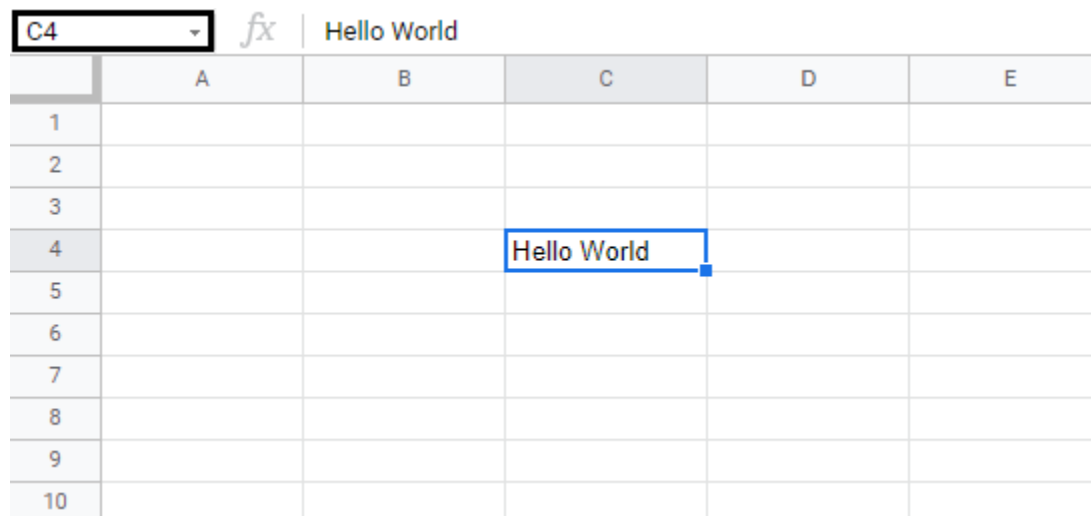




Each cell has its unique reference which is its coordinates. This is where the columns and rows intersect.

Let's break this up and explain by an example

Have a look at the picture below. "Hello world" was typed in cell C4. The reference can be found by clicking on the relevant cell and seeing the reference in the **Name Box** to the left, which tells you that the cell's reference is C4.



Another way to find the reference is to first find the column, in this case C, then map that towards the row, in this case 4, which gives us the reference of C4.

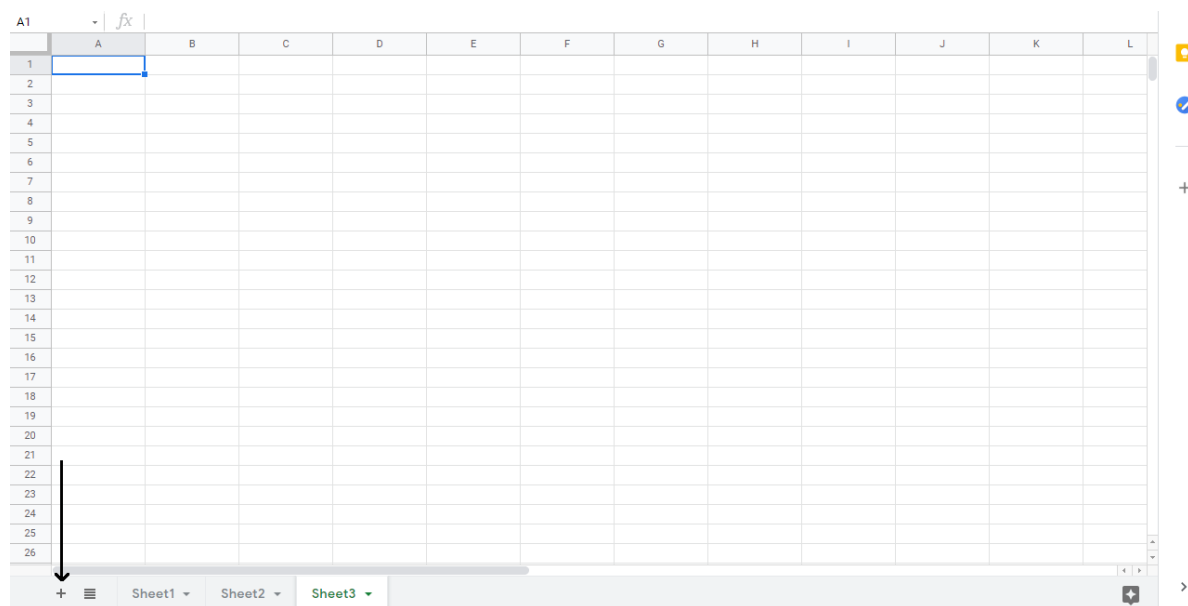
**Note:** The reference of the cell is its coordinates. For example, C4 has the coordinates of column C and row 4. You find the cell in the intersection of the two. The letter is always the column and the number is always the row.

## Multiple Sheets

You start with one **Sheet** by default when you create a new workbook. You can have many sheets in a workbook. New sheets can be added or removed. Sheets can be named to making it easier to work with data sets.

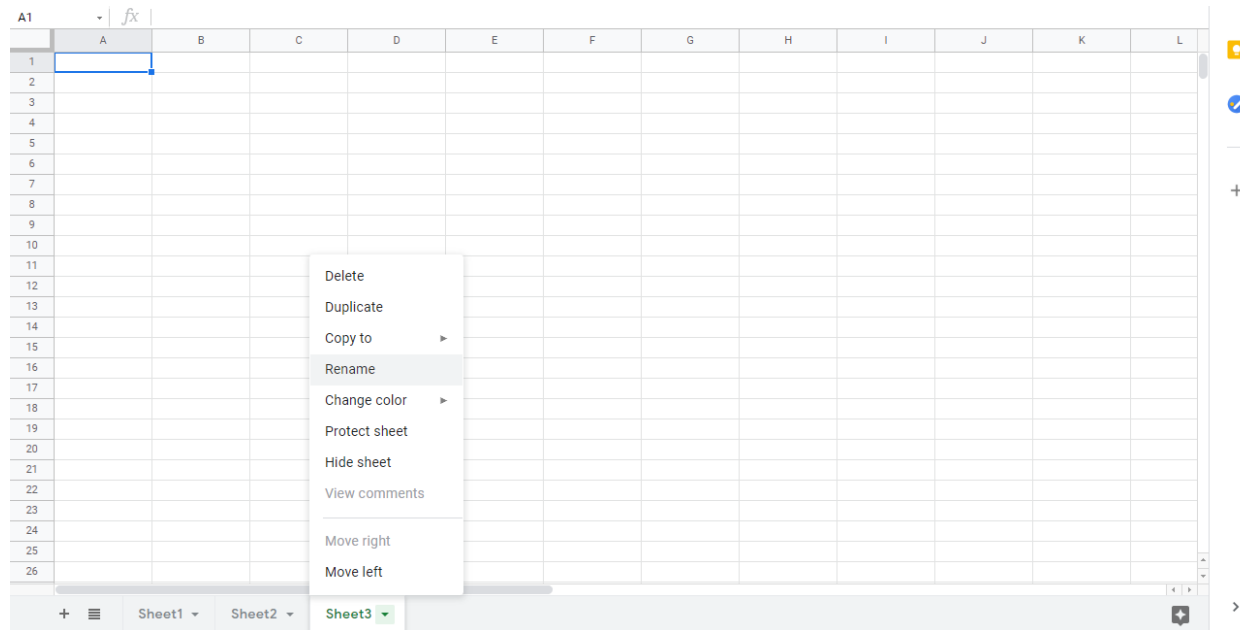
**Are you up for the challenge?** Let's create two new sheets and give them useful names.

First, click the plus icon, shown in the picture below, create two new sheets:

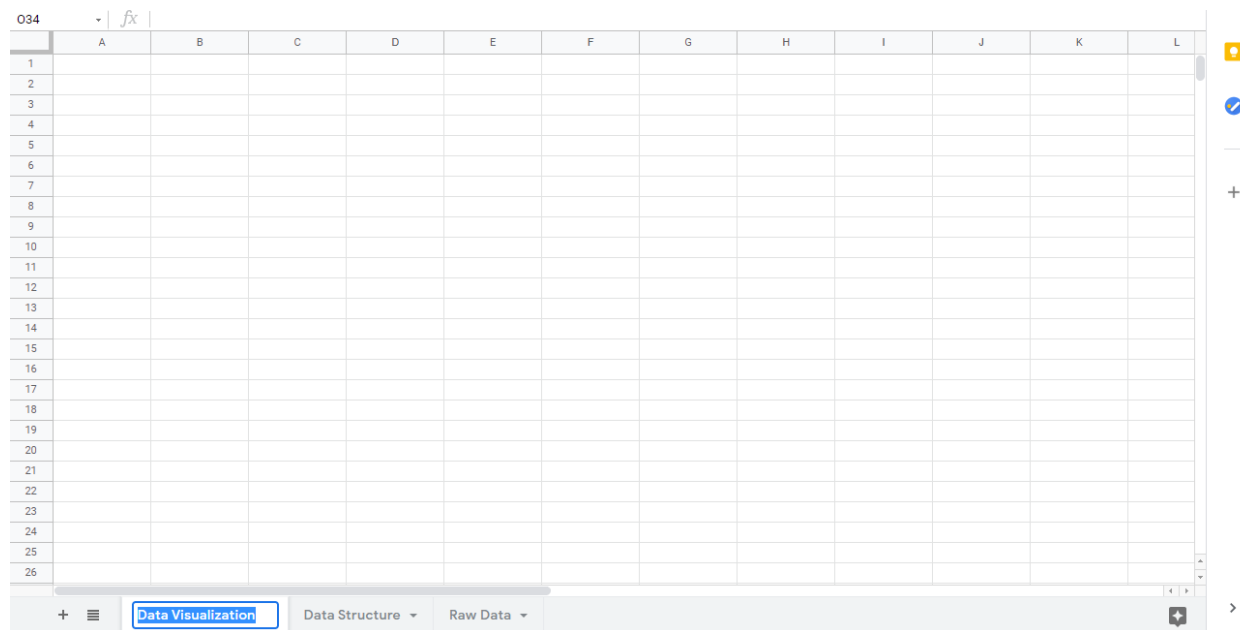


**Tip:** You can use the hotkey **Shift + F11** to create new sheets. Try it!

Second, right click with your mouse on the relevant sheet and click rename:



Third, enter useful names for the three sheets:



In this example we used the names **Data Visualization**, **Data Structure** and **Raw Data**.

This is a typical structure when you are working with data.

## What is PowerPoint?

### Lesson 1:

- Introduction in PowerPoint
- Opening PowerPoint
- Working with PowerPoint environment
- Exploring the Ribbon
- The quick access toolbar
- Creating and opening presentations
- Save and save as presentations

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### Introduction in PowerPoint

- PowerPoint is a slideshow presentation program that's part of Microsoft Office. PowerPoint makes it easy to create, collaborate, and present your ideas in dynamic, visually compelling ways.
- The file extension of PowerPoint, PPT, and PPTX. When You Open PowerPoint menu and toolbars are just like the other Office applications

## When You Open Power Point

Power Point menu and toolbars are just like the other Office applications

Home Toolbar :



Insert Toolbar :



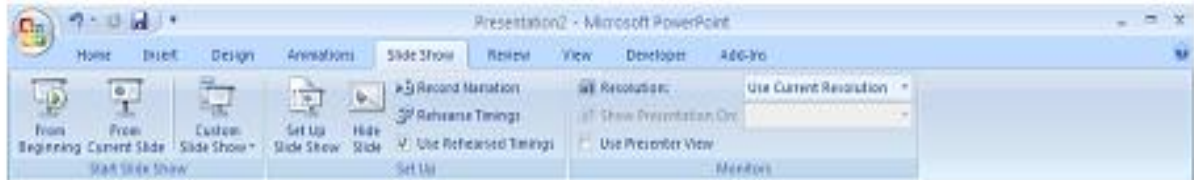
Design Toolbar :



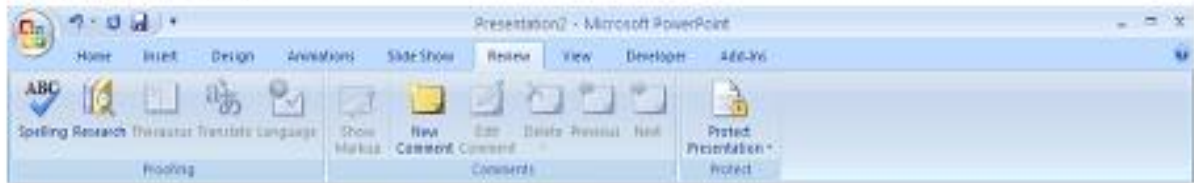
### Animations Toolbar :



### Slide Show Toolbar :



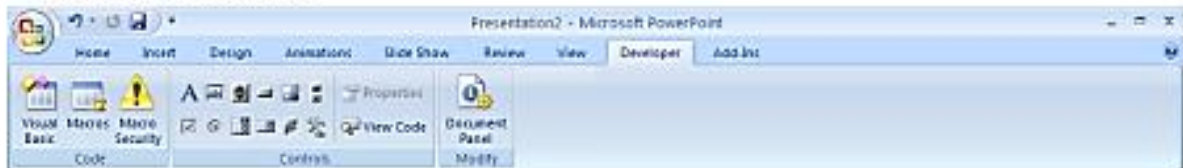
### Review Toolbar :



### View Toolbar :



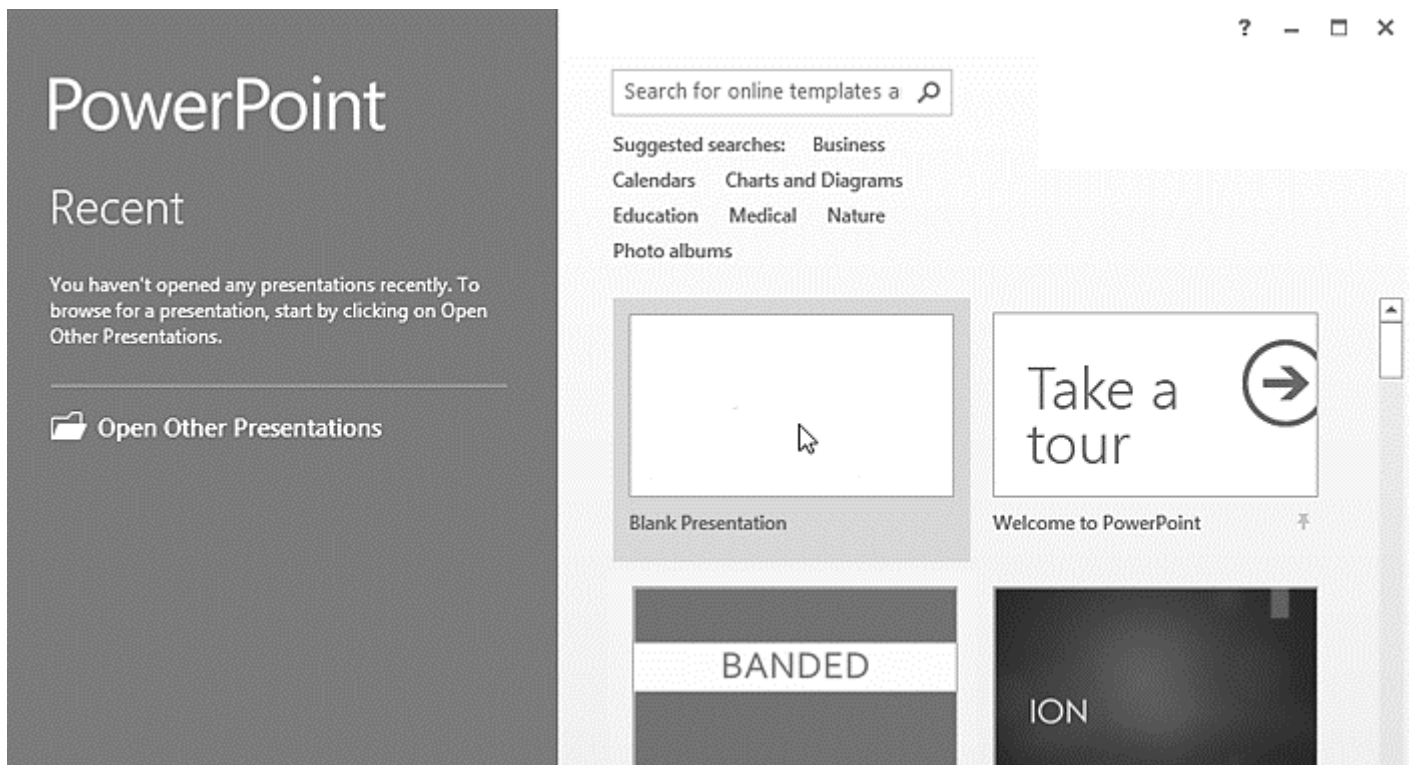
### Developer Toolbar :



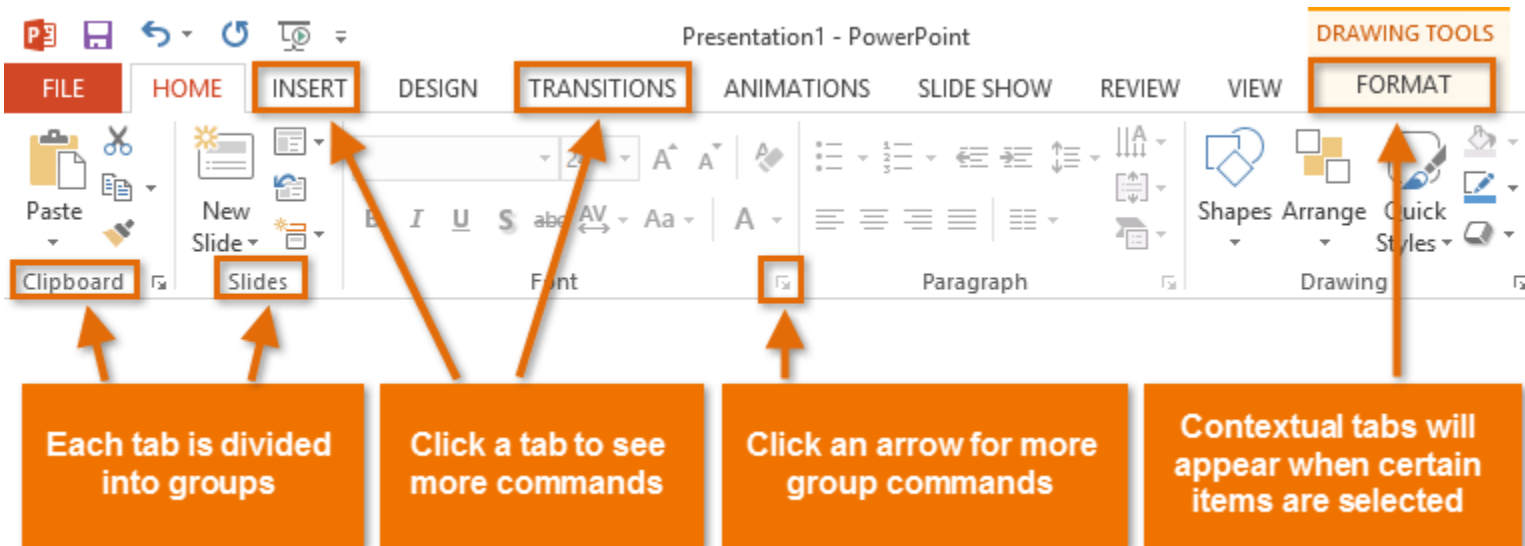
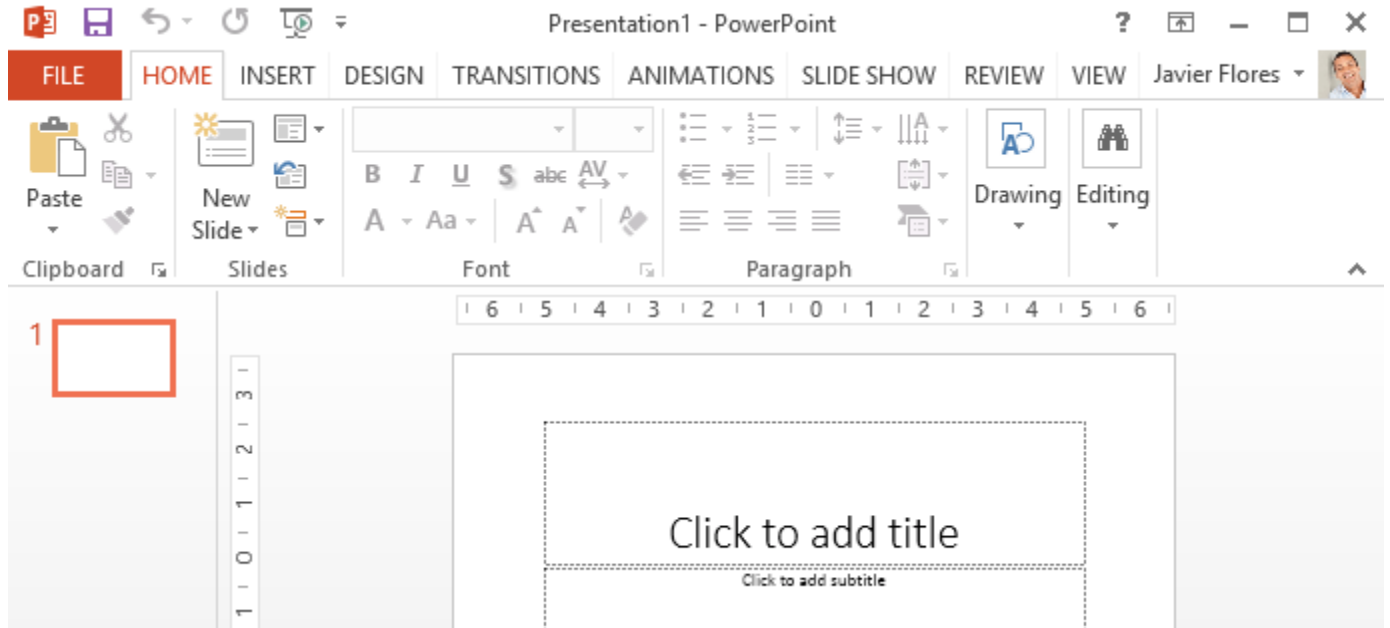
## **Opening PowerPoint**

When you open PowerPoint for the first time, the **Start Screen** will appear. From here, you will be able to create a **new presentation**, choose a **template**, and access your **recently edited presentations**.

1. From the **Start Screen**, locate and select **Blank Presentation**.
2. A **new presentation** will appear.



## Working with the PowerPoint environment



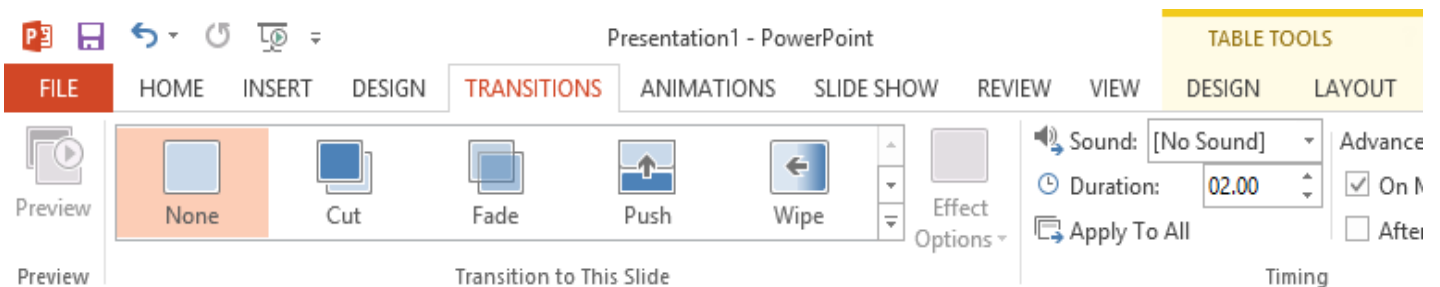
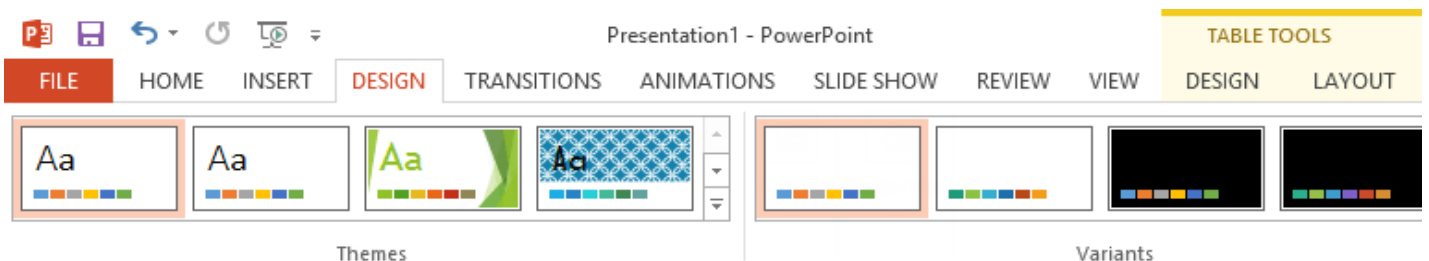
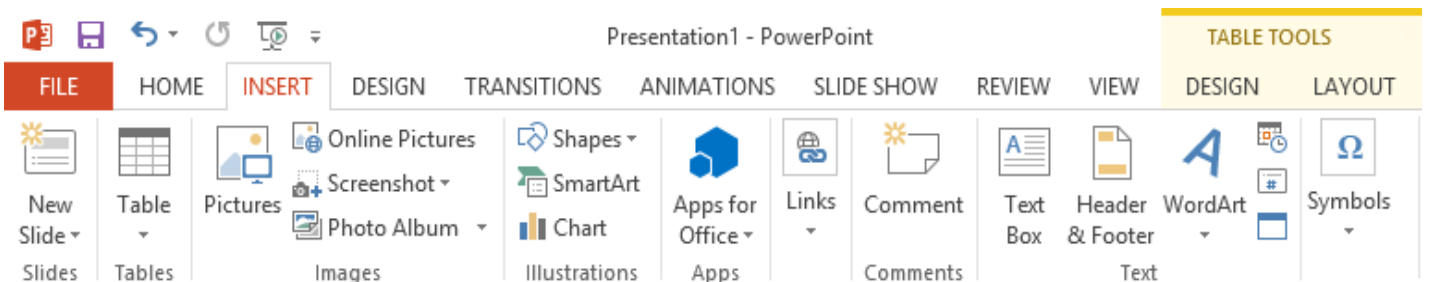
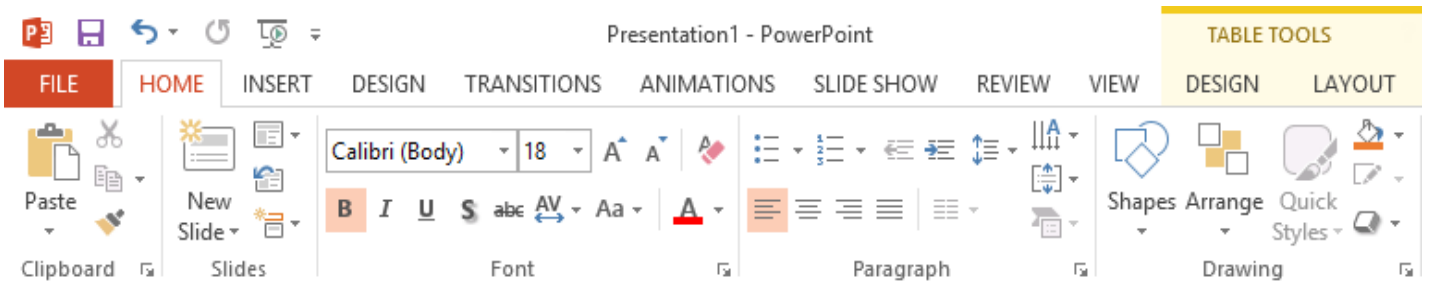
The Ribbon contains **multiple tabs**, each with several **groups of commands**. You will use these tabs to perform the most **common tasks** in PowerPoint.

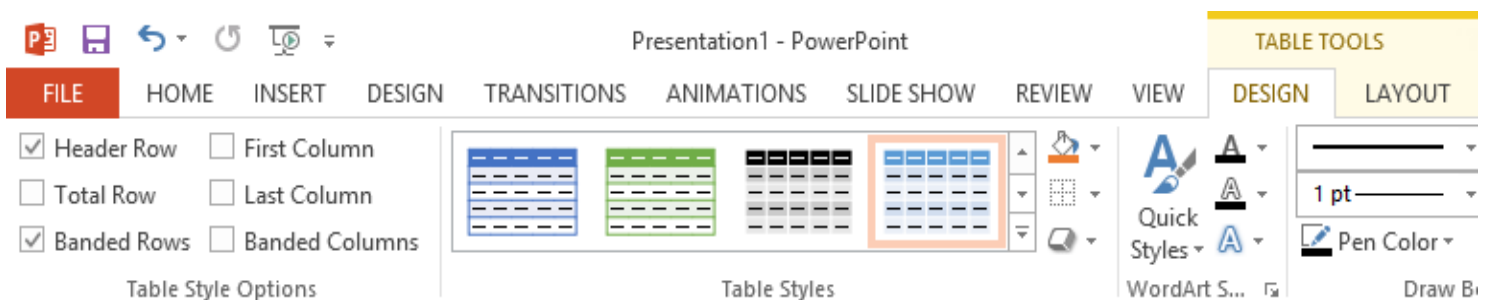
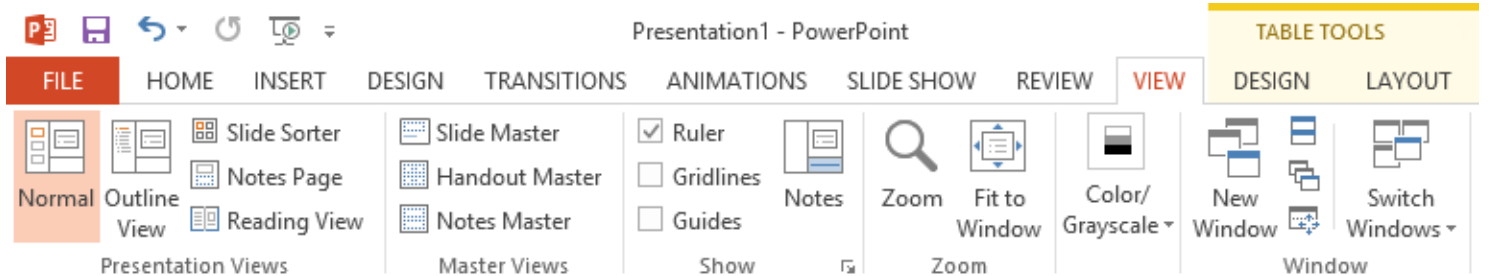
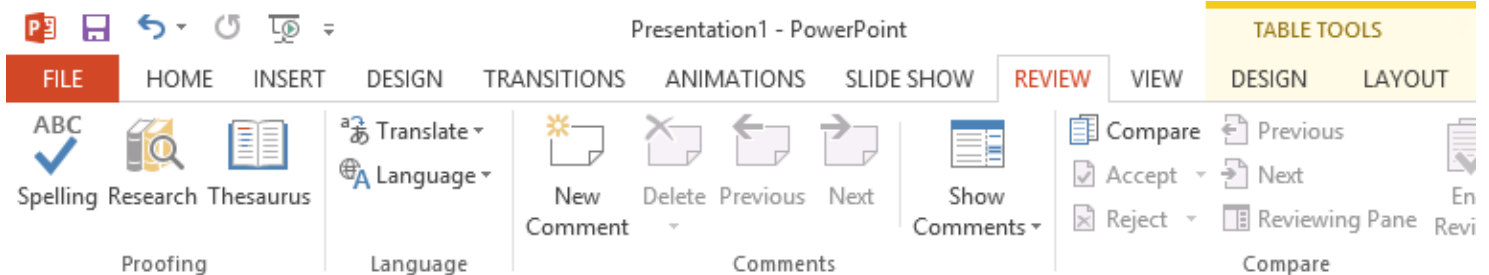
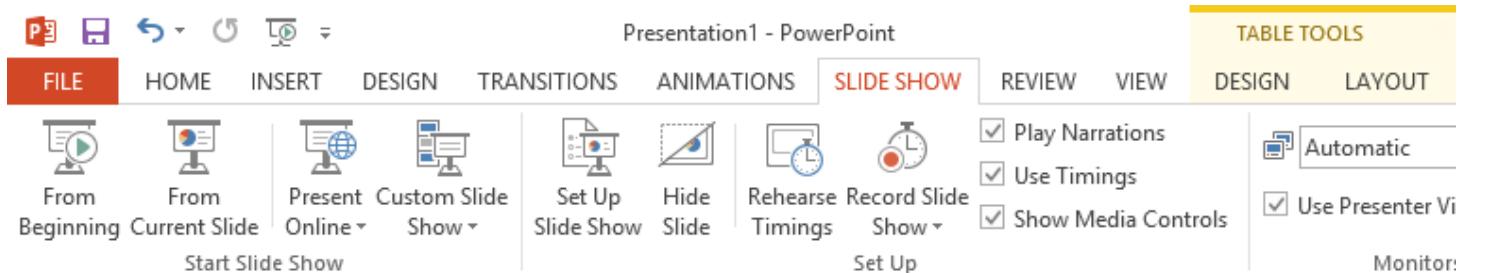
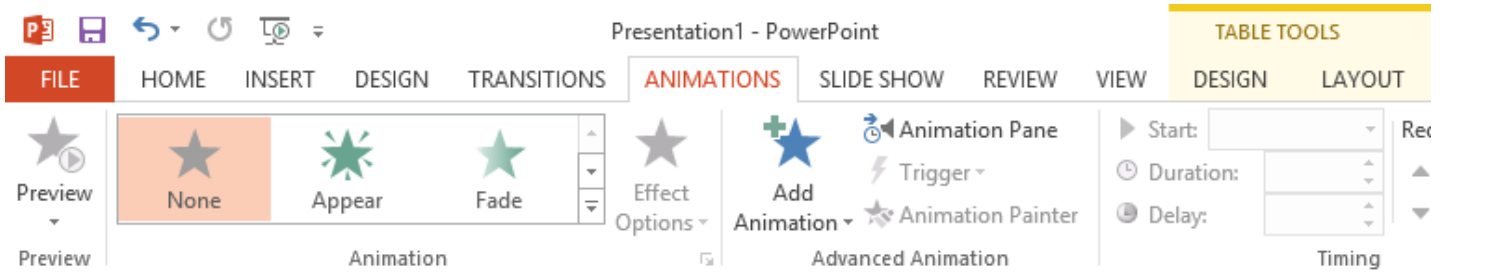


## Exploring the Ribbon

You will need to move between tabs to perform common tasks in PowerPoint. Knowing where to find the right command will make PowerPoint easier to use.

The **Home** tab gives you access to the most used commands, including **copy and paste**, **formatting**, and the **New Slide** command. The Home tab is selected by default whenever you open PowerPoint.



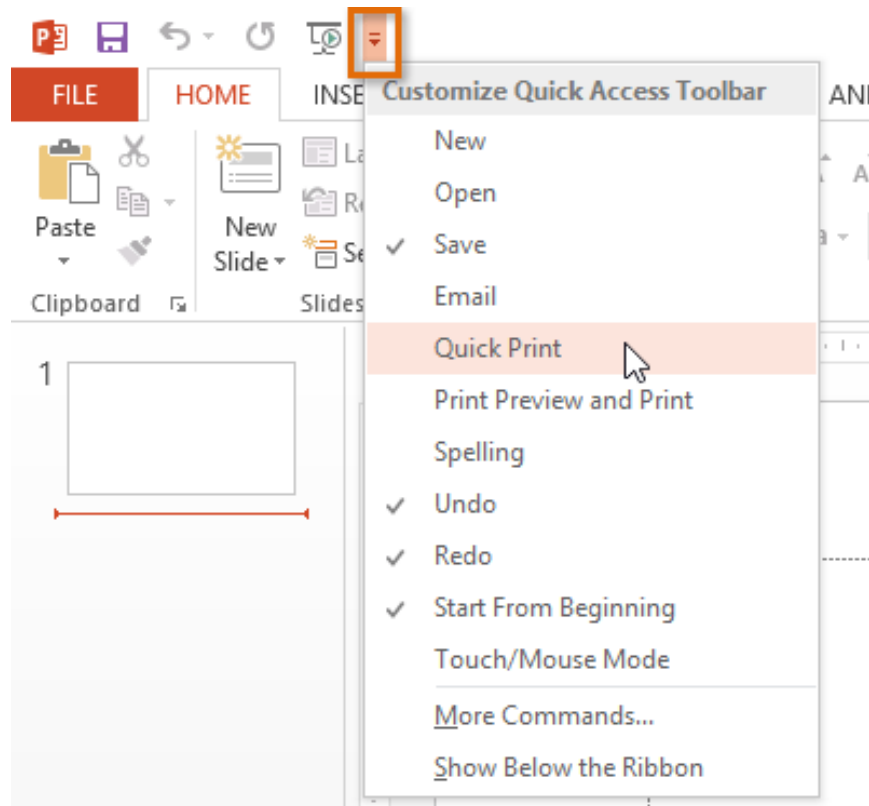


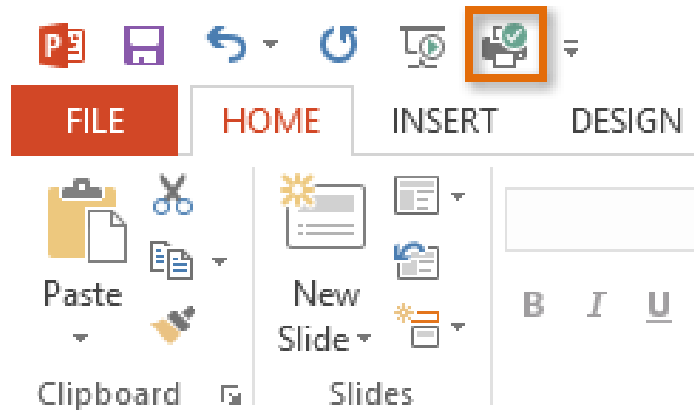
## The Quick Access toolbar

Located just above the Ribbon, the **Quick Access toolbar** lets you access common commands no matter which tab is selected. By default, it includes the **Save, Undo, Repeat,** and **Start Presentation** commands. You can add other commands depending on your preference.

### To add commands to the Quick Access toolbar:

1. Click the **drop-down arrow** to the right of the **Quick Access toolbar**.
2. Select the **command** you want to add from the drop-down menu. To choose from more commands, select **More Commands**.
3. The command will be added to the Quick Access toolbar.





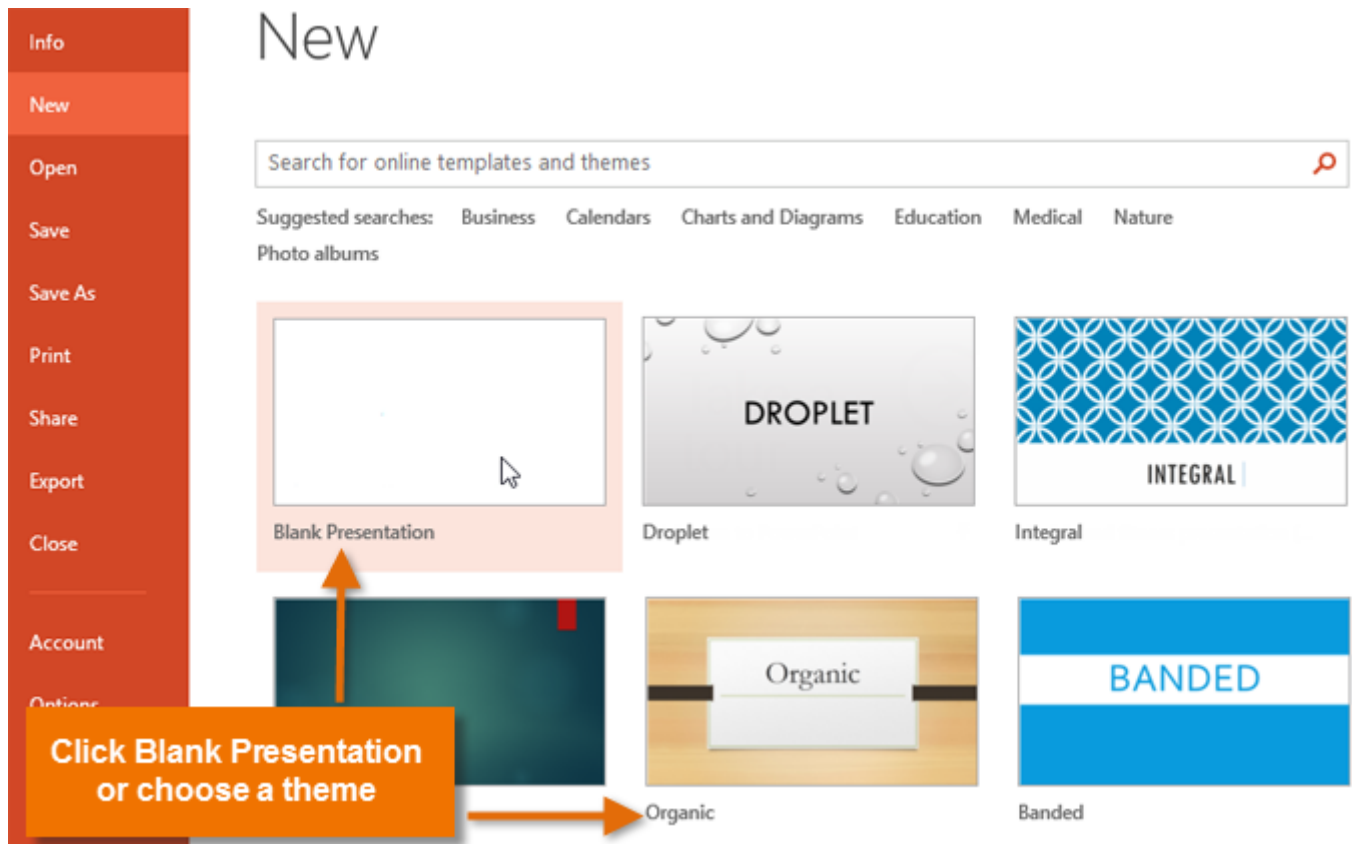
## Creating and Opening Presentations

### Introduction

PowerPoint files are called **presentations**. Whenever you start a new project in PowerPoint, you'll need to create a new **presentation**, which can either be **blank** or from a **template**. You'll also need to know how to **open an existing presentation**.

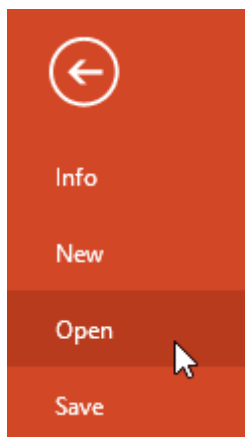
### To create a new presentation:

1. Select the **File** tab to go to **Backstage view**.
2. Select **New** on the left side of the window, then click **Blank Presentation** or choose a **theme**.
3. A new presentation will appear.

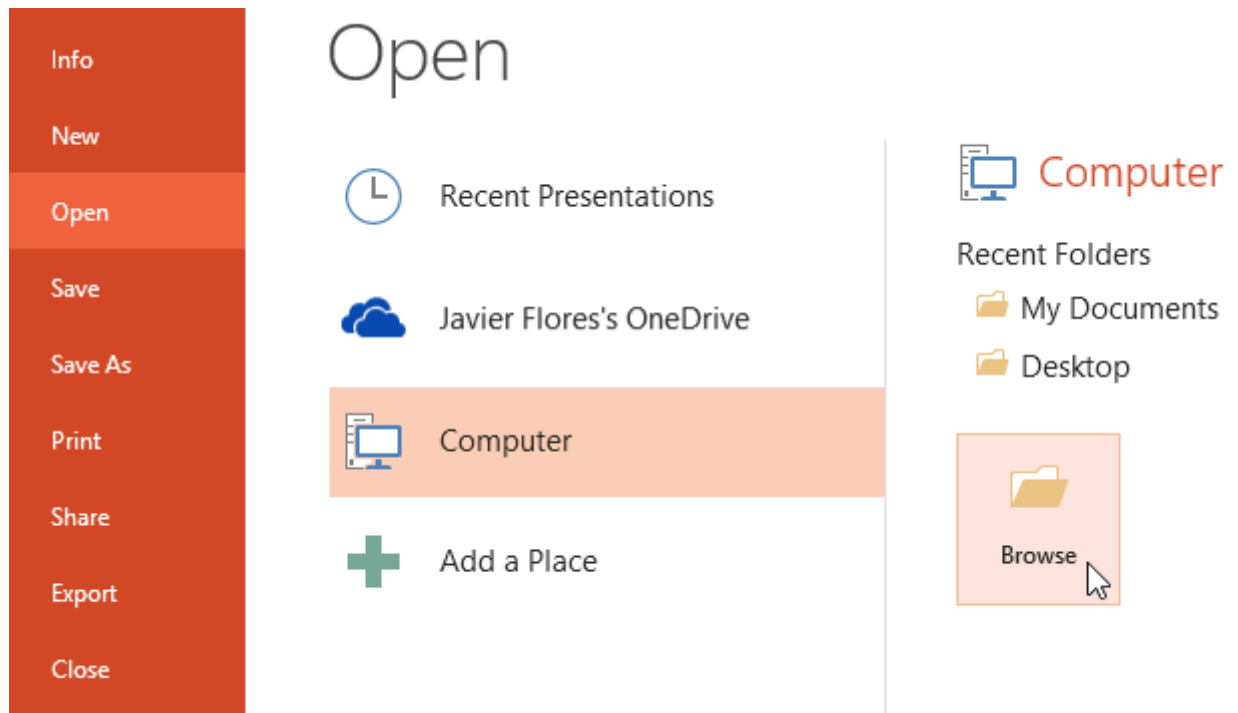


**To open an existing presentation:**

1. Select the **File** tab to go to **Backstage view**.
2. Select **Open**.



3. Select **Computer**, then click **Browse**. Alternatively, you can choose **OneDrive** (previously known as SkyDrive) to open files stored on your OneDrive.



4. The **Open** dialog box will appear. Locate and select your **presentation**, then click **Open**.

## Save and Save As

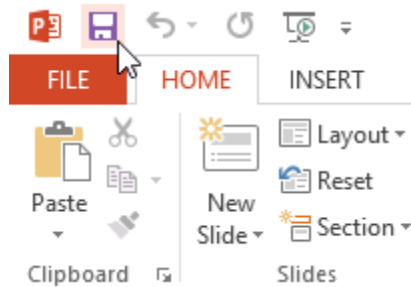
PowerPoint offers two ways to save a file: **Save** and **Save As**. These options work in similar ways, with a few important differences:

- **Save:** When you create or edit a presentation, you'll use the **Save** command to save your changes. You'll use this command most of the time. When you save a file, you'll only need to choose a file name and location the first time. After that, you can just click the Save command to save it with the same name and location.
- **Save As:** You'll use this command to create a **copy** of a presentation while keeping the original. When you use Save As, you'll need to choose a different name and/or location for the copied version.

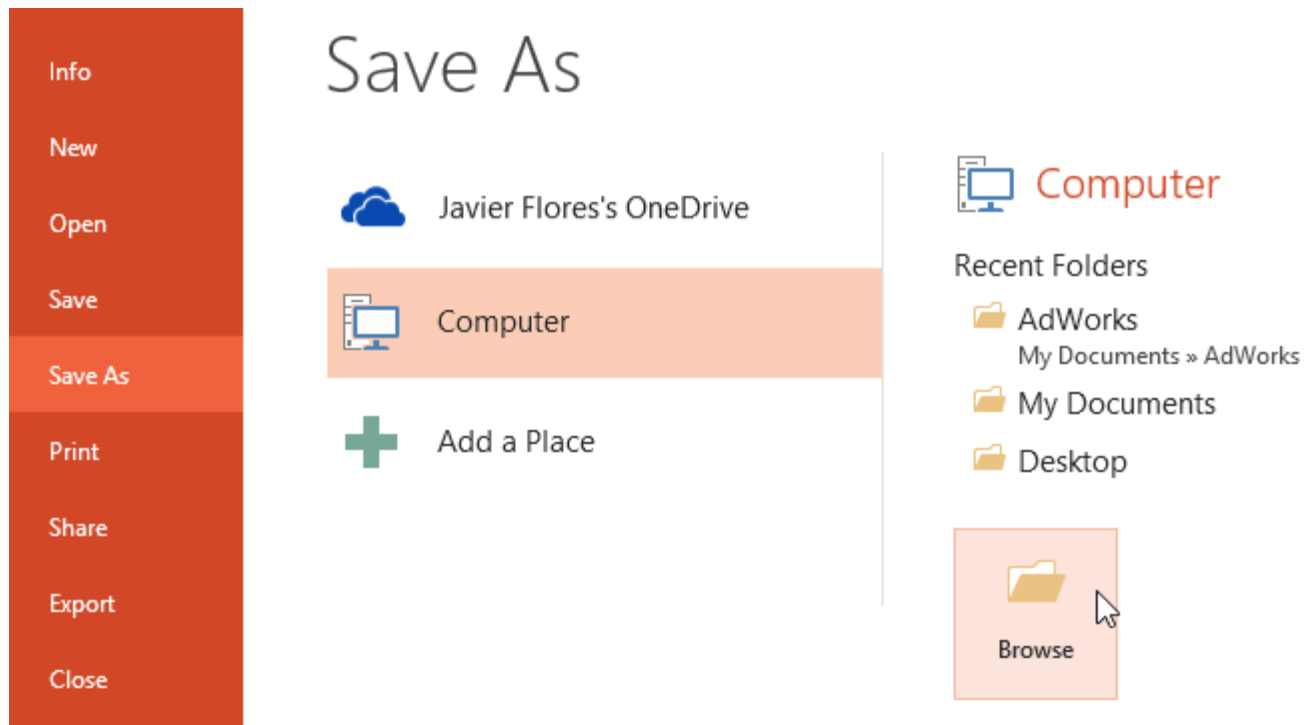
### To save a presentation:

It's important to **save your presentation** whenever you start a new project or make changes to an existing one. Saving early and often can prevent your work from being lost. You'll also need to pay close attention to **where you save** the presentation so it will be easy to find later.

1. Locate and select the **Save** command on the **Quick Access toolbar**.

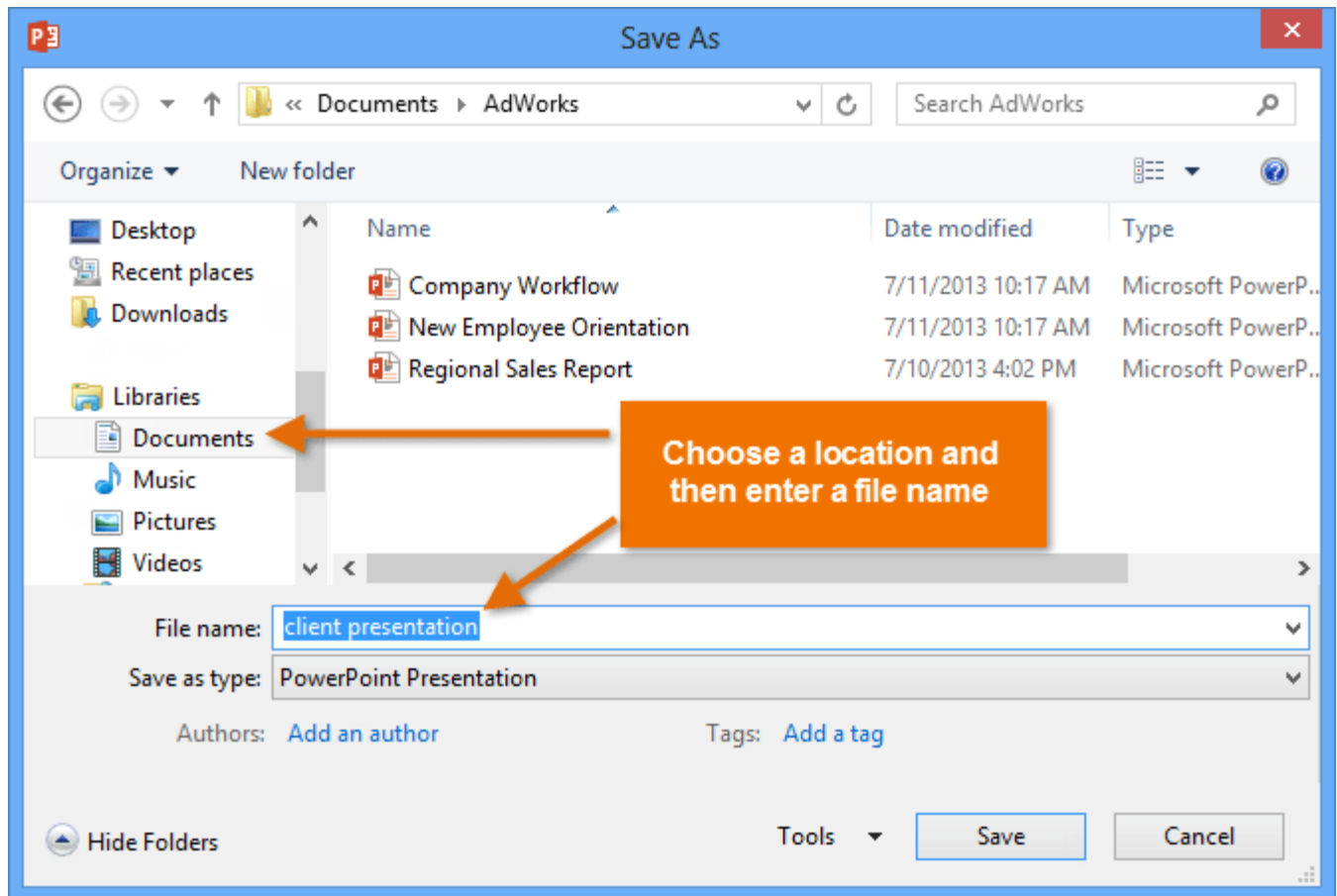


2. If you're saving the file for the first time, the **Save As** pane will appear in **Backstage view**.
3. You'll then need to choose **where to save** the file and give it a **file name**. To save the presentation to your computer, select **Computer**, then click **Browse**. Alternatively, you can click **OneDrive** to save the file to your OneDrive.





4. The **Save As** dialog box will appear. Select the **location** where you want to save the presentation.
5. Enter a **file name** for the presentation, then click **Save**.



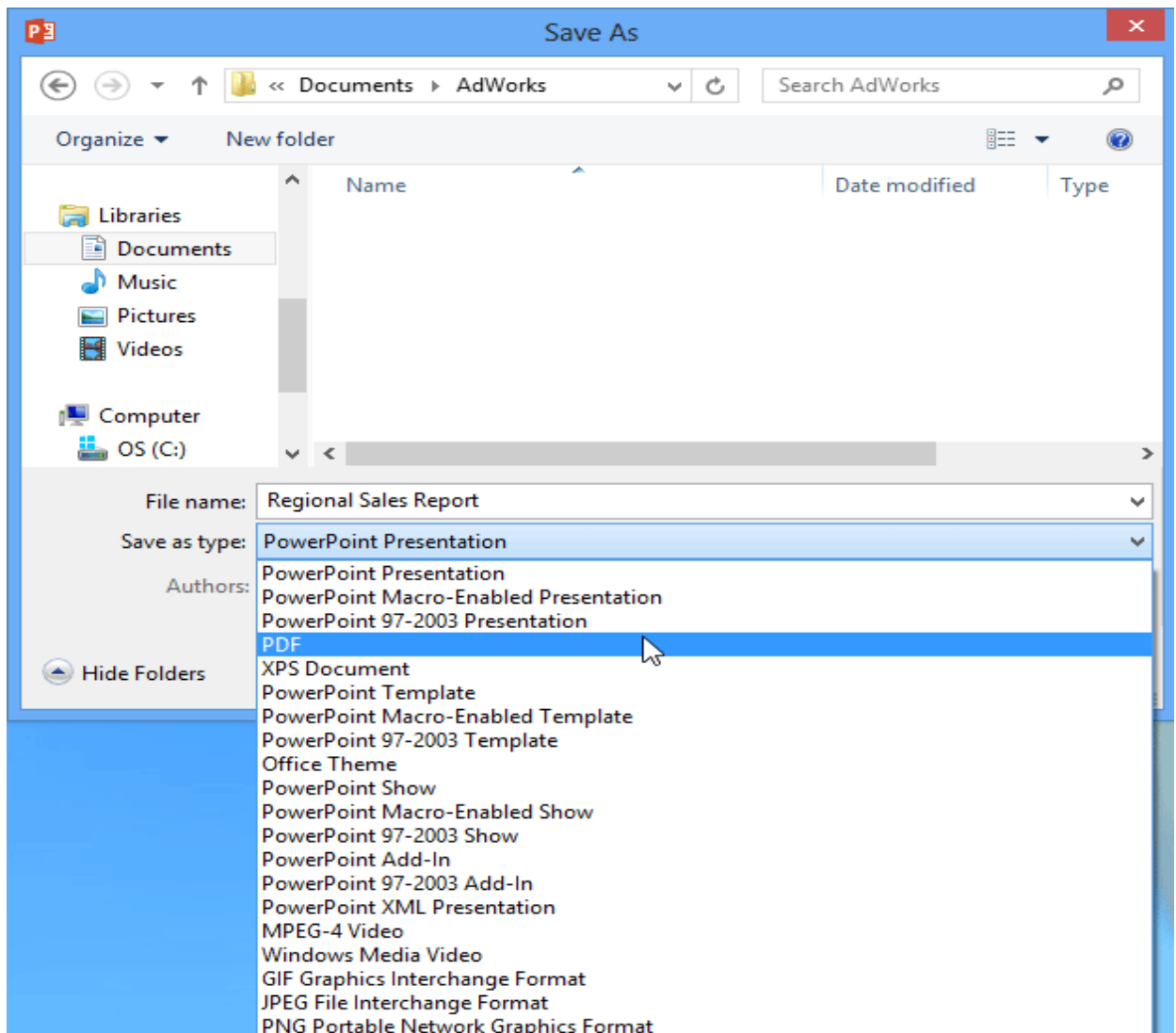
6. The presentation will be **saved**. You can click the **Save** command again to save your changes as you modify the presentation.

You can also access the **Save** command by pressing **Ctrl+S** on your keyboard.

## Exporting presentations

By default, PowerPoint presentations are saved in the **.pptx** file type. However, there may be times when you need to use **another file type**, such as a **PDF** or **PowerPoint 97-2003 presentation**. It's easy to **export** your presentation from PowerPoint in a variety of file types:

- **PDF:** Saves the presentation as a **PDF document** instead of a PowerPoint file
- **Video:** Saves the presentation as a video
- **Package for CD:** Saves the presentation in a folder along with the Microsoft PowerPoint Viewer, a special slide show player anyone can download
- **Handouts:** Prints a handout version of your slides
- **Other file type:** Saves in other file types, including **PNG** and **PowerPoint 97-2003**



## Lesson 2:

- Slide Basics
- Slide master
- Organizing slides
- Working with slide
- Customizing slides
- Using find and replace

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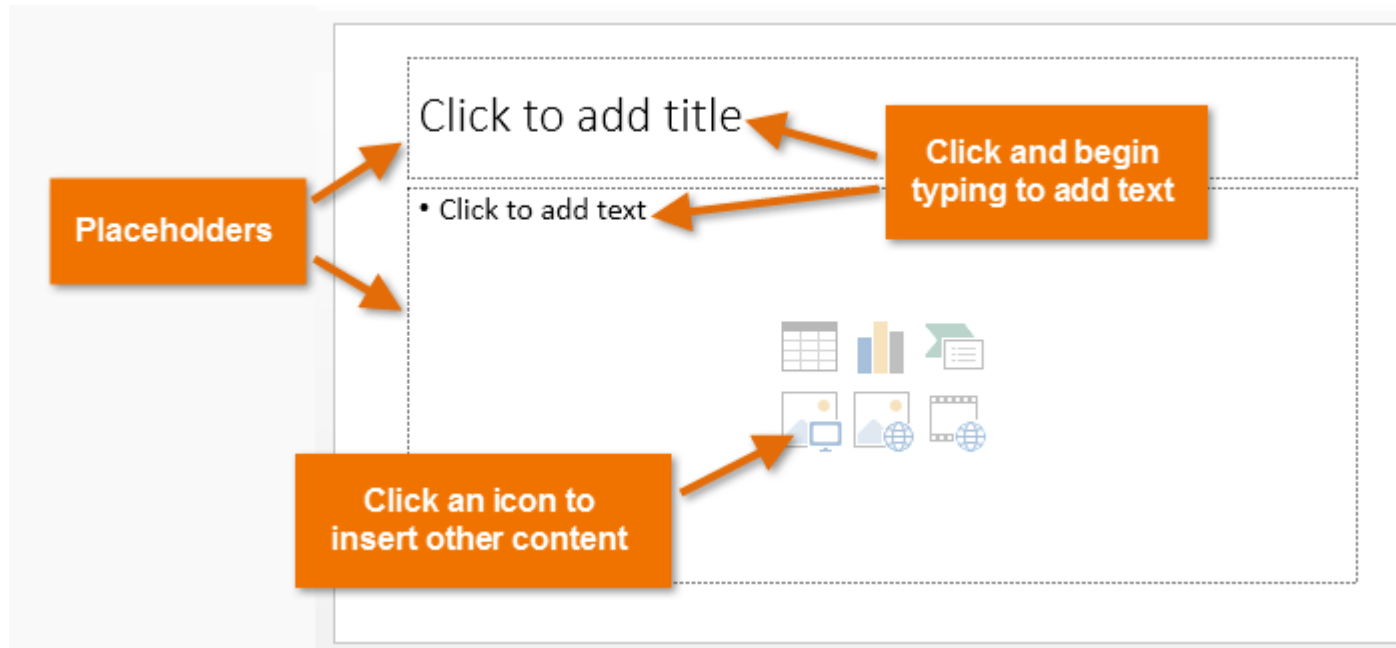
## Slide Basics

### Introduction

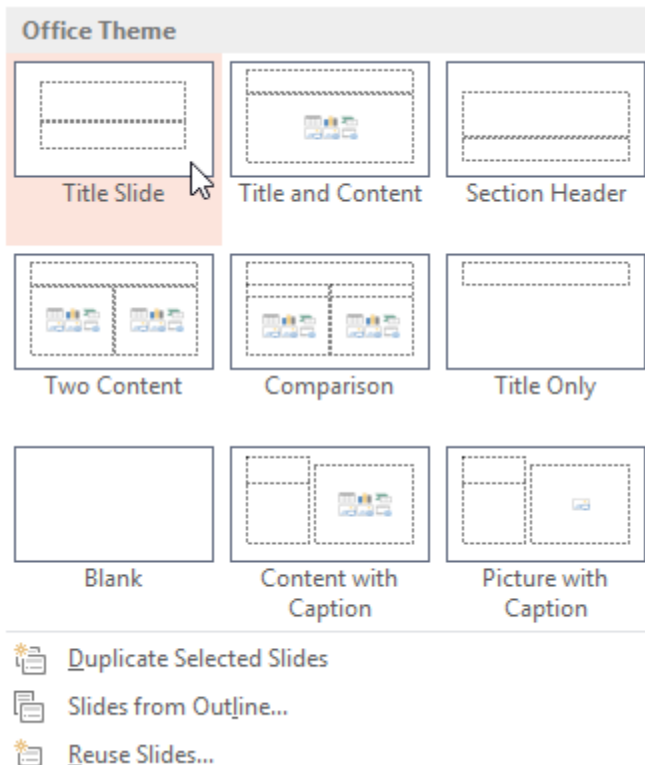
PowerPoint presentations are made up of a series of **slides**. Slides contain the information you will present to your audience. This might include **text**, **pictures**, and **charts**. Before you start creating presentations, you'll need to know the basics of working with **slides** and **slide layouts**.

### Understanding slides and slide layouts

When you insert a **new slide**, it will usually have **placeholders**. Placeholders can contain different types of content, including **text** and **images**. Some placeholders have **placeholder text**, which you can replace with your own text. Others have **thumbnail icons** that allow you to insert pictures, charts, and videos.



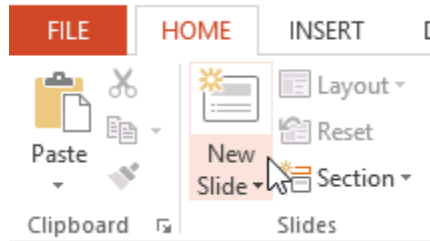
Slides have different **layouts** for placeholders, depending on the type of information you want to include. Whenever you create a new slide, you'll need to choose a slide layout that fits your content.



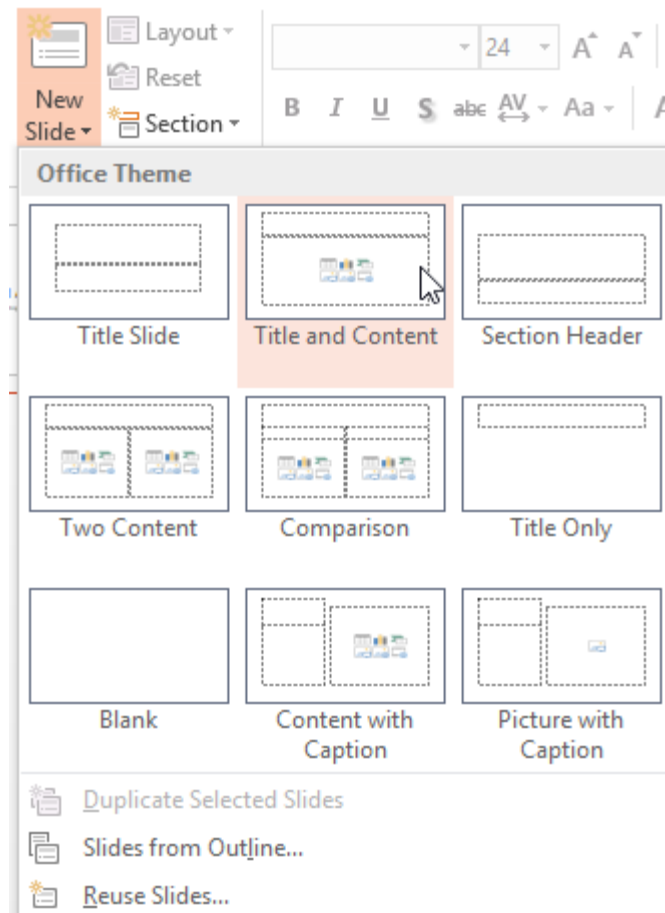
**To insert a new slide:**

Whenever you start a new presentation, it will contain **one slide** with the **Title Slide** layout. You can insert as many slides as you need from a variety of layouts.

1. From the **Home** tab, click the **bottom half** of the **New Slide** command.

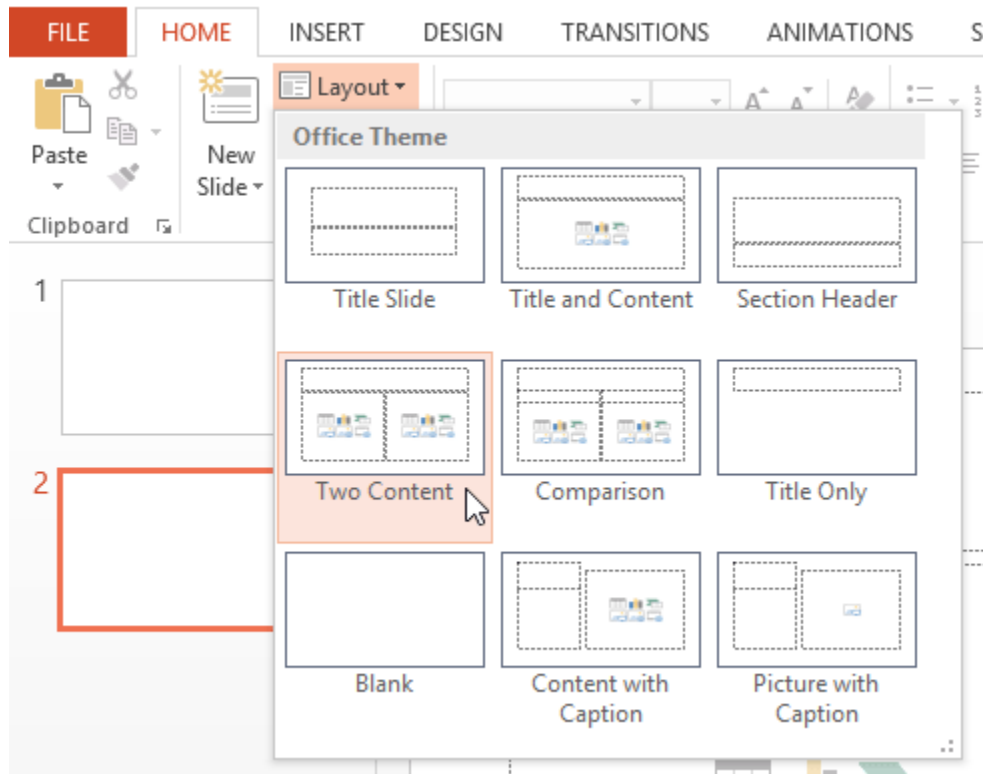


2. Choose the desired **slide layout** from the menu that appears.



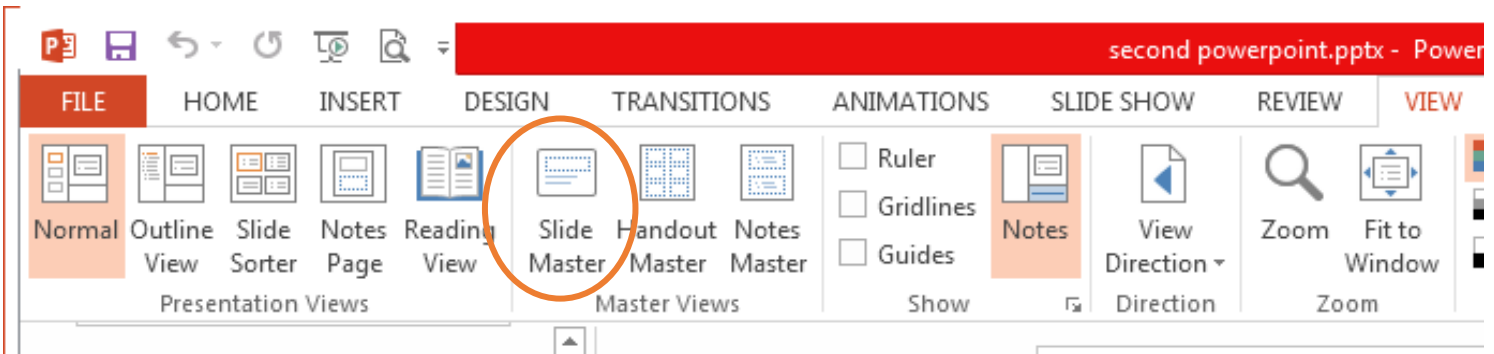
3. The new slide will appear. Click any **placeholder** and begin typing to add text. You can also click an **icon** to add other types of content, such as a **picture** or a **chart**.

To change the layout of an existing slide, click the **Layout** command, then choose the desired layout.



## Slide Master

- **A master is a slide that contains the text and other objects that appear on all slides of the same type.**
- **PowerPoint presentations have two types of masters:**
  - The Title Master contains objects that appear on the title slide
  - The Slide Master contains objects that appear on all slides except the title slide
- **You will use the masters to make design changes that you want to appear on every slide:**
  - If you want your company logo to appear on the bottom right of every page, you will add it to the Slide Master
  - If you want a picture of your office on a single slide, you add the picture to only that slide



## Organizing slides

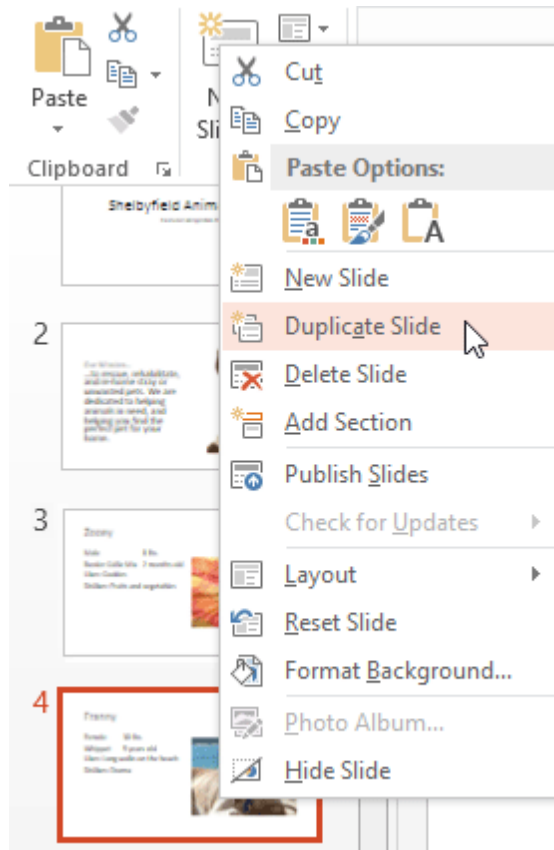
PowerPoint presentations can contain as many slides as you need. The **Slide Navigation pane** makes it easy to **organize** your slides. From there, you can **duplicate**, **rearrange**, and **delete** slides in your presentation.





### Working with slides

- **Duplicate slides:** If you want to copy and paste a slide quickly, you can **duplicate** it. To duplicate slides, select the slide you want to **duplicate**, right-click the mouse, and choose **Duplicate Slide** from the menu that appears. You can also duplicate **multiple slides** at once by selecting them first.



- **Move slides:** It's easy to change the **order** of your slides. Just click, hold, and drag the **desired slide** in the Slide Navigation pane to the desired position.



- **Delete slides:** If you want to remove a slide from your presentation, you can **delete** it. Simply select the slide you want to delete, then press the **Delete** or **Backspace** key on your keyboard.

### **To copy and paste slides:**

If you want to create several slides with the same layout, you may find it easier to **copy and paste** a slide you've already created instead of starting with an empty slide.

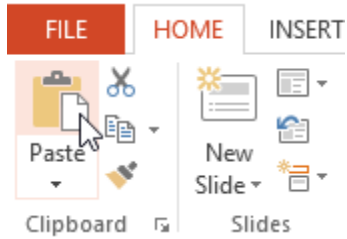
1. Select the **slide** you want to copy in the Slide Navigation pane, then click the **Copy** command on the **Home** tab.



2. In the Slide Navigation pane, click just below a slide (or between two slides) to choose a paste location. A **horizontal insertion point** will appear.



3. Click the **Paste** command on the **Home** tab.



4. The slide will appear in the selected location.

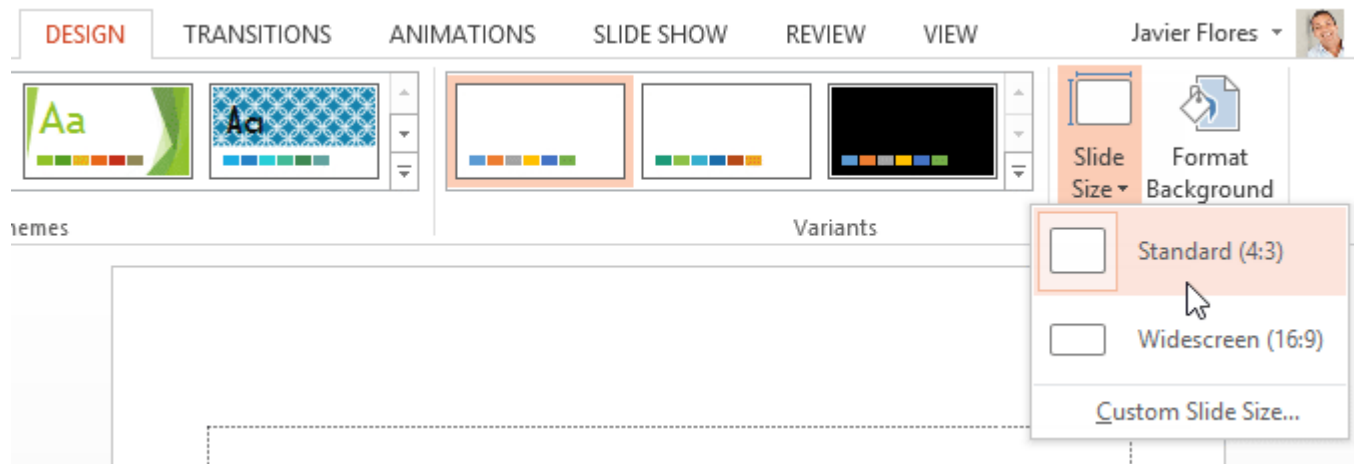


## Customizing slides

### To change the slide size:

By default, all slides in PowerPoint use a **16 by 9**—or **widescreen**—aspect ratio. You might know that widescreen TVs also use the 16-by-9 aspect ratio. Widescreen slides will work best with widescreen monitors and projectors. However, if you need your presentation to fit a standard **4-by-3** screen, it's easy to change the slide size to fit.

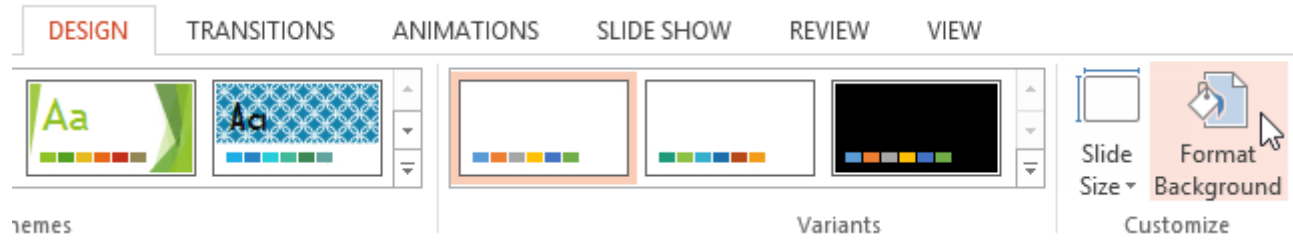
- To change the slide size, select the **Design** tab, then click the **Slide Size** command. Choose the desired slide size from the menu that appears or click **Custom Slide Size...** for more options.



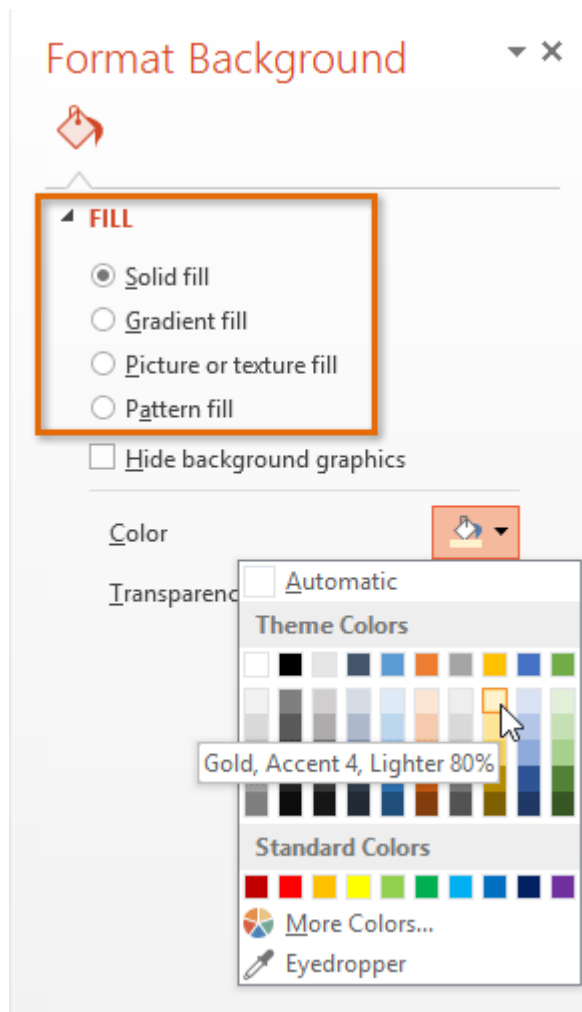
### To format the slide background:

By default, all slides in your presentation use a **white background**. It's easy to change the background style for some or all of your slides. Backgrounds can have a **solid**, **gradient**, **pattern**, or **picture** fill.

1. Select the **Design** tab, then click the **Format Background** command.



2. The **Format Background** pane will appear on the right. Select the desired fill options. In our example, we'll use a **Solid fill** with a **light gold** color.

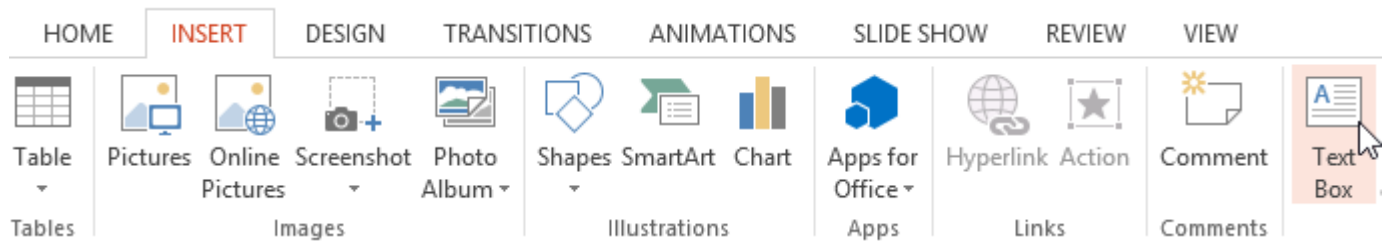


3. The background style of the selected slide will update.
4. If you want, you can click **Apply to All** to apply the same background style to all slides in your presentation.

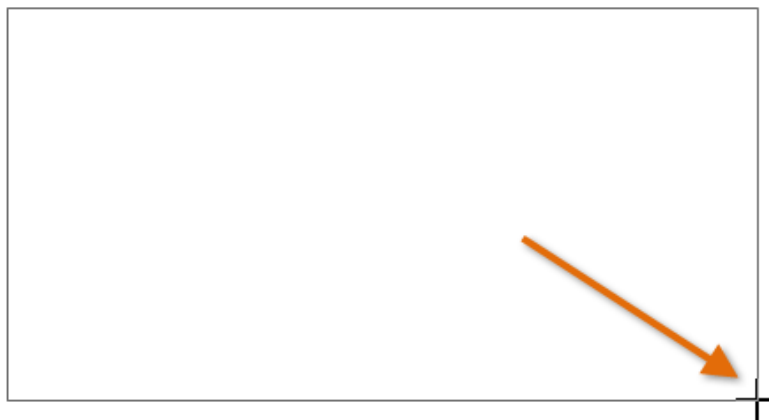
**To add a text box:**

Text can be inserted into both **placeholders** and **text boxes**. Inserting **text boxes** allows you to add to the slide layout. Unlike placeholders, text boxes always stay in the same place, even if you change the theme.

1. From the **Insert** tab, select the **Text Box** command.



2. Click, hold, and drag to draw the text box on the slide.



3. The text box will appear. To add text, simply click the text box and begin typing.

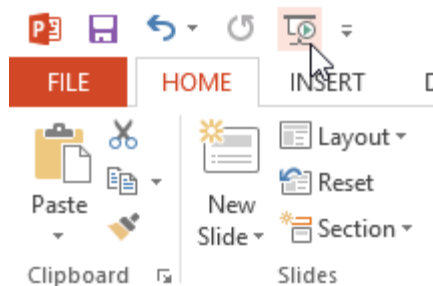




### To play the presentation:

Once you've arranged your slides, you may want to **play** your presentation. This is how you will present your slide show to an audience.

1. Click the **Start from Beginning** command on the Quick Access toolbar to see your presentation.



2. The presentation will appear in full-screen mode.
3. You can advance to the next slide by **clicking your mouse** or pressing the **spacebar** on your keyboard. Alternatively, you can use the **arrow keys** on your keyboard to move forward or backward through the presentation.
4. Press the **Esc** key to exit presentation mode.

You can also press the **F5** key at the top of your keyboard to start a presentation.

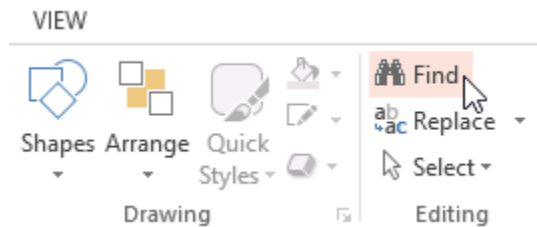
## Using Find and Replace

When you're working with longer presentations, it can be difficult and time-consuming to locate a specific word or phrase. PowerPoint can automatically search your presentation using the **Find** feature, and it allows you to quickly change words or phrases using the **Replace** feature.

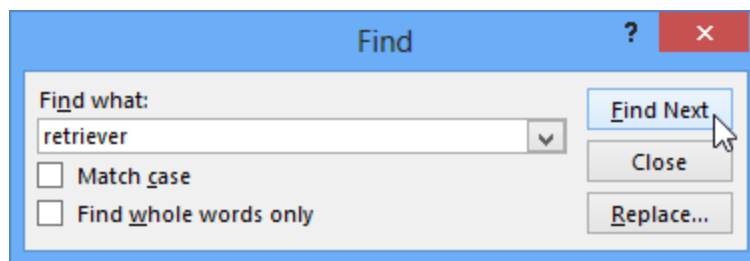
### To find text:

In our example, we'll use the **Find** feature to look for specific dog breeds in our presentation.

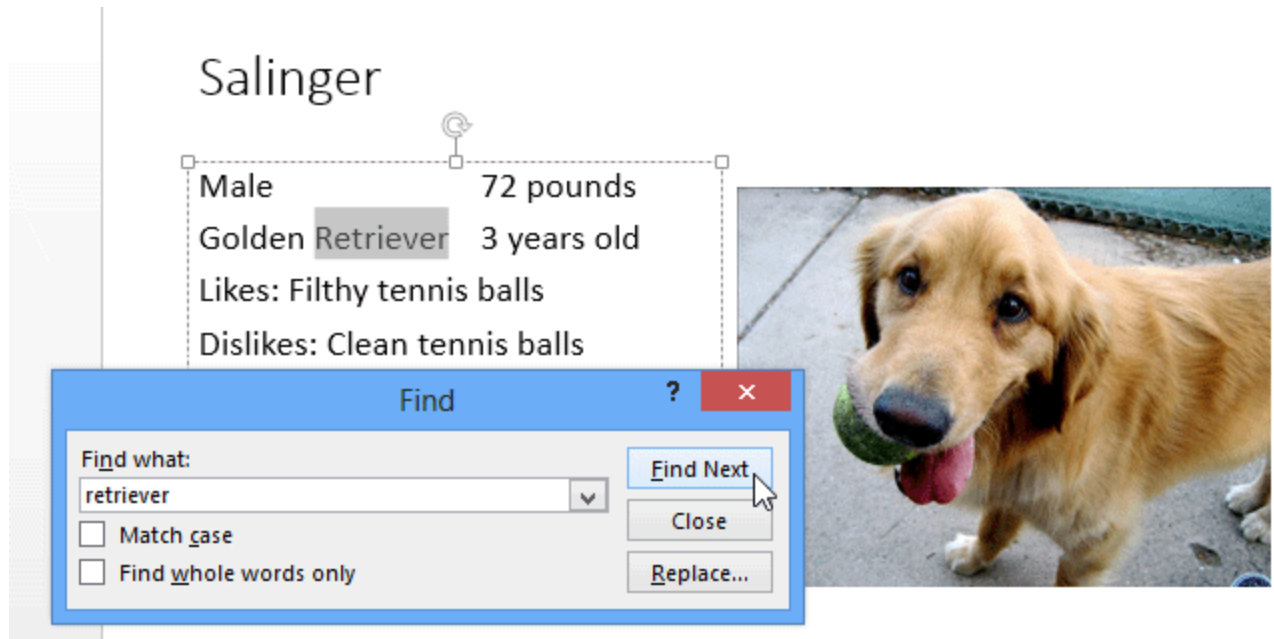
1. From the **Home** tab, click the **Find** command.



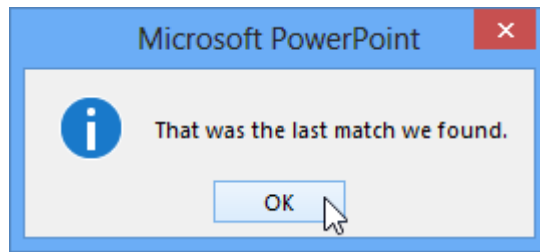
2. A dialog box will appear. Enter the **text** you want to find in the **Find what:** field, then click **Find Next**.



3. If the text is found, it will be selected.



4. Click **Find Next** to find further instances. If none are found, a dialog box will appear. Click **OK**.



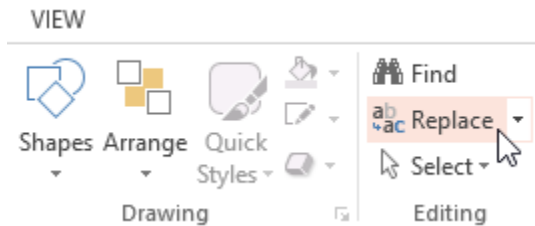
5. When you are finished, click **Close** to exit the dialog box.

You can also access the Find command by pressing **Ctrl+F** on your keyboard.

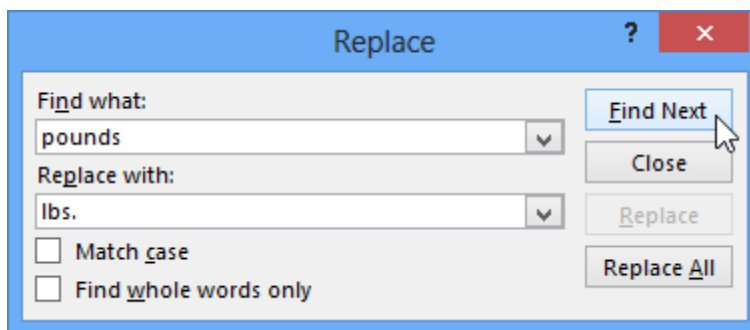
### To replace text:

At times, you may discover that you've repeatedly made a mistake throughout your presentation—such as misspelling someone's name—or that you need to exchange a particular word or phrase for another. You can use the **Replace** feature to make quick revisions. In our example, we'll replace with word **pounds** with the abbreviation **lbs**.

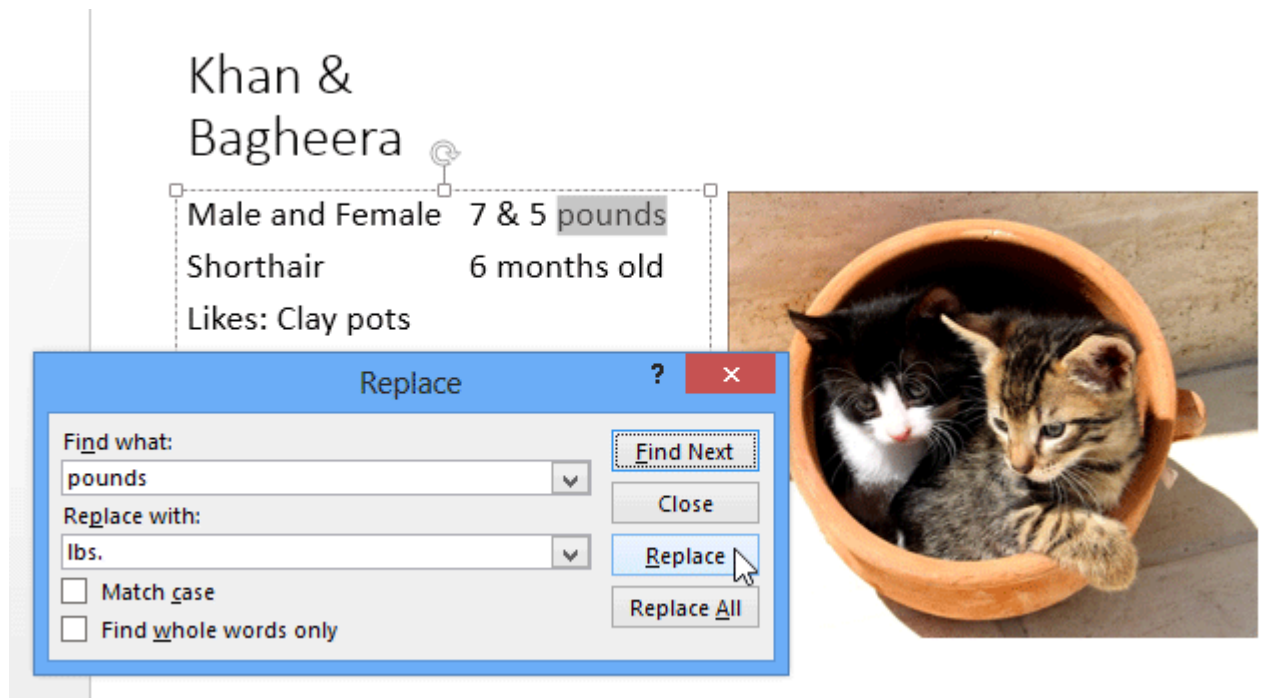
1. From the **Home** tab, click the **Replace** command.



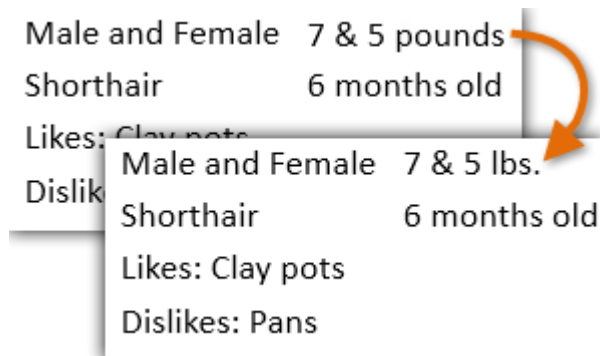
2. A dialog box will appear. Type the text you want to find in the **Find what:** field.
3. Type the text you want to replace it with in the **Replace with:** field, then click **Find Next**.



4. If the text is found, it will be selected. Review the text to make sure you want to replace it.
5. If you want to replace it, select one of the **replace** options. **Replace** will replace individual instances and **Replace All** will replace every instance. In our example, we'll use the **Replace** option.



6. The selected text will be **replaced**.



7. PowerPoint will move to the next instance of the text in the presentation. When you are finished replacing text, click **Close** to exit the dialog box.

### Lesson 3:

- Design
- Applying Transitions
- Printing

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## Design in PowerPoint

### Themes

1. Select the **Design** tab.
2. Select one of the **Themes**.
3. Select one of the **Variants**.



### Use PowerPoint Designer

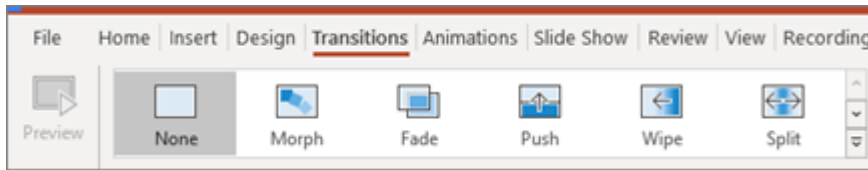
1. Insert one or more pictures, a list of items, or a list of dates.
2. The **Designer** panel will open. Select the design you want.

### Transitions

To add a special effect, to transition from one slide to another:

1. Select the slide you want to add a transition to.
2. On the **Transitions** tab, select the effect you want.
3. Select **Effect Options** to change how the transition happens: **From Right, From Left, ...**

To undo a transition, select **None**.



## Applying Transitions

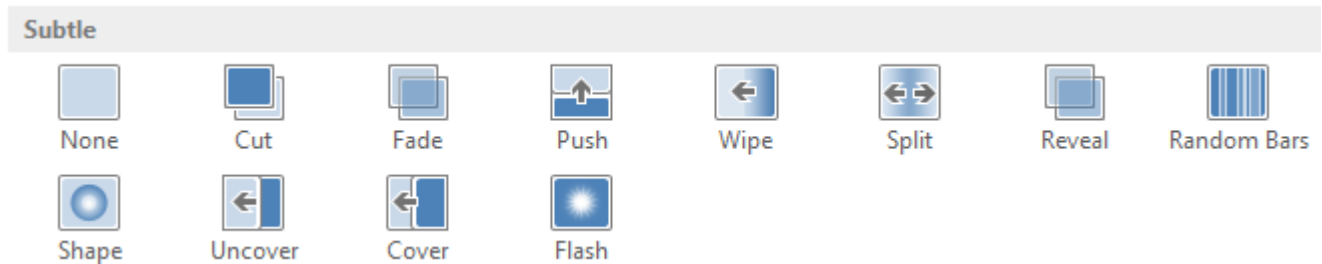
### Introduction

If you've ever seen a PowerPoint presentation that had special effects between each slide, you've seen **slide transitions**. A transition can be as simple as fading to the next slide or as flashy as an eye-catching effect. PowerPoint makes it easy to apply transitions to some or all of your slides, giving your presentation a polished, professional look

### About transitions

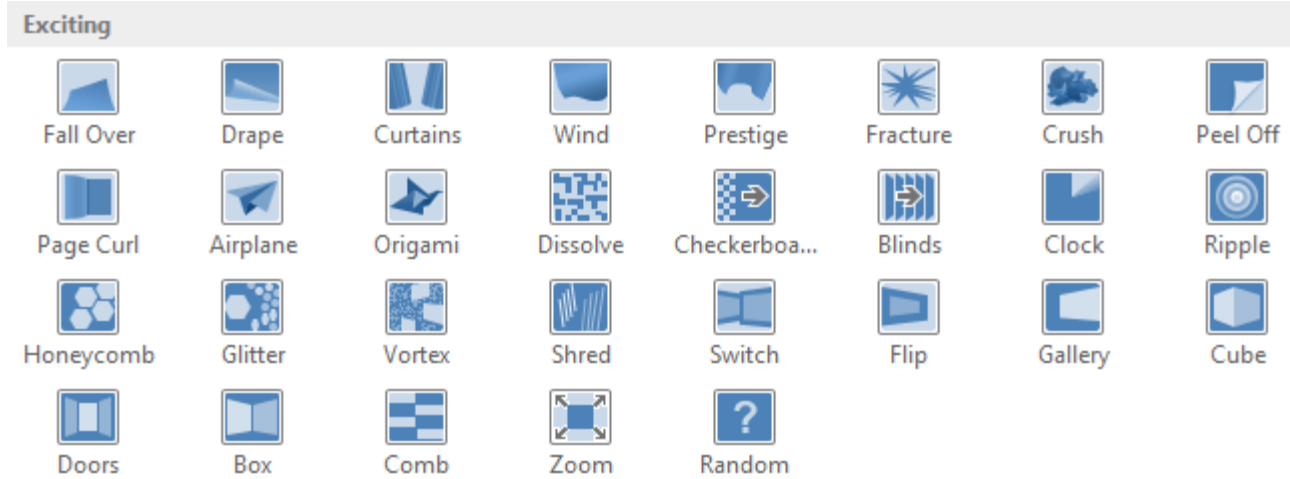
There are **three categories** of unique transitions to choose from, all of which can be found on the **Transitions** tab:

- **Subtle:** These are the most basic types of transitions. They use **simple animations** to move between slides.

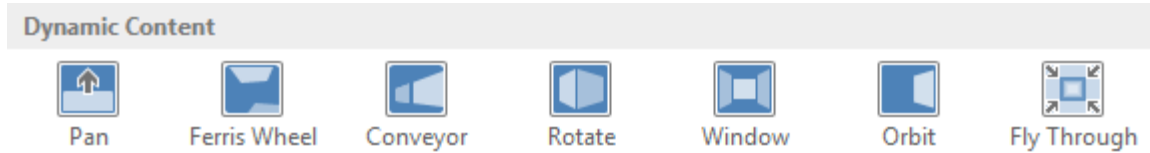


- **Exciting:** These use more **complex animations** to transition between slides. While they're more visually interesting than **Subtle** transitions, adding too many can make your presentation look less professional. However, when used in moderation they can add a nice touch between important slides.





- **Dynamic Content:** If you're transitioning between two slides that use similar **slide layouts**, dynamic transitions will move only the **placeholders**, not the slides themselves. When used correctly, dynamic transitions can help **unify** your slides and add a further level of polish to your presentation.

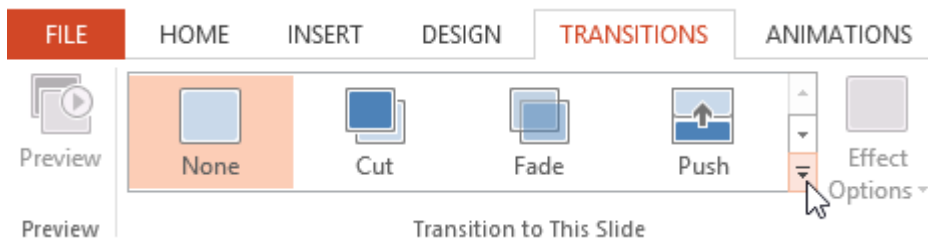


**To apply a transition:**

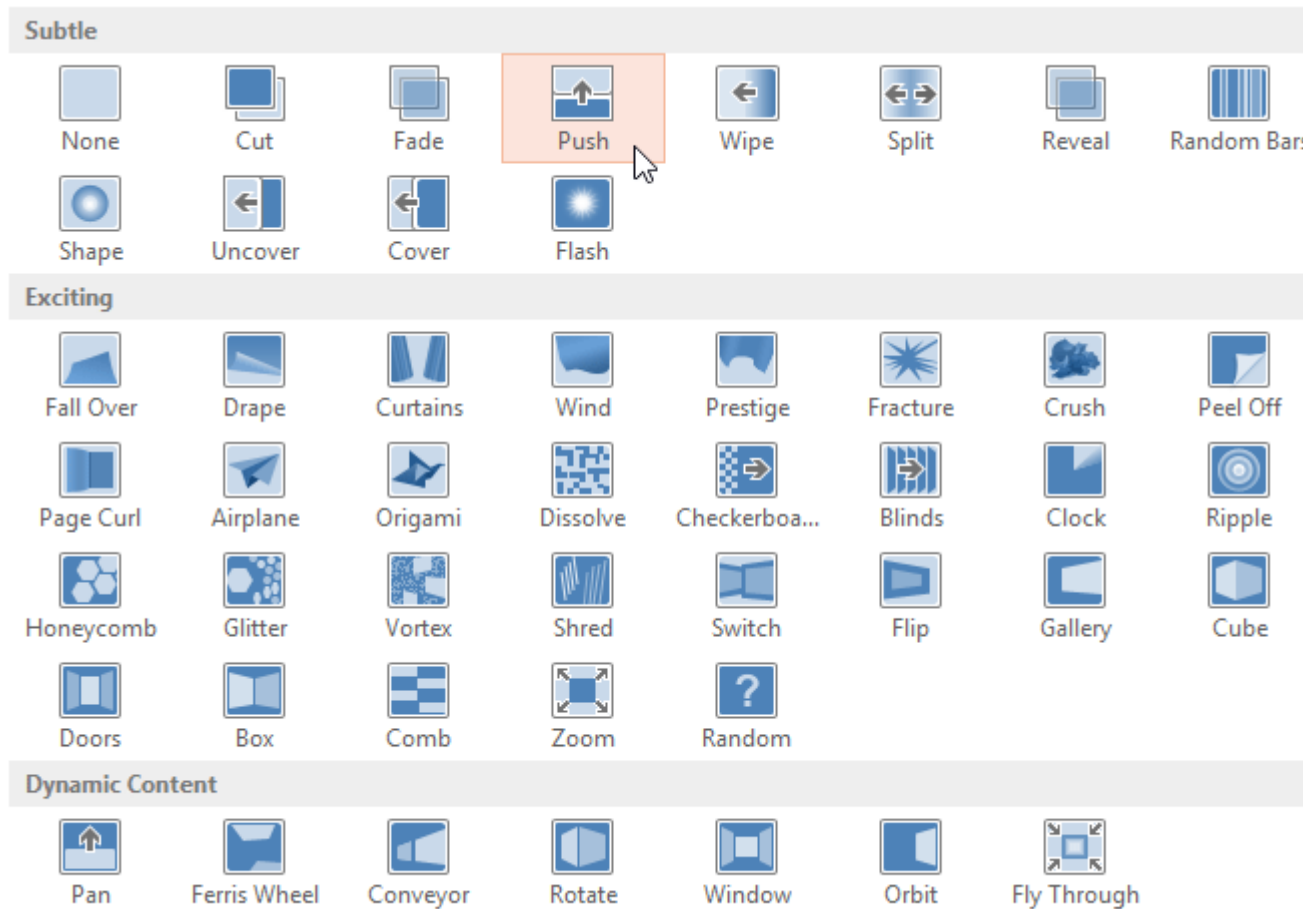
1. Select the **desired slide** from the **Slide Navigation** pane. This is the slide that will appear **after** the transition.



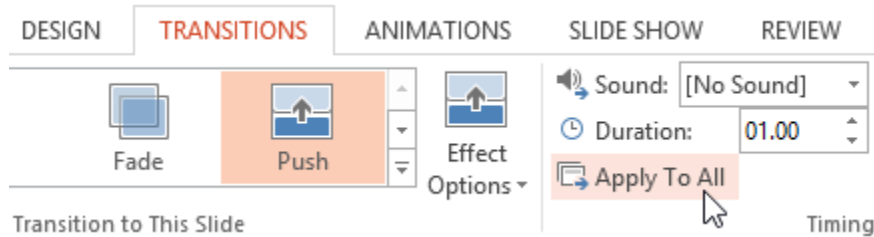
2. Click the **Transitions** tab, then locate the **Transition to This Slide** group. By default, **None** is applied to each slide.
3. Click the **More** drop-down arrow to display all transitions.



4. Click a **transition** to apply it to the selected slide. This will automatically preview the transition.

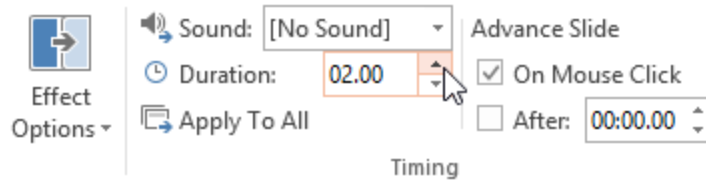


You can use the **Apply To All** command in the **Timing** group to apply the same transition to all slides in your presentation. Keep in mind that this will modify any other transitions you've applied.



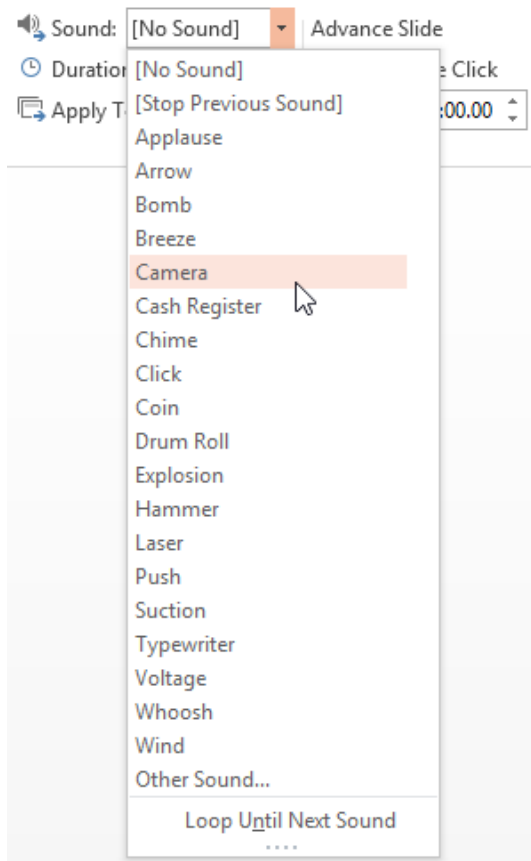
**To modify the transition duration:**

1. Select the **slide** with the transition you want to modify.
2. In the **Duration** field in the **Timing** group, enter the **desired time** for the transition. In this example, we'll increase the time to two seconds—or 02.00—to make the transition **slower**.



**To add sound:**

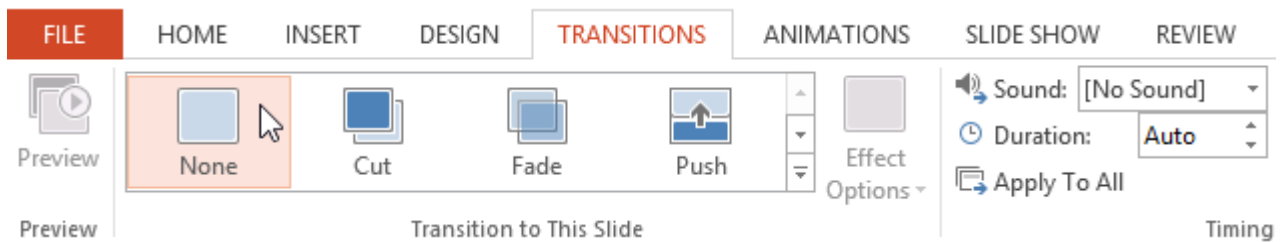
1. Select the **slide** with the transition you want to modify.
2. Click the **Sound** drop-down menu in the **Timing** group.
3. Click a **sound** to apply it to the selected slide, then preview the transition to hear the sound.



Sounds are best used in moderation. Applying a sound between every slide could become overwhelming or even annoying to an audience when presenting your slide show.

**To remove a transition:**

1. Select the **slide** with the transition you want to remove.
2. Choose **None** from the **Transition to This Slide** group. The transition will be removed.



To remove transitions from **all slides**, apply the **None** transition to a slide, then click the **Apply to All** command.

## Printing

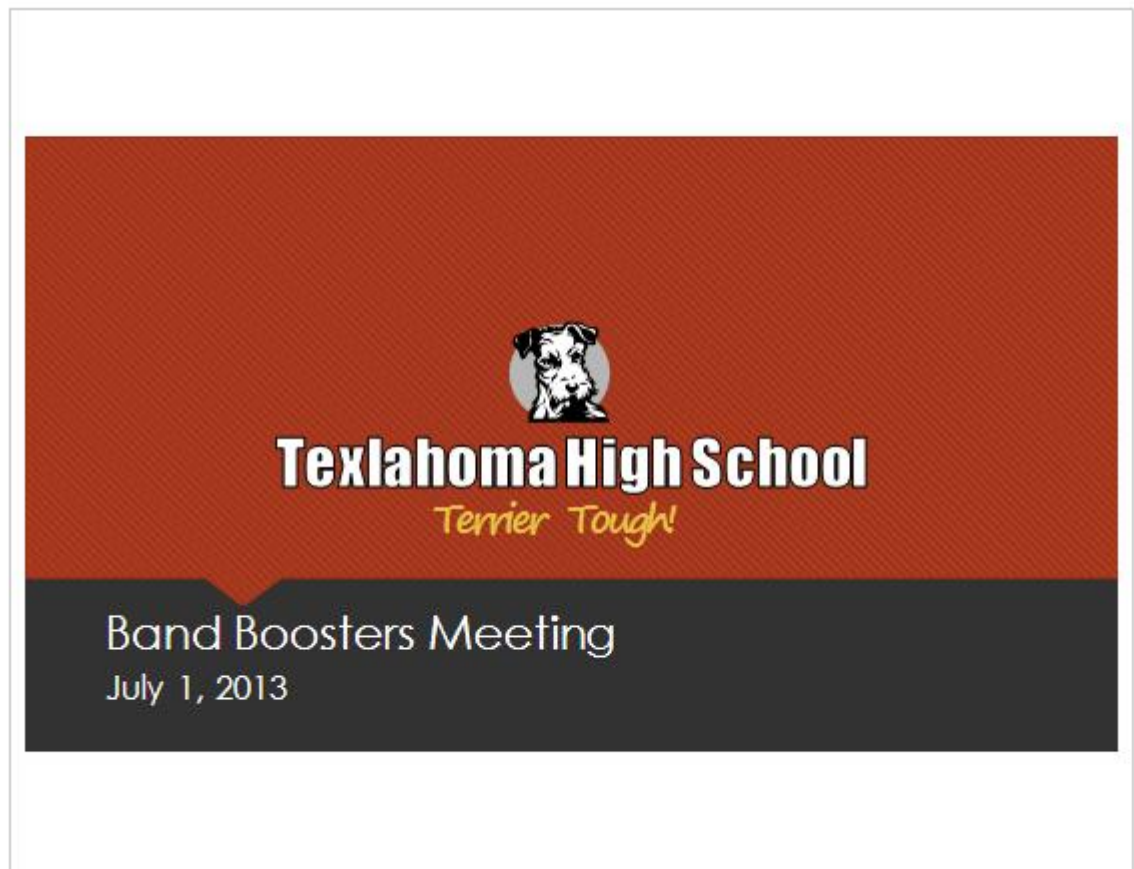
### Introduction

Even though PowerPoint presentations are designed to be viewed on a computer, there may be times when you want to **print** them. You can even print custom versions of a presentation, which can be especially helpful when **presenting** your slide show. The **Print** pane makes it easy to preview and print your presentation.

### Print layouts

PowerPoint includes several **layouts** when printing a presentation. The layout you choose will mostly depend on **why** you're printing the slide show. There are four different print layouts:

- **Full-page slides:** This prints a full page for **each slide** in your presentation. This layout would be most useful if you needed to **review** or **edit** a printed copy of your presentation.



- **Notes:** This prints each slide, along with any **speaker notes** for the slide. If you've included a lot of notes for each slide, you could keep a printed copy of the notes with you while presenting.



### Meeting Goals:

- Thank previous year's officers
  - Introduce new officers
  - Discuss yearly fundraising goals
  - Plan for next meeting
- 
- **Outline:** This prints an overall **outline** of the slide show. You could use this layout to review the organization of your slide show and prepare to deliver your presentation.

- 1  Band Boosters Meeting  
July 1, 2013
  
- 2  **Agenda**
  - New Officers
    - ❖ Elections and Thank You
    - ❖ Announce New Officers
    - ❖ Distribute Officer Contact Info
  - Fundraising
    - ❖ Past and Present Ideas
    - ❖ Review Yearly Results
- 3  **New Officer Announcement**  
2013-2014 School Year
- 4  **Elections and Appreciation**
- 5  **New 2013-14 Band Booster Officers**
- 6  **Fundraising**  
Past and Future
- 7  **Possible Fundraising Projects**

- **Handouts:** This prints **thumbnail versions** of each slide, with optional space for **notes**. This layout is especially useful if you want to give your audience a **physical copy** of the presentation. The optional space allows them to **take notes** on each slide.



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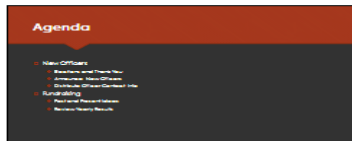
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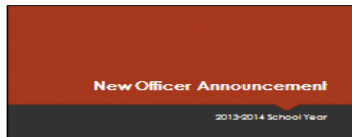
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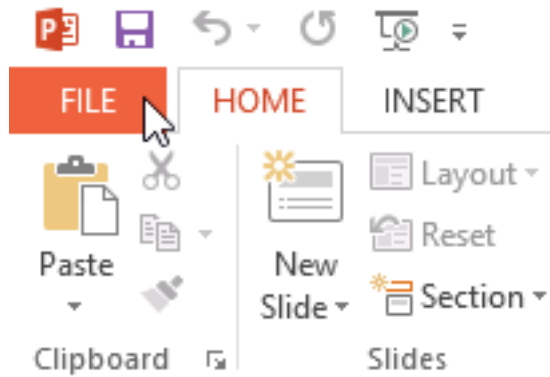
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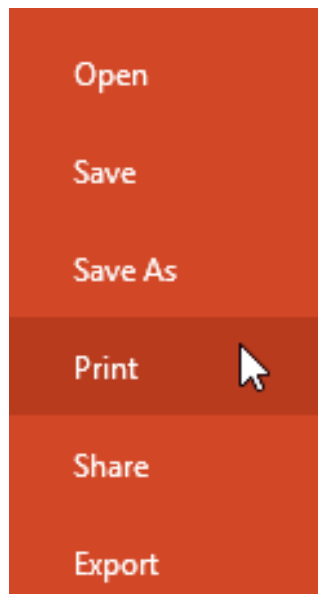


To access the Print pane:

1. Select the **File** tab. **Backstage view** will appear.



2. Select **Print**. The **Print** pane will appear.



Click the buttons in the interactive below to learn more about using the Print pane.

# Print



Copies: 1

## Printer

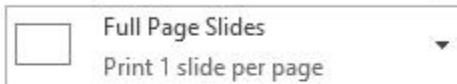


[Printer Properties](#)

## Settings



Slides:



[Find more print settings](#)

[Edit Header & Footer](#)



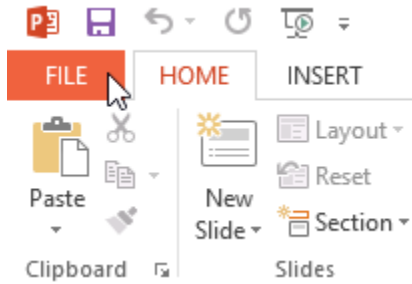
1 of 11

37% 

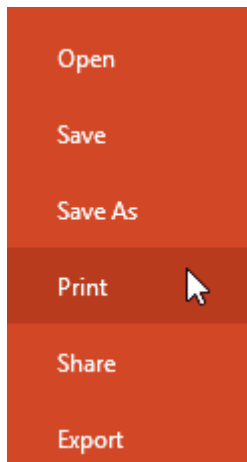
You can also access the Print pane by pressing **Ctrl+P** on your keyboard.

**To print a presentation:**

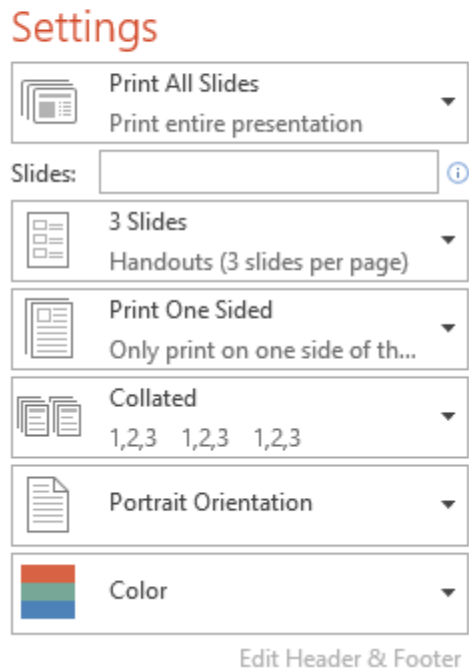
1. Select the **File** tab. **Backstage view** will appear.



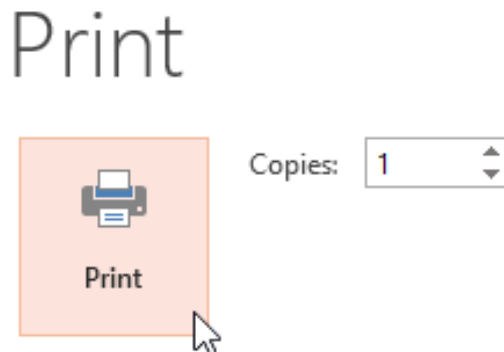
2. Select **Print**. The **Print** pane will appear.



3. Choose the desired **printer** and **print range**.
4. Choose the desired **print layout** and **color** settings.



5. When you're done modifying the settings, click **Print**.



## Lesson 4:

- **Presenting Your Slide Show**
- **Lists**
- **Line spacing**

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## Presenting Your Slide Show

### Introduction

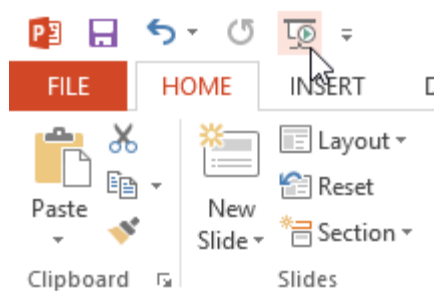
Once your slide show is complete, you'll need to learn how to **present it** to an audience. PowerPoint offers several tools and features to help make your presentation smooth, engaging, and professional.

### Presenting a slide show

Before you present your slide show, you'll need to think about the type of **equipment** that will be available for your presentation. Many presenters use **projectors** during presentations, so you might want to consider using one as well. This allows you to control and preview slides on one monitor while presenting them to an audience on another screen.

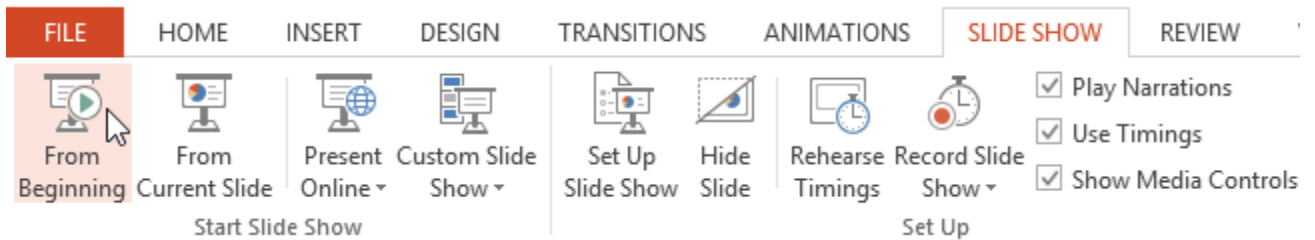
### To start a slide show:

- Click the **Start From Beginning** command on the Quick Access toolbar, or press the **F5** key at the top of your keyboard. The presentation will appear in full-screen mode.



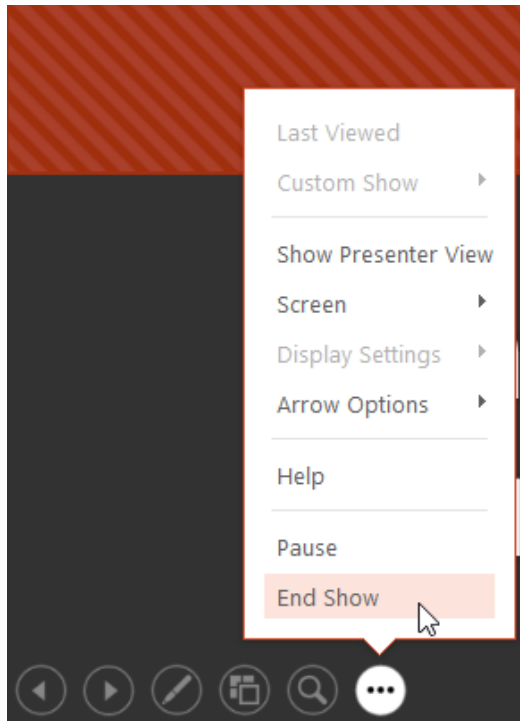


Click the **Slide Show** tab on the Ribbon to access even more options. From here, you can start the presentation **from the current slide** and access **advanced presentation options**.



### To stop a slide show:

- You can exit presentation mode by clicking the **Esc** key on your keyboard. Alternatively, you can click the **Slide Show Options** button in the bottom-left and select **End Show**.



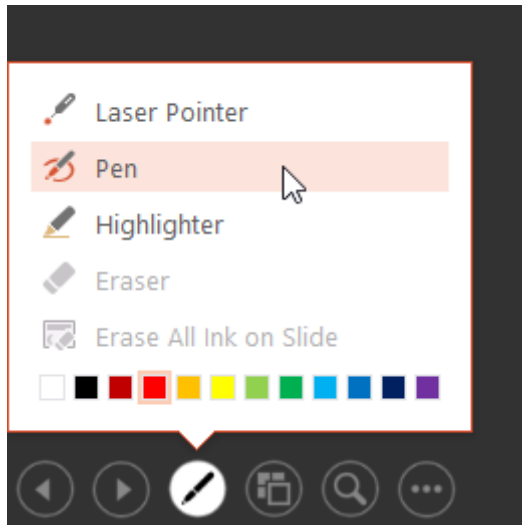
## **Presentation tools and features**

PowerPoint provides convenient tools you can use while presenting your slide show. For example, you can change your mouse pointer to a **pen** or **highlighter** to draw attention to items in your slides. In addition, you can **jump around** to slides in your presentation or access other programs from your **taskbar** if needed.

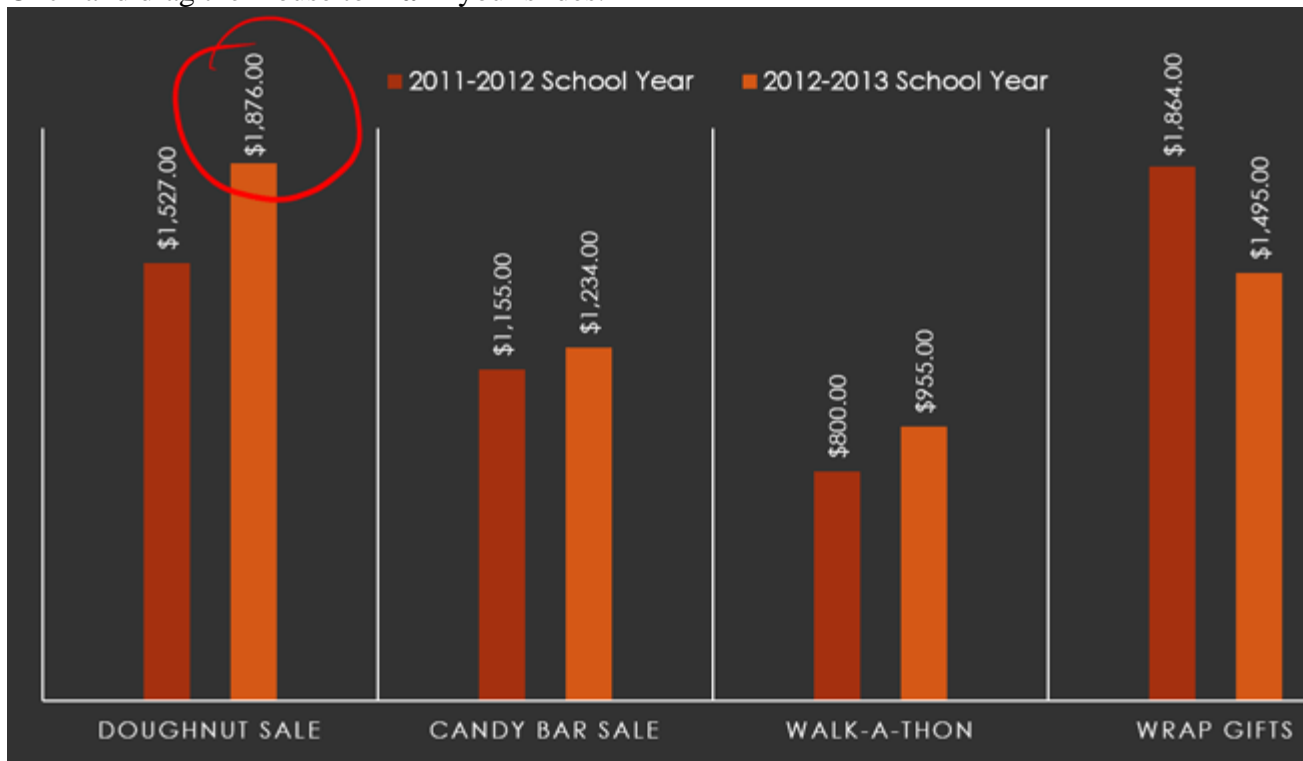
### **To access drawing tools:**

Your mouse pointer can act as **pen** or **highlighter** to draw attention to items in your slides.

1. Locate and select the **Pen Tools** button in the bottom-left corner.
2. Select **Pen** or **Highlighter** based on your preference.



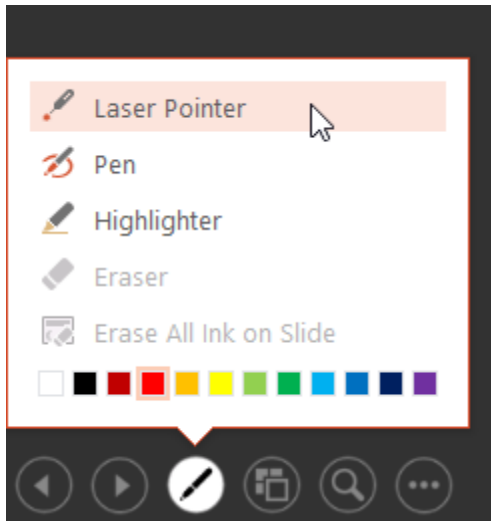
3. Click and drag the mouse to **mark** your slides.



- 4.

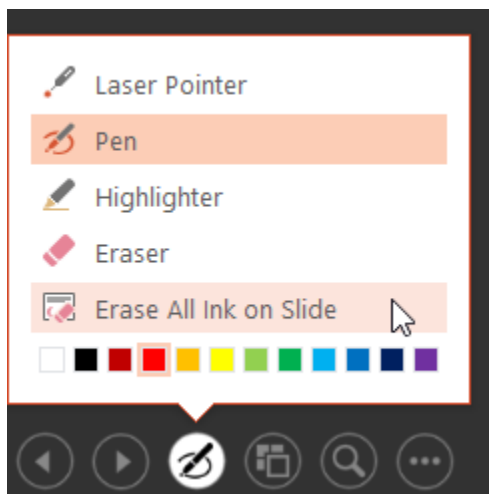
You can also use the **laser pointer** feature to draw attention to certain parts of your slide. Unlike the pen and highlighter, the laser pointer will not leave markings on your slides.





**To erase ink markings:**

1. Locate and select the **Pen Tools** button in the bottom-left corner.
2. Select **Eraser** to erase individual ink markings, or select **Erase All Ink on Slide** to erase all markings.



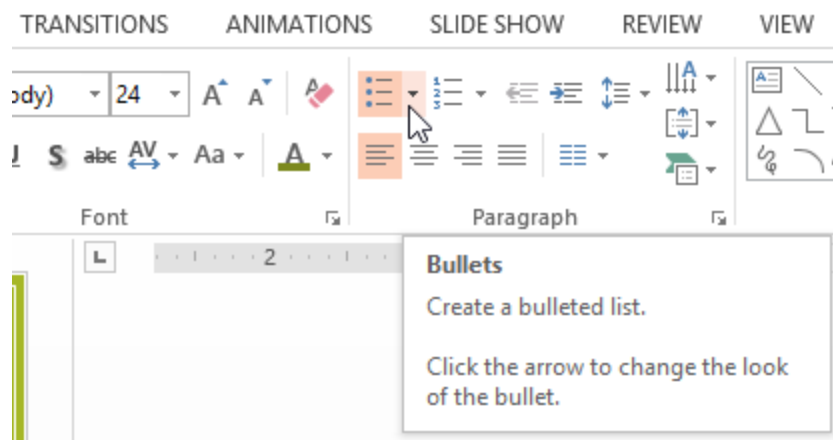
## Lists

### Introduction

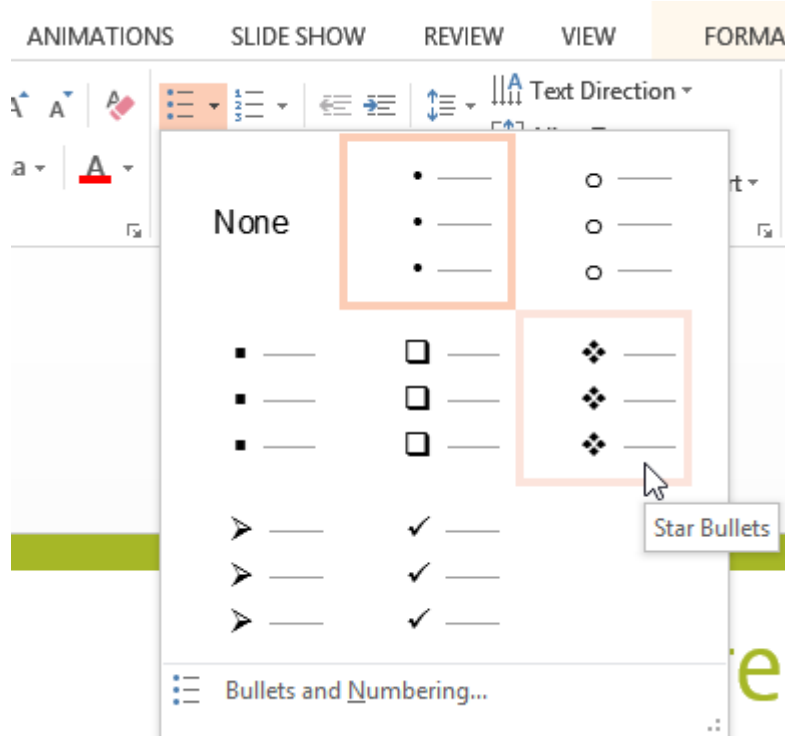
To create effective PowerPoint presentations, it's important to make your slides **easy for the audience to read**. One of the most common ways of doing this is to format the text as a **bulleted or numbered list**. By default, when you type text into a placeholder, a **bullet** is placed at the beginning of each paragraph—automatically creating a **bulleted list**. If you want, you can modify a list by choosing a different bullet **style** or by switching to a **numbered list**.

### To modify the bullet style:

1. Select an existing list you want to format.
2. On the **Home** tab, click the **Bullets** drop-down arrow.



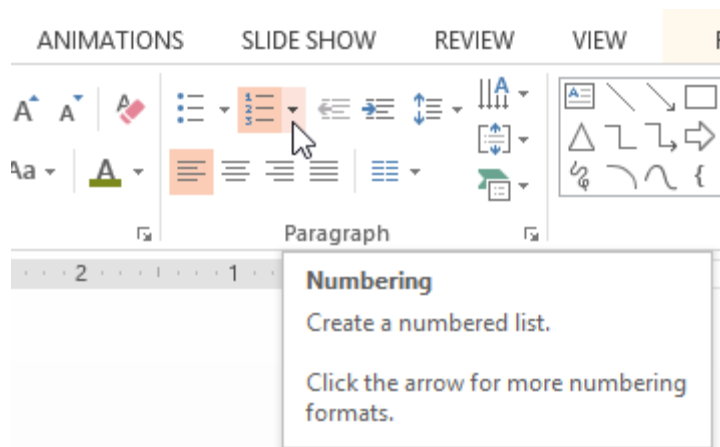
3. Select the desired **bullet style** from the menu that appears.



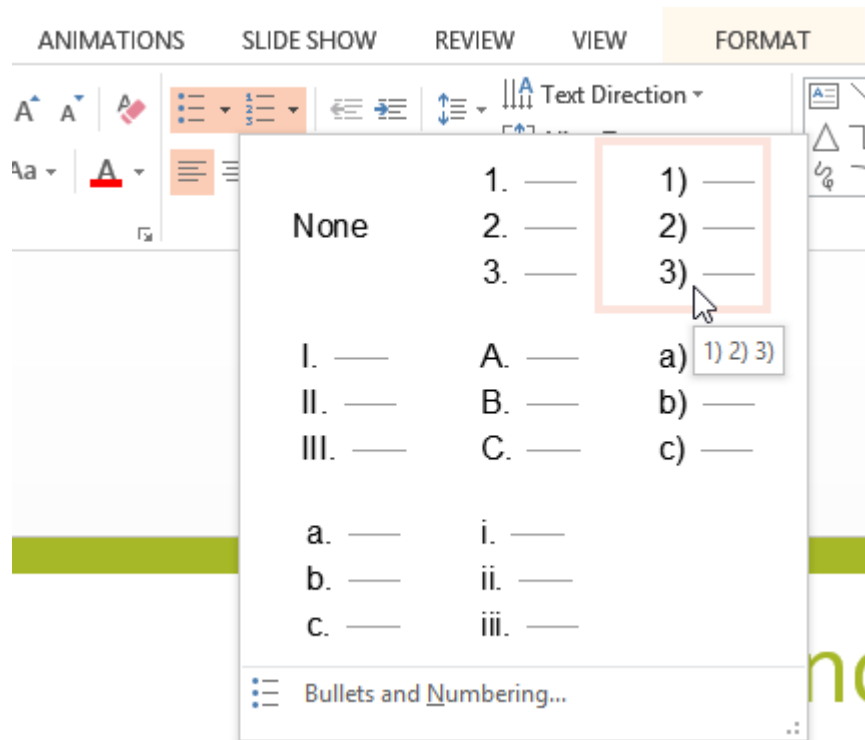
4. The bullet style will appear in the list.

**To modify a numbered list:**

1. Select an existing list you want to format.
2. On the **Home** tab, click the **Numbering** drop-down arrow.



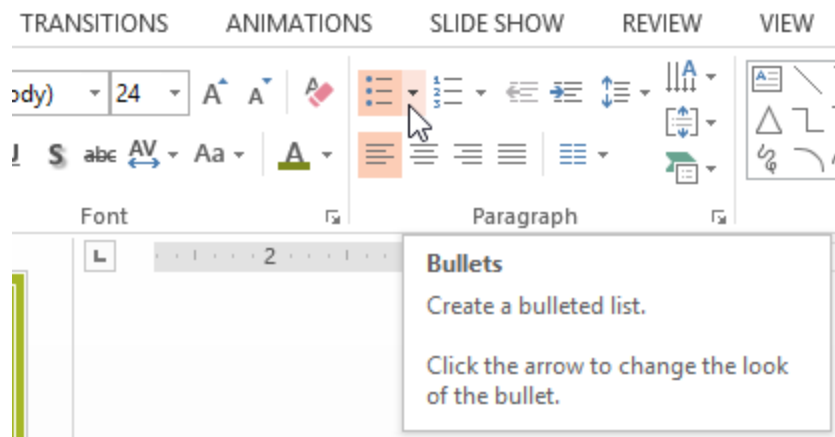
3. Select the desired **numbering option** from the menu that appears.



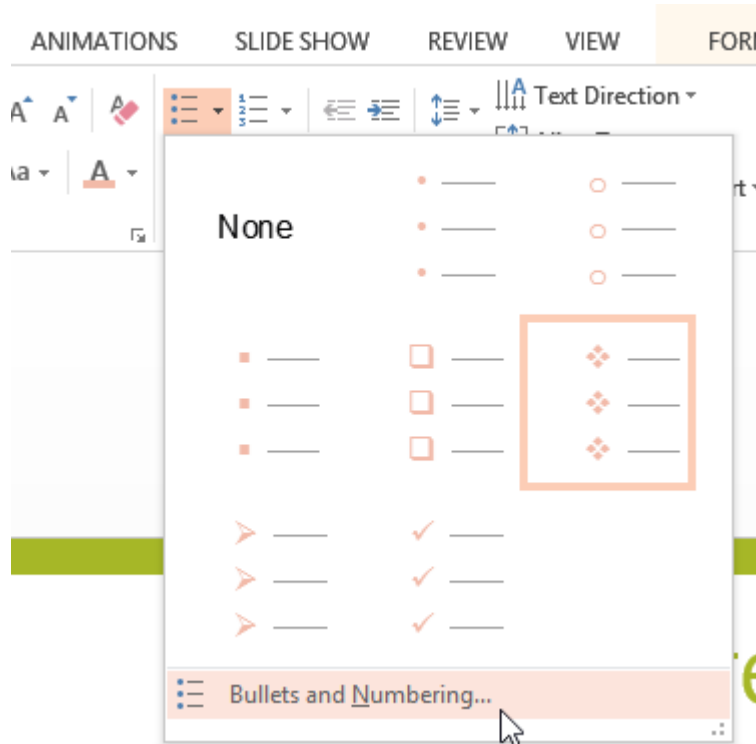
4. The numbering option will appear in the list.

**To use a symbol as a bullet:**

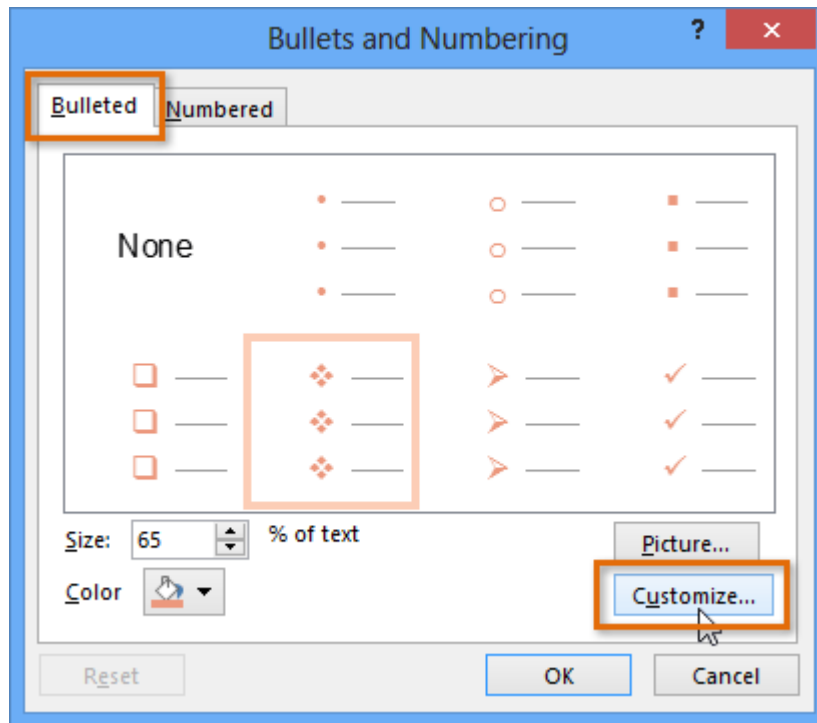
1. Select an existing bulleted list.
2. On the **Home** tab, click the **Bullets** drop-down arrow.



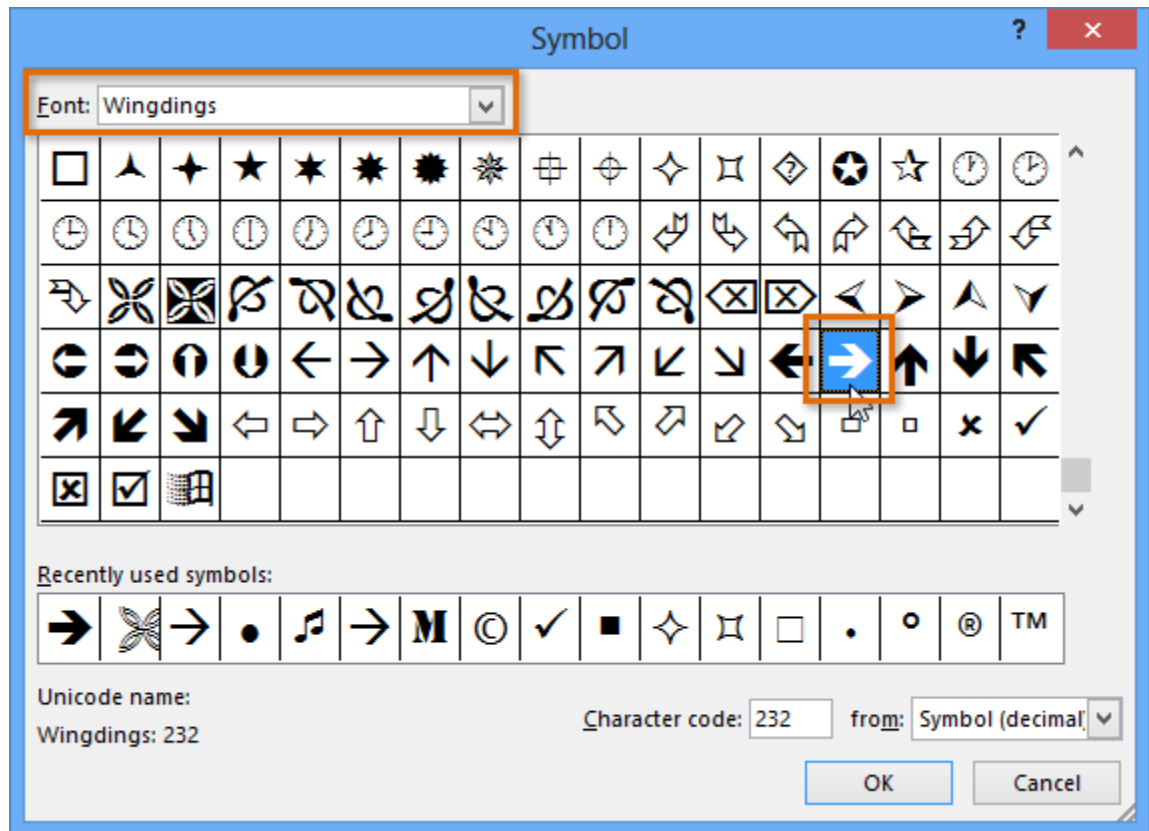
3. Select **Bullets and Numbering** from the menu that appears.



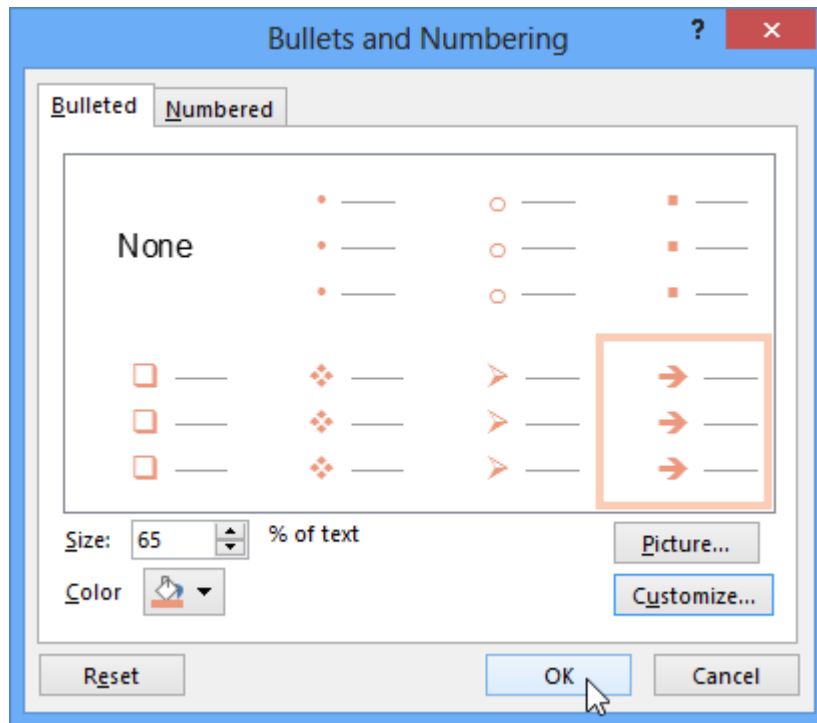
4. A dialog box will appear. On the Bulleted tab, click **Customize**.



5. The **Symbol** dialog box will appear.
6. Click the **Font** drop-down box and select a font. The **Wingdings** and **Symbol** fonts are good choices because they have a lot of useful symbols.
7. Select the desired symbol.



8. Click **OK**. The symbol will now appear as the selected bullet option in the Bullets and Numbering dialog box.



9. Click **OK** again to apply the symbol to the list in the document.

- Global Biofuel Initiatives
- Renewable Fuels for Aircraft and Spacecraft
- Emerging Technologies
- Algae-based Fuels

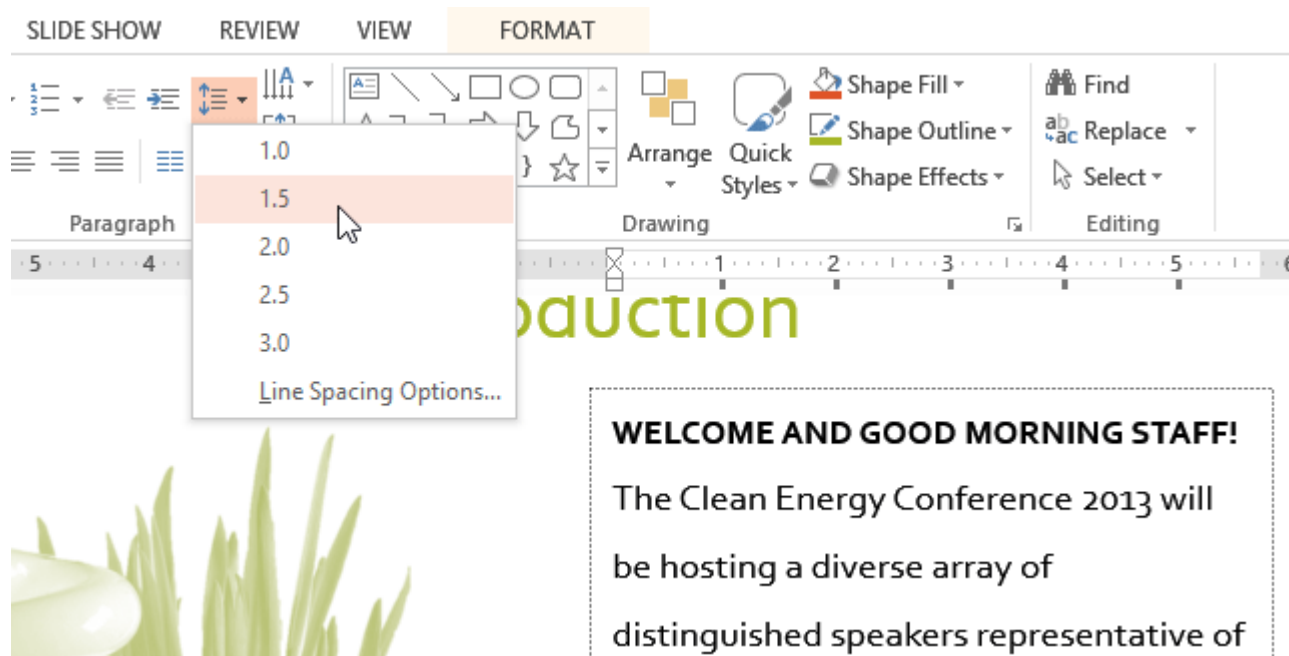


## Line spacing

PowerPoint allows you to adjust the amount of space between each line in a list or paragraph. You can **reduce** the line spacing to fit more lines on a slide, or you can **increase** it to improve readability. In some instances, PowerPoint may automatically change the font size when you adjust the line spacing, so increasing the line spacing too much may cause the text to be too small.

### To format line spacing:

1. **Select** the text you want to format.
2. On the **Home** tab, locate the **Paragraph** group, then click the **Line Spacing** command.
3. Select the desired **line spacing** from the menu that appears.



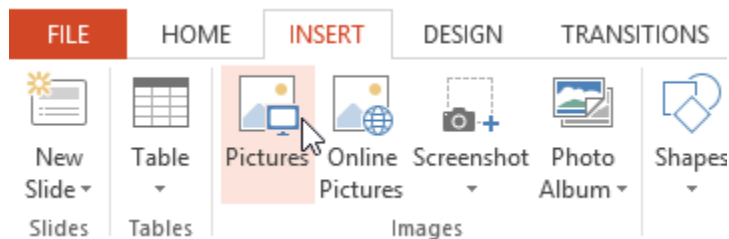
## Lesson 5: Inserting Pictures

### Introduction

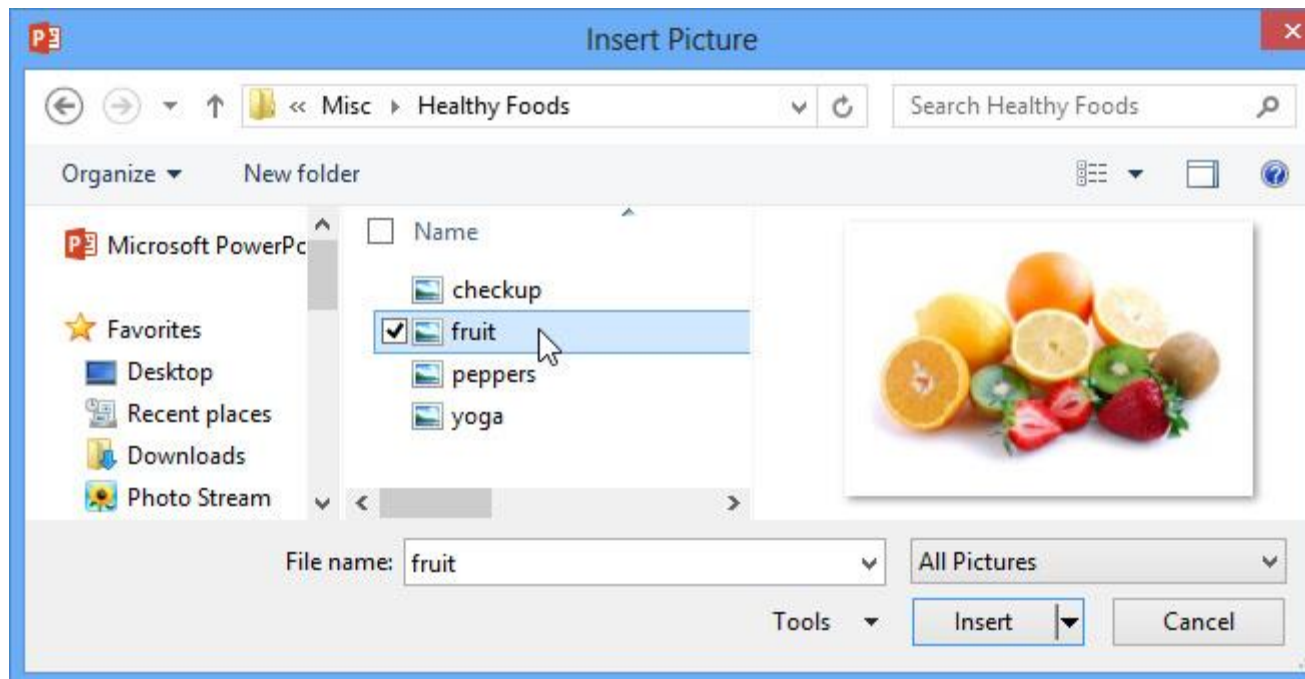
Adding **pictures** can make your presentations more interesting and engaging. You can insert a **picture from a file** on your computer onto any slide. PowerPoint even includes tools for finding **online pictures** and adding **screenshots** to your presentation

**To insert a picture from a file:**

1. Select the **Insert** tab, then click the **Pictures** command in the **Images** group.



2. A dialog box will appear. Locate and select the **desired image file**, then click **Insert**.



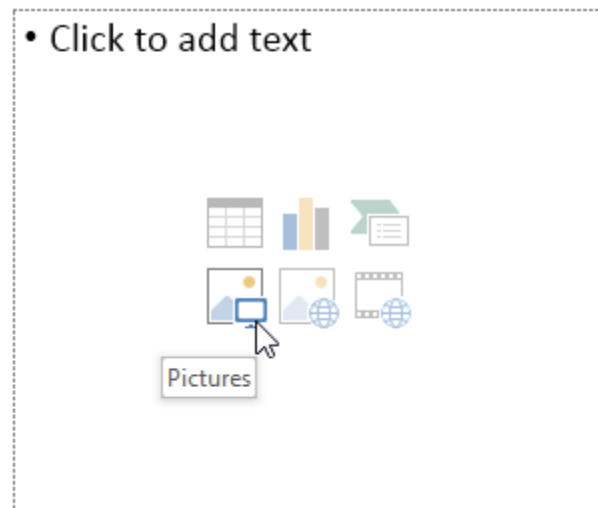
3. The picture will appear on the currently selected slide.

## New Wellness Program

- ▶ Geb BioFuels will be implementing its new Wellness Program in January.
- ▶ The program will provide resources and opportunities for employees to improve their overall health.

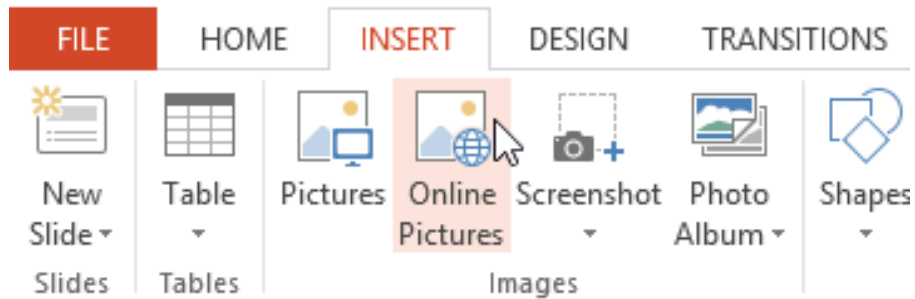


You can also click the **Pictures** command in a **placeholder** to insert images.

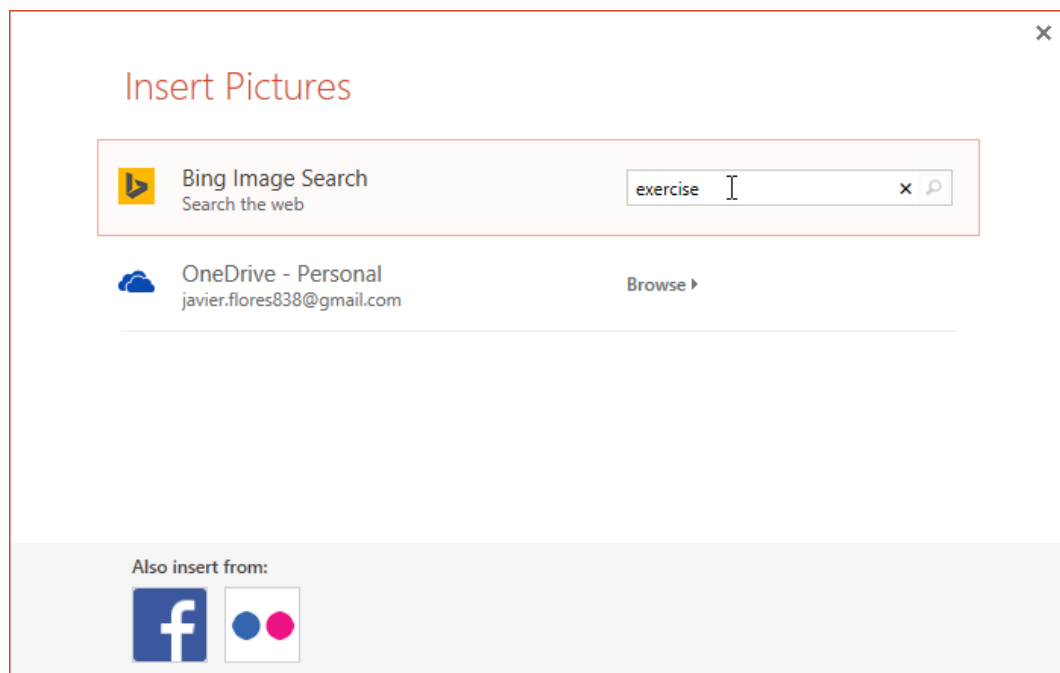


**To insert an online picture:**

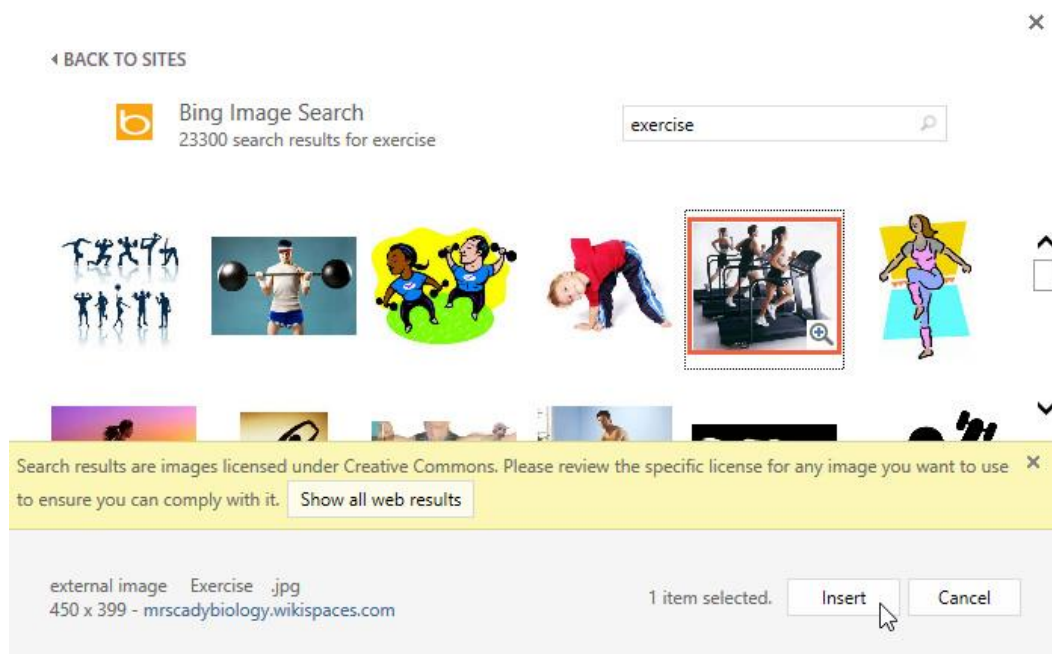
1. Select the **Insert** tab, then click the **Online Pictures** command.



2. The **Insert Pictures** dialog box will appear.
3. Choose **Bing Image Search** or your **OneDrive**. In our example, we'll use Bing Image Search.



4. Press the **Enter** key. Your search results will appear in the dialog box.
5. Select the desired image, then click **Insert**.



6. The image will appear on the currently selected slide.



### Moving and resizing pictures

Once you've inserted a picture, you may want to move it to a **different location** on the slide or change its **size**. PowerPoint makes it easy to **arrange** pictures in your presentation.

### To select a picture:

Before you can modify a picture, you'll need to **select** it.

- Simply click to select a picture. A **solid line** will appear around a selected picture.



### To resize a picture:

- Click and drag the **corner sizing handles** until the picture is the desired size.



The corner sizing handles will resize a picture while preserving its **original aspect ratio**. If you use the side sizing handles, the image will become **distorted**.

**To rotate a picture:**

- Click and drag the arrow above an image to **rotate** it right or left.



Hold the **Shift** key on your keyboard when rotating an image to limit the rotation angle.

**To move a picture:**

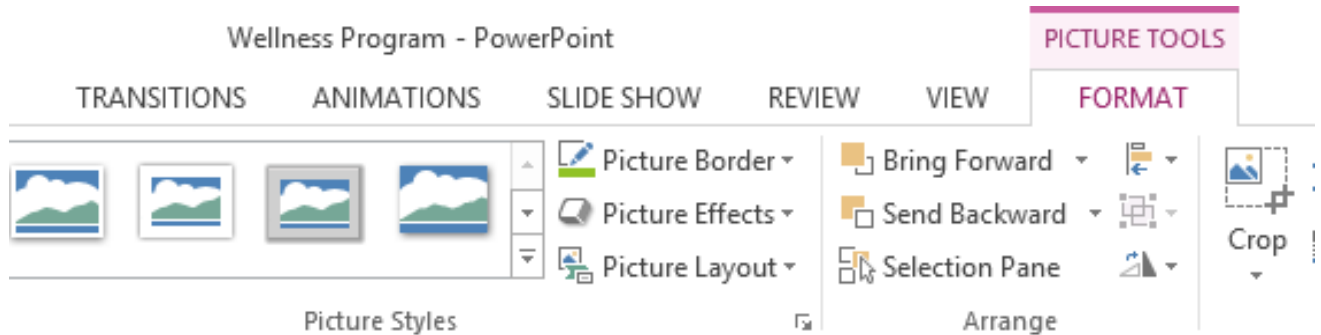
- Click and drag to **move** a picture to a new location on a slide.





### To delete a picture:

- Select the picture you want to delete, then press the **Backspace** or **Delete** key on your keyboard.



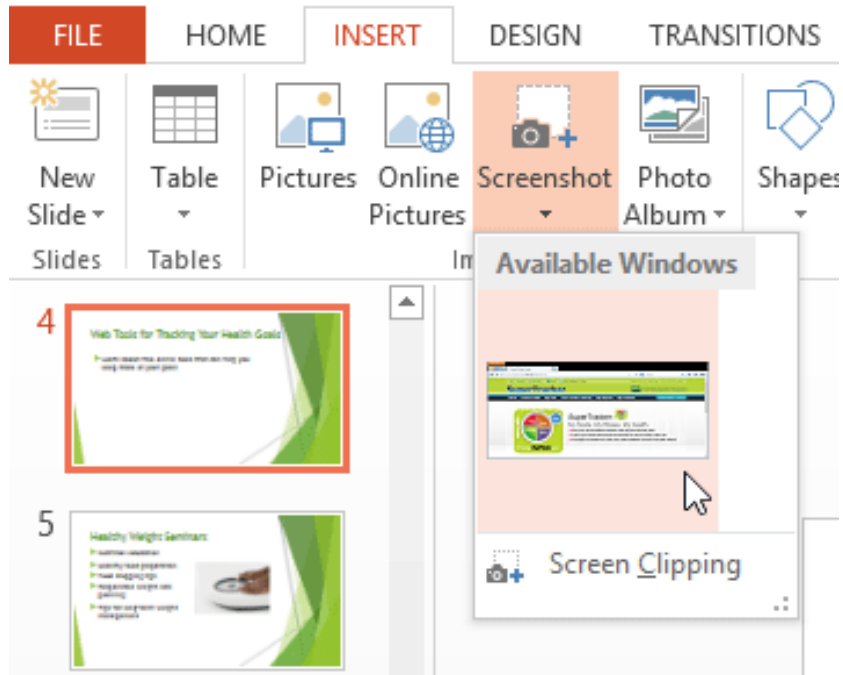
### Inserting screenshots

**Screenshots** are basically snapshots of your computer screen. You can take a screenshot of almost any program, website, or open window. PowerPoint makes it easy to insert a screenshot of an **entire window** or a **screen clipping** of part of a window in your presentation.

### To insert screenshots of a window:

1. Select the **Insert** tab, then click the **Screenshot** command in the **Images** group.
2. The **Available Windows** from your desktop will appear. Select the **window** you want to capture as a screenshot.



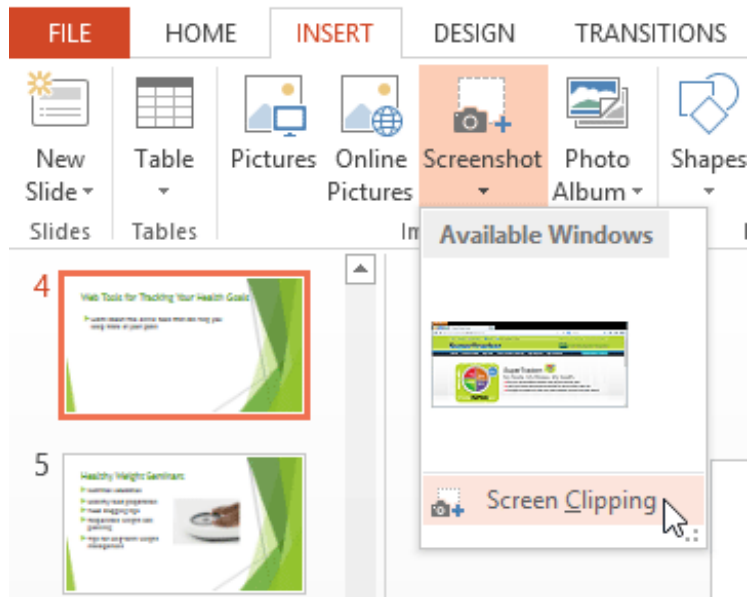


3. The screenshot will appear on the currently selected slide.



**To insert a screen clipping:**

1. Select the **Insert** tab, click the **Screenshot** command, then select **Screen Clipping**.



2. A faded view of your desktop will appear. Click and drag to draw the area you want to capture as a screen clipping.



3. The screen clipping will appear on the currently selected slide.

## Web Tools for Tracking Your Health Goals

- ▶ Learn about free online tools that can help you keep track of your goals



**MyPlate.gov**

**SuperTracker:** My foods. My fitness. My health.

- Get your personalized nutrition and physical activity plan.
- Track your foods and physical activities to see how they stack up.
- Get tips and support to help you make healthier choices and plan ahead.

## Lesson 6: Formatting Pictures

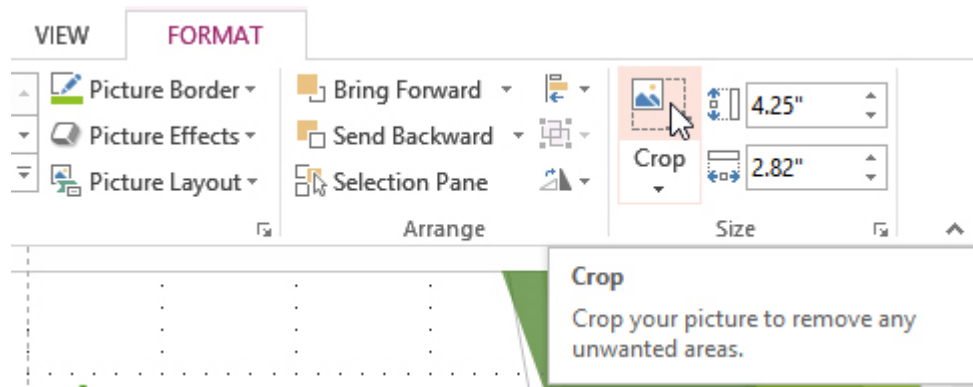
### Introduction

There are a variety of ways to **format** the pictures in your slide show. The **picture tools** in PowerPoint make it easy to **personalize** and **modify** the images in interesting ways. PowerPoint allows you to change the **picture style** and **shape**, add a **border**, **crop** and **compress** pictures, add **artistic effects**, and more.

### To crop an image:

When you crop an image, a part of the picture is removed. Cropping may be helpful when a picture has a lot of content and you want to focus on only part of it.

1. Select the image you want to crop. The **Format** tab appears.
2. On the Format tab, click the **Crop** command.



3. **Cropping handles** will appear around the image. Click, hold, and drag a **handle** to crop the image.

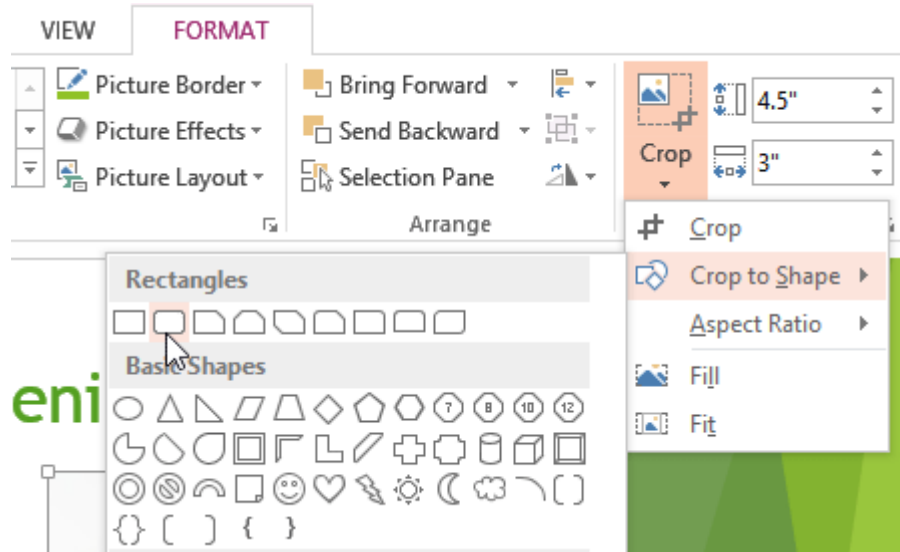


4. Click the **Crop** command again. The image will be cropped.

The corner handles are useful for simultaneously cropping the image horizontally and vertically.

**To crop an image to a shape:**

1. Select the image you want to crop, then click the **Format** tab.
2. Click the **Crop** drop-down arrow. Hover the mouse over **Crop to Shape**, then select the desired **shape** from the drop-down menu that appears.



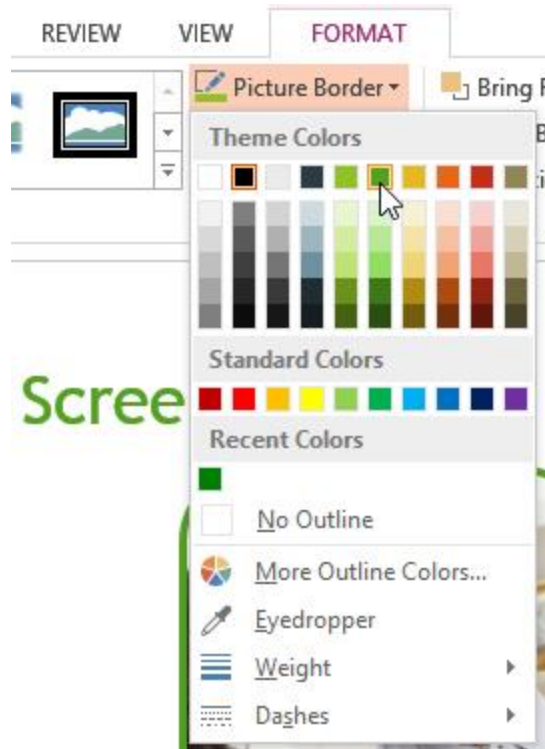
3. The image will appear formatted as the shape.



You may want to crop the image to the desired size before cropping it to a shape.

**To add a border to an image:**

1. Select the image you want to add border to, then click the **Format** tab.
2. Click the **Picture Border** command. A drop-down menu will appear.
3. From here, you can select a **color**, **weight** (thickness), and whether or not the line is **dashed**.

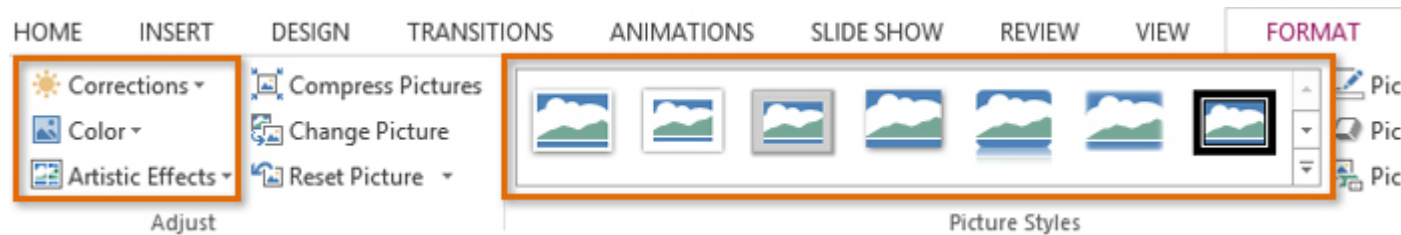


4. The border will appear around the image.



### Image adjustments

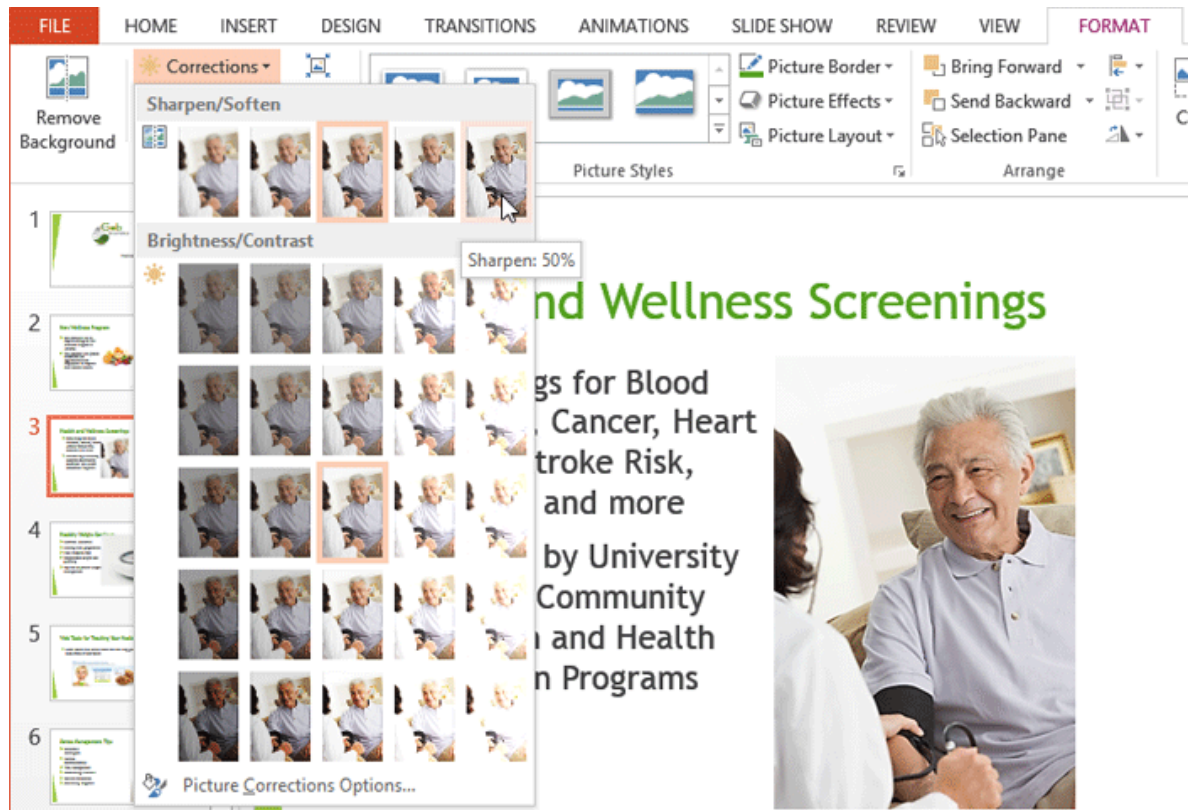
PowerPoint offers several options for changing the way images appear in your slide show. For example, you can add a **frame**, make image **corrections**, change the image's **color** or **brightness**, and even add some stylish **artistic effects**. These options are located in the **Adjust** and **Picture Styles** groups on the **Format** tab.



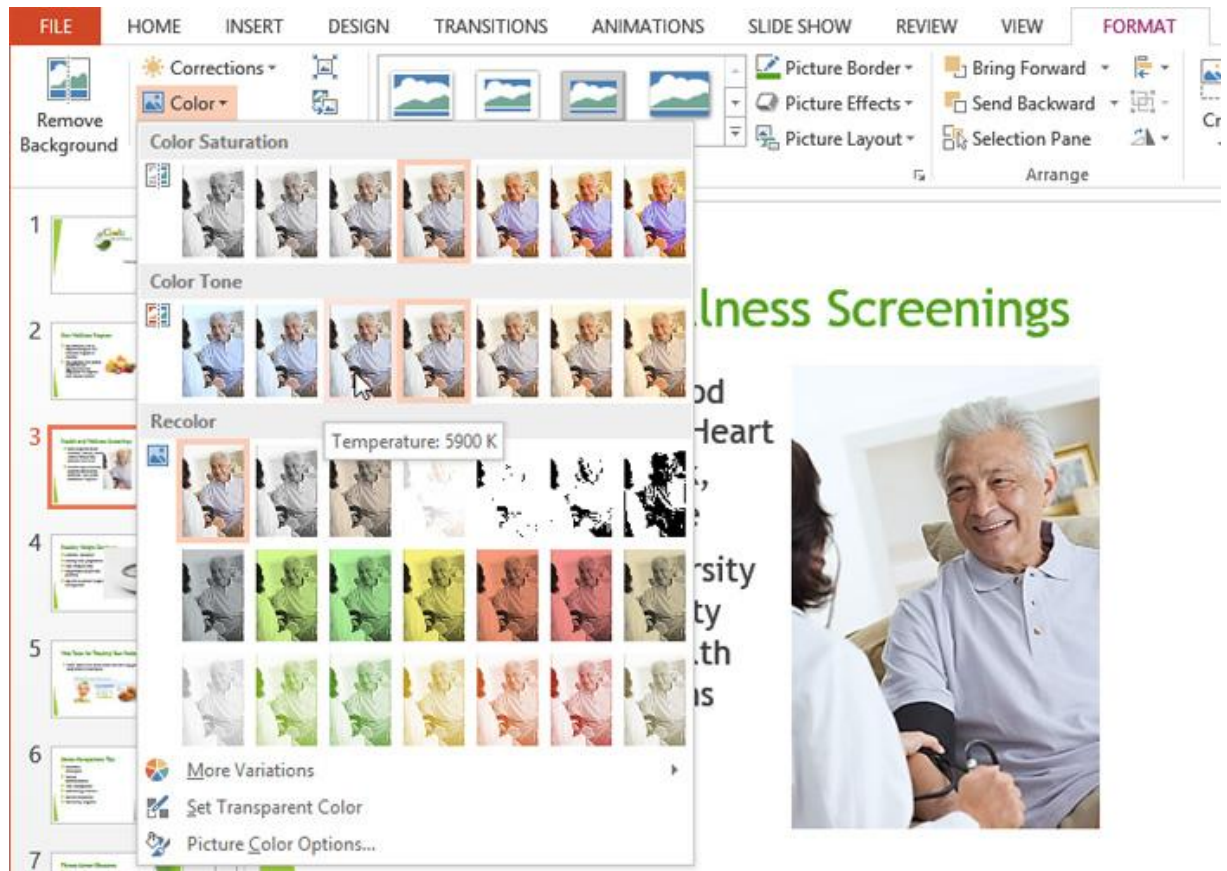
When you're ready to make adjustments or experiment with the look of an image, select the picture and choose one of these options from the Format tab:

- **Corrections:** This command is located in the **Adjust** group. From here, you can **sharpen** or **soften** the image to adjust how blurry or clear it appears. You can also adjust the **brightness** and **contrast**, which controls how light or dark the picture appears.





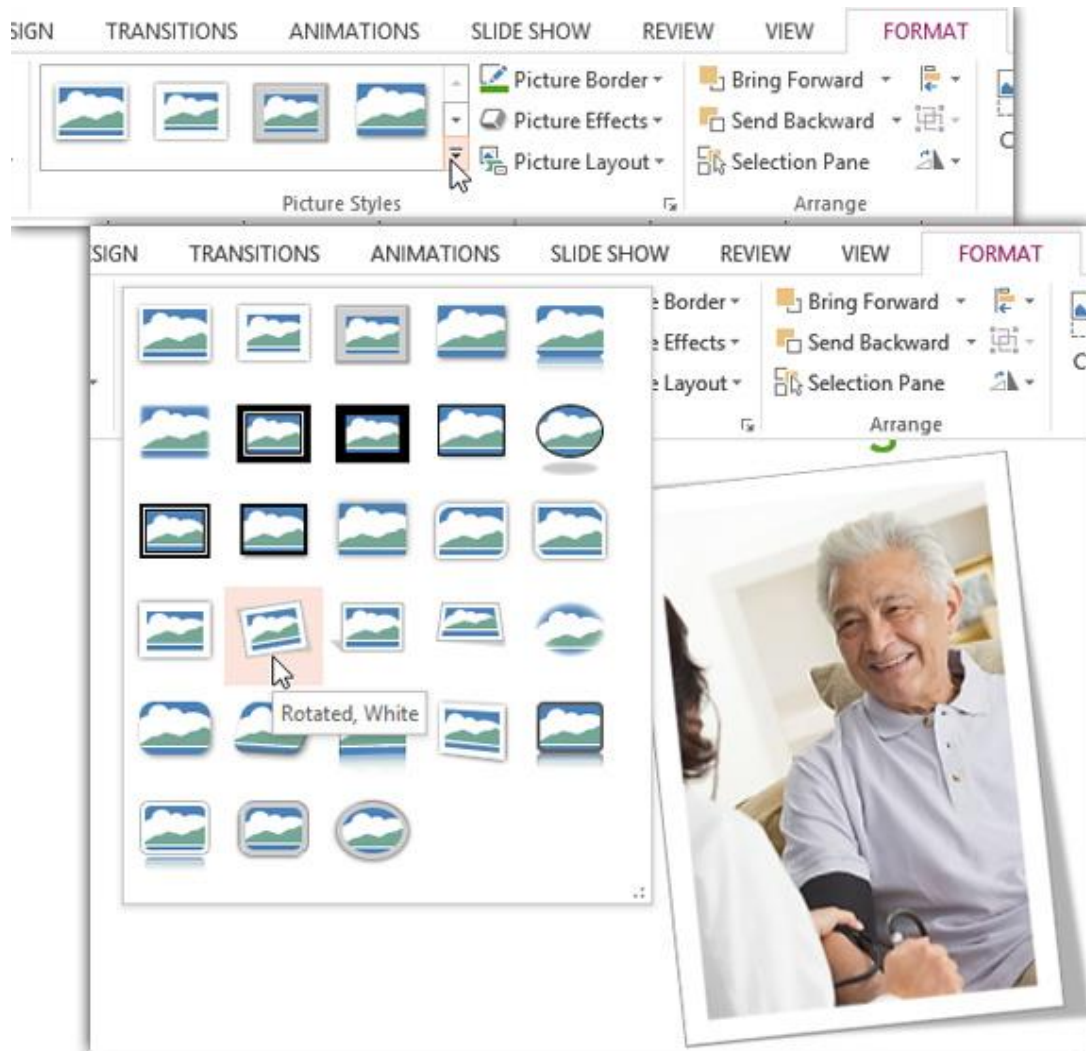
- **Color:** This command is located in the **Adjust** group. From here, you can adjust the image's **saturation** (how vivid the colors are), **tone** (the temperature of the image, from cool to warm), and **coloring** (changing the overall color of the image).



- **Artistic Effects:** This command is located in the **Adjust** group. From here, you can add artistic effects such as pastels, watercolors, and glowing edges.



- **Picture Styles Group:** This group contains a variety of styles you can apply to your picture, such as frames, borders, and soft edges.

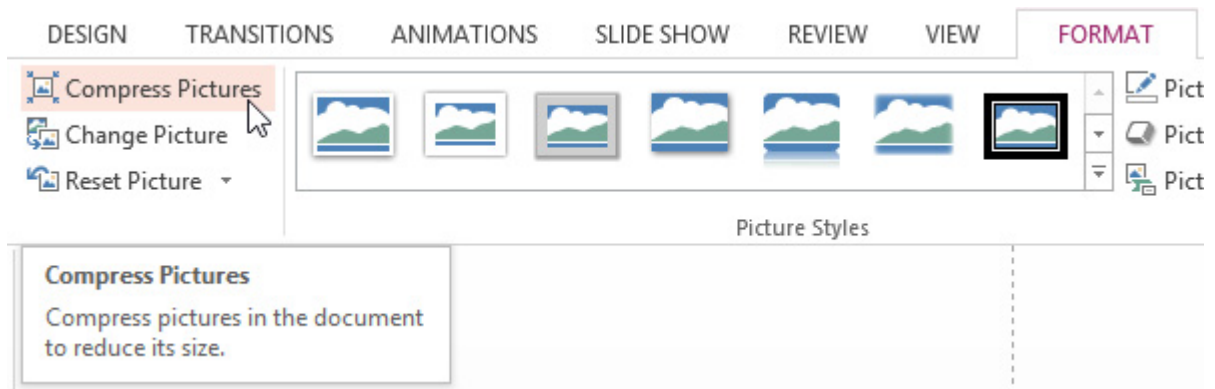


## Compressing pictures

If you want to email a presentation that contains pictures, you'll need to monitor its **file size**. Large high-resolution pictures can quickly cause your presentation to become very large, which may make it difficult or impossible to attach to an email. Additionally, **cropped areas** of pictures are saved with the presentation by default, which can add to the file size. PowerPoint can reduce the file size by **compressing** pictures, lowering their **resolution**, and **deleting cropped areas**.

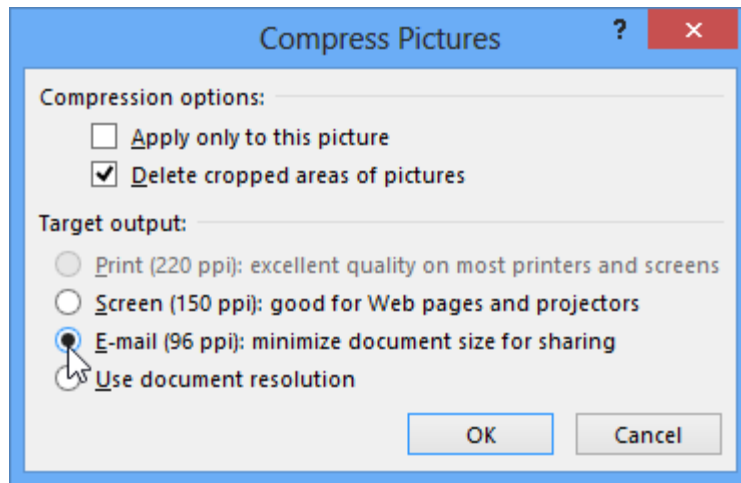
### To compress a picture:

1. Select the picture you want to compress, then click the **Format** tab.
2. Click the **Compress Pictures** command.



3. A dialog box will appear. Place a check mark next to **Delete cropped areas of pictures**. You can also choose whether to apply the settings to **this picture only** or to all pictures in the presentation.
4. Choose a **Target output**. If you are emailing your presentation, you may want to select **Email**, which produces the smallest file size. When you are done, click **OK**.





### **Removing the background from an image**

With **Background Removal**, PowerPoint uses special algorithms to determine which parts of the image are the background and then removes these areas from the image. This can give your images a cleaner appearance and will allow the slide background (or other objects) to show through

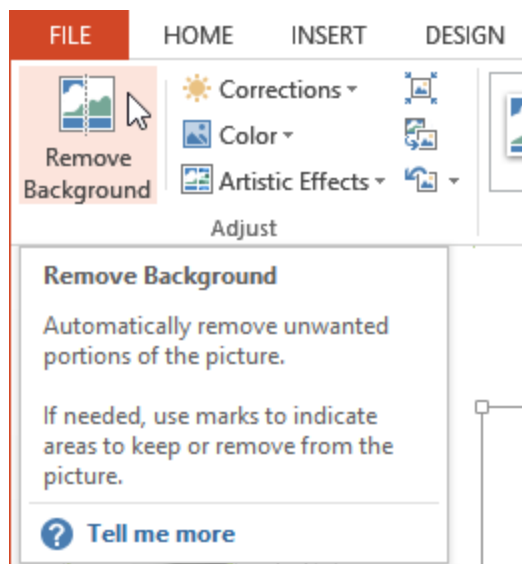
Some images do not work as well with Background Removal, and they may require extra time and effort to get good results. Generally, it's more difficult if the image has a complex background or if the foreground and background blend together.





**To remove the background from an image:**

1. Select the desired image, then click the **Format** tab.
2. Click the **Remove Background** command.

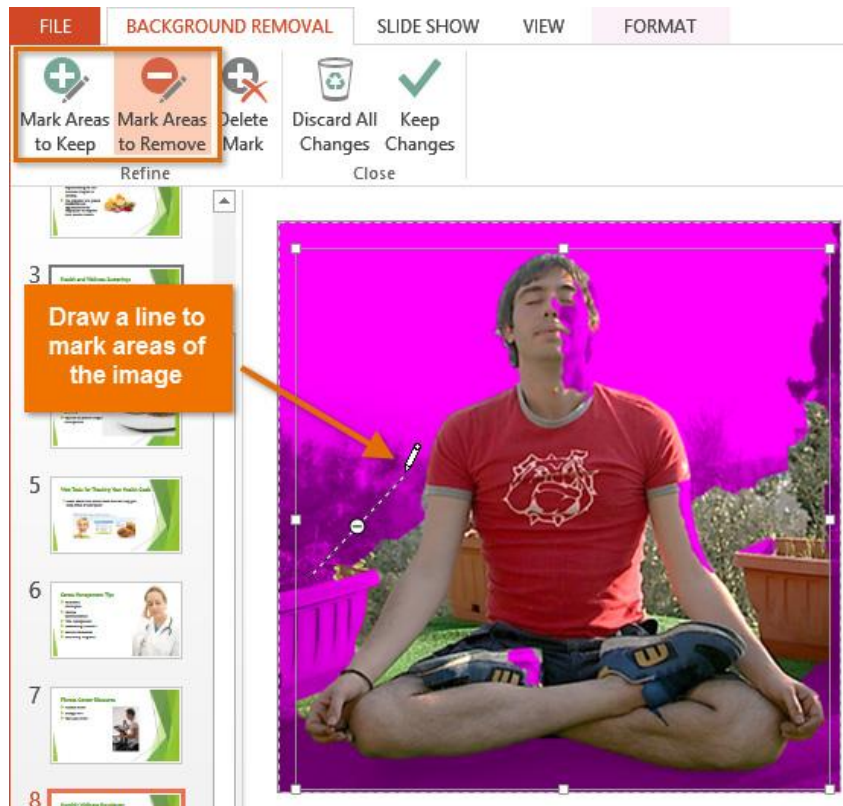


3. PowerPoint will try to guess which part of the image is the background, and it will mark this area with a **magenta** fill. It will also place a box around the image with selection handles.

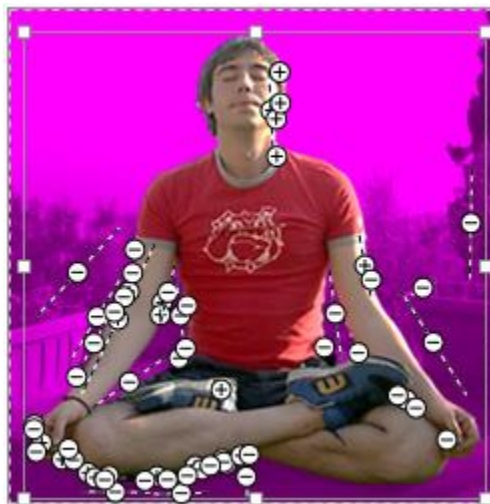


4. Drag the selection handles until all of the foreground is inside the box. After you do this, PowerPoint may readjust the background.
5. At this point, you may need to help PowerPoint decide which parts of the image are **foreground** and which parts are **background**. You can do this by using the **Mark Areas to Keep** and **Mark Areas to Remove** commands:
  - If PowerPoint has marked part of the foreground magenta, click **Mark Areas to Keep** and draw a line in that region of the image.
  - If part of the background has not been marked with magenta, click **Mark Areas to Remove** and draw a line in that region of the image.

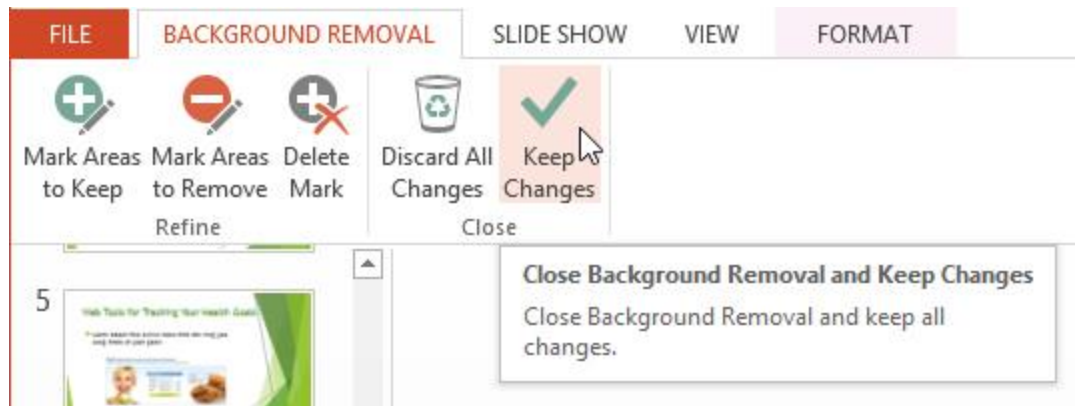




6. After you add your marks, PowerPoint will readjust the image.



7. When you're satisfied with the image, click **Keep Changes**.



8. The background will be removed. You can adjust the image at any time by clicking the Remove Background command again.



## Lesson 7:

- Shapes and WordArt
- Insert videos
- Insert audio
- Reviewing presentation
- Hyperlinks

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## Shapes and WordArt

### Introduction

There are many features and commands you can use in PowerPoint to create visually appealing slides. Two of these features are **WordArt** and **shapes**. **WordArt** allows you to create **stylized text** with effects such as textures, shadows, and outlines. You can also insert and modify a **variety of shapes** like rectangles, circles, lines, arrows, callouts, and stars.

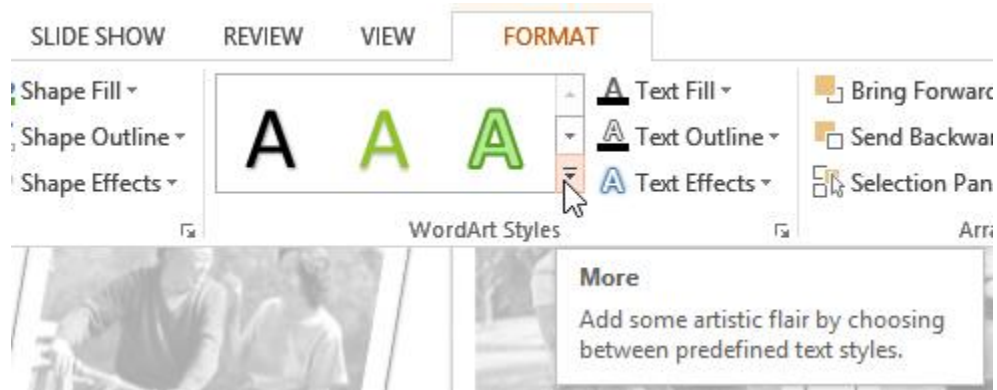
### About WordArt

PowerPoint allows you to add effects to the **text inside of a text box**, which is known as **WordArt**. For the most part, the types of effects you can add are the same as the ones you can add to shapes and text boxes (shadow, bevel, etc.). However, with WordArt, you can also **Transform** the text to give it a wavy, slanted, or inflated look.

### To apply a WordArt style to text:

A **WordArt Style** will automatically apply several effects to your text at once. You can then refine the look of your text by adding or modifying text effects.

1. Select a text box, or select some text inside of the text box.
2. On the **Format** tab, click the **More** drop-down arrow in the **WordArt Styles** group.



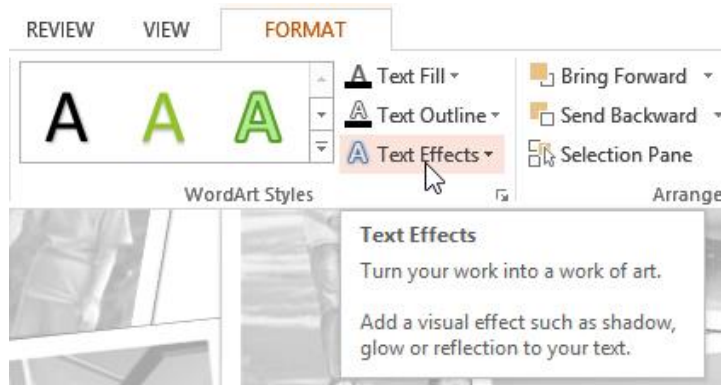
3. A drop-down menu of WordArt Styles will appear. Select the **style** you want to use.



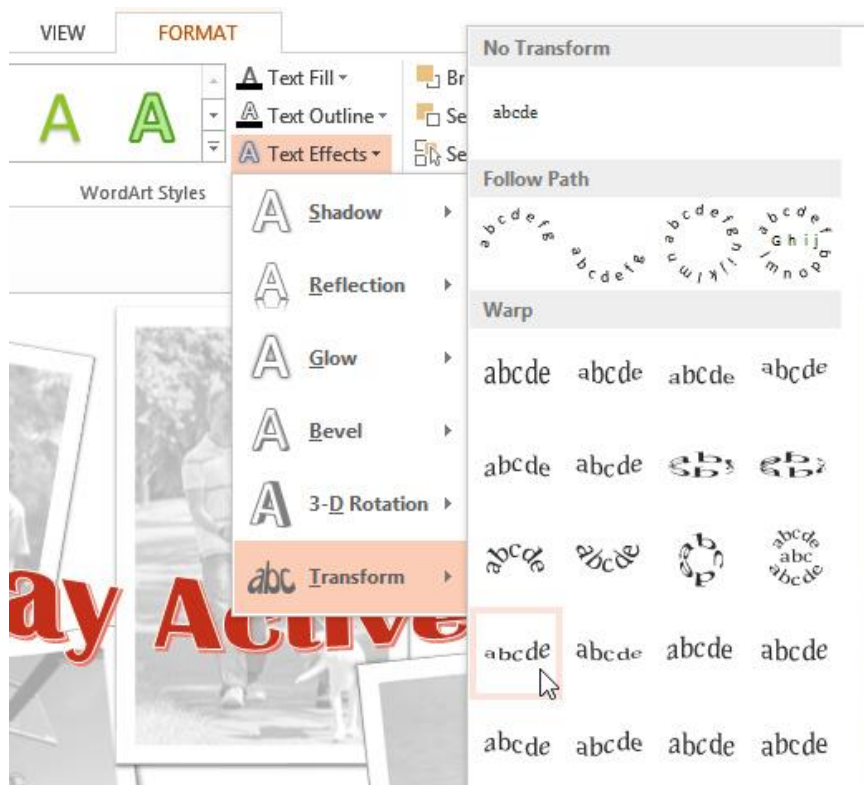
4. The text will appear in the selected style. If desired, you can change the font or font color from the **Home** tab.

**To add or modify text effects:**

1. Select a text box, or select some text inside of the text box. The **Format** tab will appear.
2. On the **Format** tab, click the **Text Effects** command in the **WordArt Styles** group.



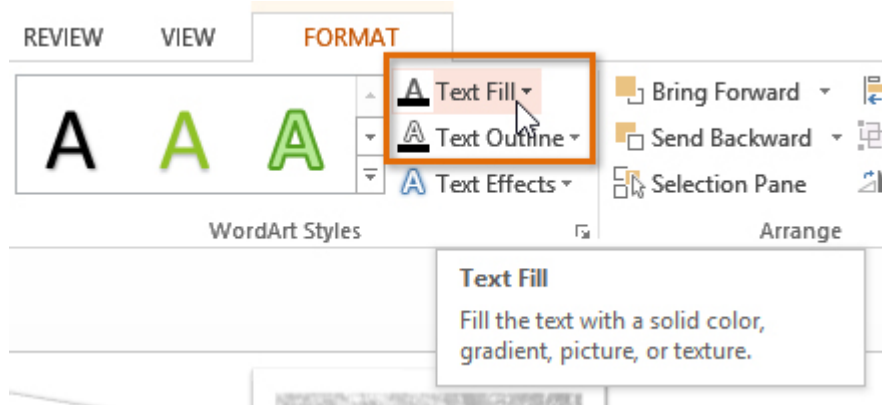
3. A drop-down menu will appear showing the different effect categories. Hover the mouse over an effect category, then select the desired **effect** from the menu that appears.



4. The effect will be applied to your text. If you want, you can combine several different effects.



In the WordArt Styles group, you can also use the **Text Fill** and **Text Outline** drop-down boxes to modify the **fill** and **outline** color.



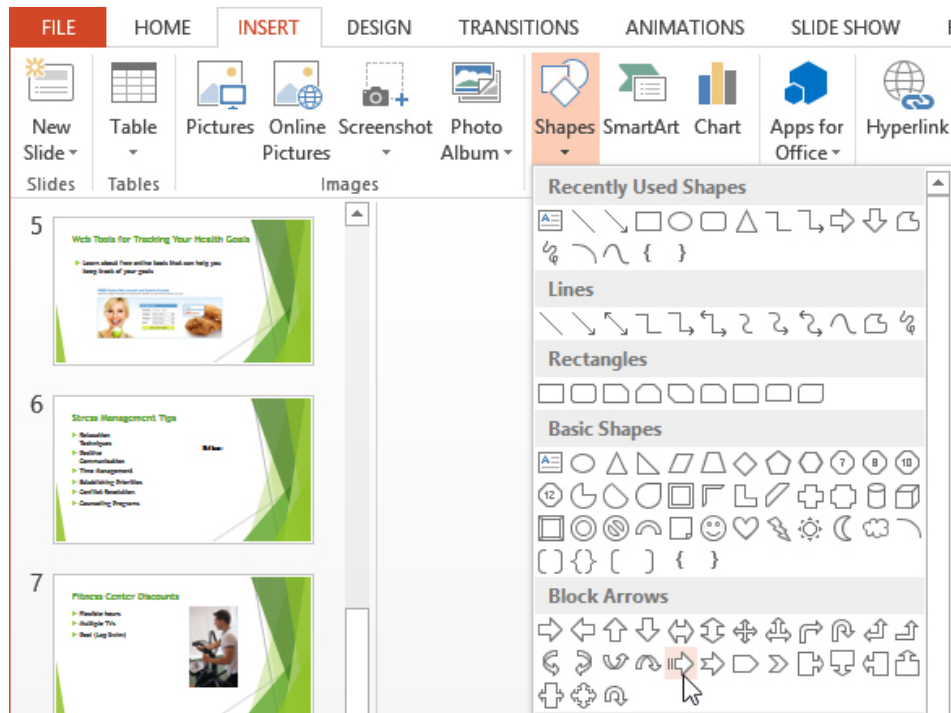
### Working with shapes and text boxes

PowerPoint's large shape collection allows you to organize and design the image you want. While you may not need shapes in every presentation you create, they can add visual appeal.

#### To insert a shape:

1. Select the **Insert** tab, then click the **Shapes** command in the **Illustrations** group. A drop-down menu of shapes will appear.
2. Select the desired **shape**.





3. Click, hold, and drag in the desired location to add the shape to the slide.



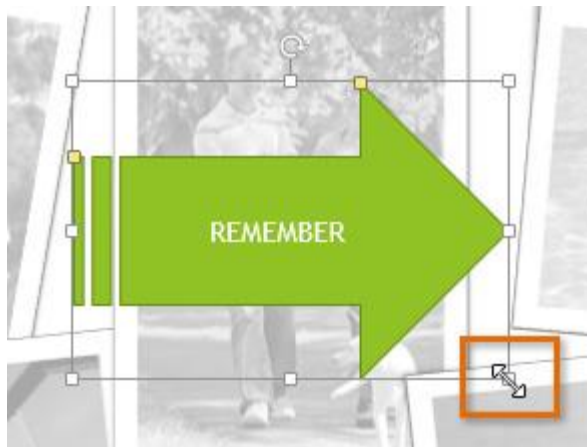
If desired, you can enter text in a shape. When the shape appears in your document, you can simply begin typing. You can then use the **formatting options** on the **Home** tab to change the font, font size, or color of the text.



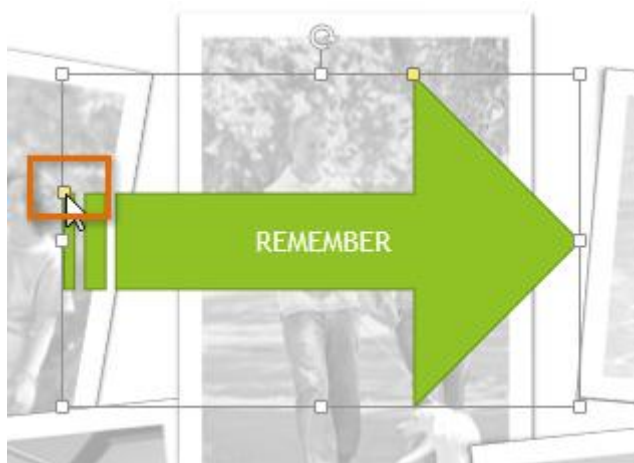
### Modifying a shape or text box

When you click a shape or text box, **handles** will appear that let you manipulate the shape. There are several types of handles:

- **Sizing handles:** Click, hold, and drag the **sizing handles** until the shape or text box is the desired size. You can use the corner sizing handles to change the **height** and **width** at the same time.

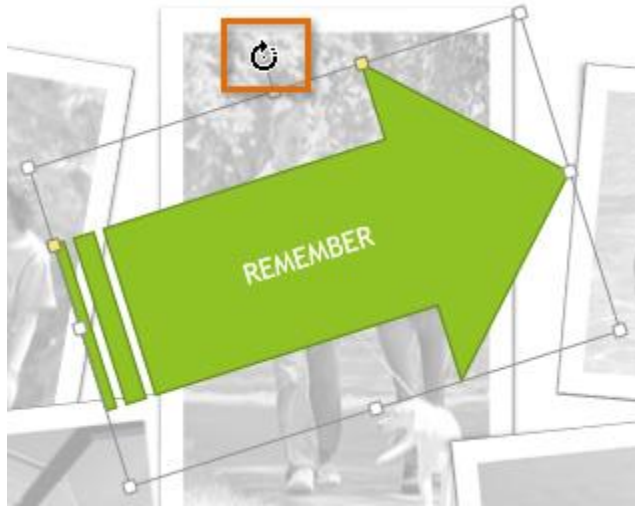


- **Yellow handles:** Some shapes have one or more **yellow handles** that can be used to customize the shape. For example, with arrow shapes you can adjust the width of the line and arrow tip.



- **Rotation handle:** Click, hold, and drag the **rotation** handle to rotate the shape.



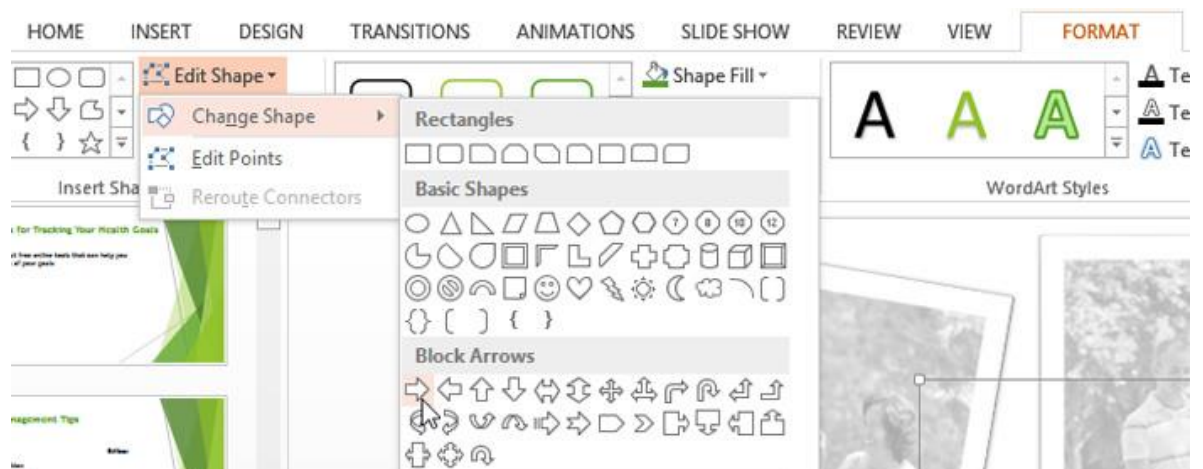


### Formatting shapes and text boxes

PowerPoint allows you to modify shapes and text boxes in a variety of ways so you can tailor them to your projects. You can **change** shapes and text boxes into **different shapes**, **format their style and color**, and add **shadow effects**.

#### To change to a different shape:

1. Select the shape or text box you want to change. The **Format** tab will appear.
2. On the **Format** tab, click the **Edit Shape** command. In the menu that appears, hover the mouse over **Change Shape** and select the desired **shape**.



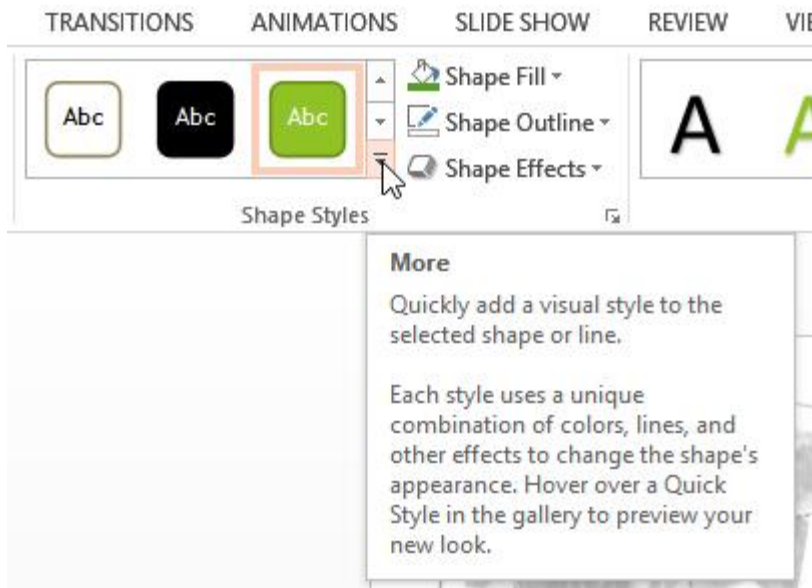
3. The new shape will appear.



### To change the shape style:

Choosing a **Shape Style** allows you to apply preset colors and effects to quickly change the appearance of your shape or text box.

1. Select the shape or text box you want to change.
2. On the **Format** tab, click the **More** drop-down arrow in the **Shape Styles** group.



3. A drop-down menu of styles will appear. Select the **style** you want to use.

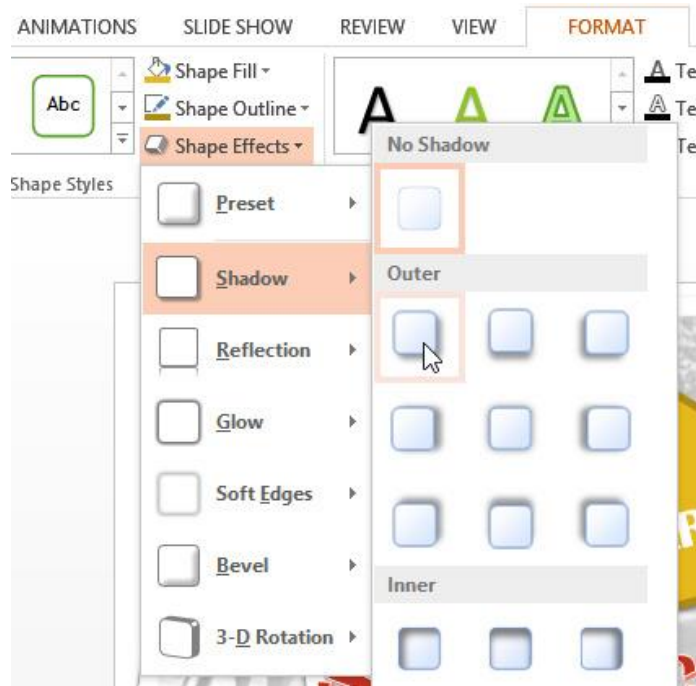


4. The shape or text box will appear in the selected style.

#### **To change shadow effects:**

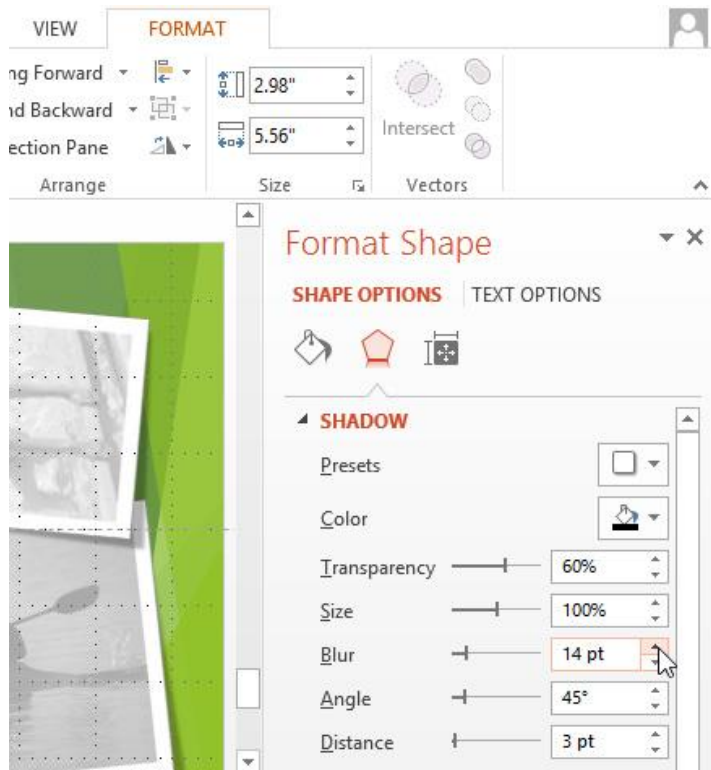
Adding a shadow to a shape can make it appear as though it is floating above the page, and it can help to add contrast between the shape and the background.

1. Select the shape or text box you want to change.
2. On the **Format** tab, click the **Shape Effects** drop-down arrow. In the menu that appears, hover the mouse over **Shadow** and select the shadow you want to use.



3. The shape will appear with the selected shadow.

To adjust the shadow color, size, and distance, select **Shadow Options** from the drop-down menu. The **Format Shape** pane will appear on the right side of the PowerPoint window, allowing you to customize the shadow.

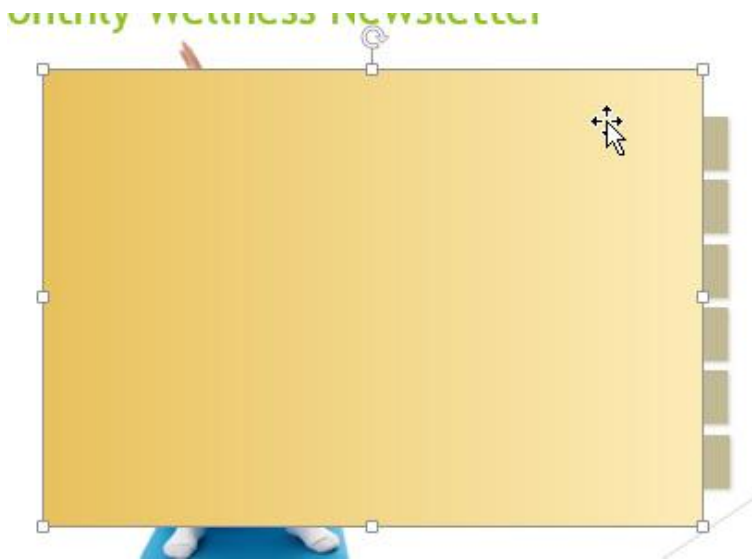


## Ordering objects

In addition to aligning objects, PowerPoint gives you the ability to **arrange objects** in a **specific order**. The ordering is important when two or more objects **overlap** because it will determine which objects are in the **front** or the **back**.

## Understanding levels

When objects are inserted into a slide, they are placed on **levels** according to the **order** in which they were inserted into the slide. In the image below, the rectangle is on the top level, but we can **change the level** to put it behind the other objects.

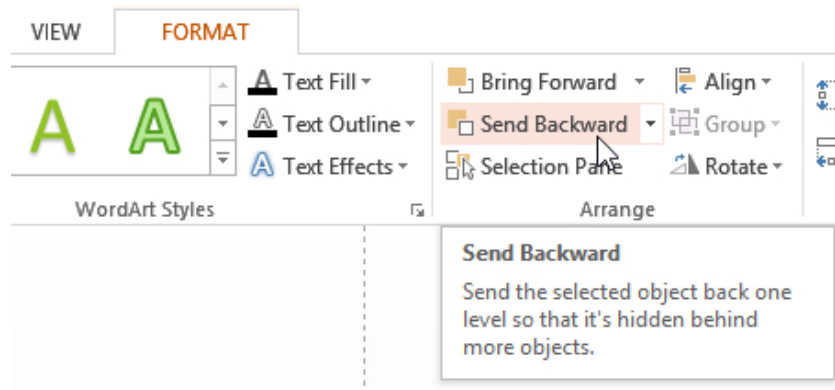


**To change the ordering by one level:**

1. Select an object. The **Format** tab will appear.



2. From the **Format** tab, click the **Bring Forward** or **Send Backward** command to change the object's ordering by **one level**. If there are multiple objects on the slide, you may need to click the command **several times** to achieve the desired ordering.



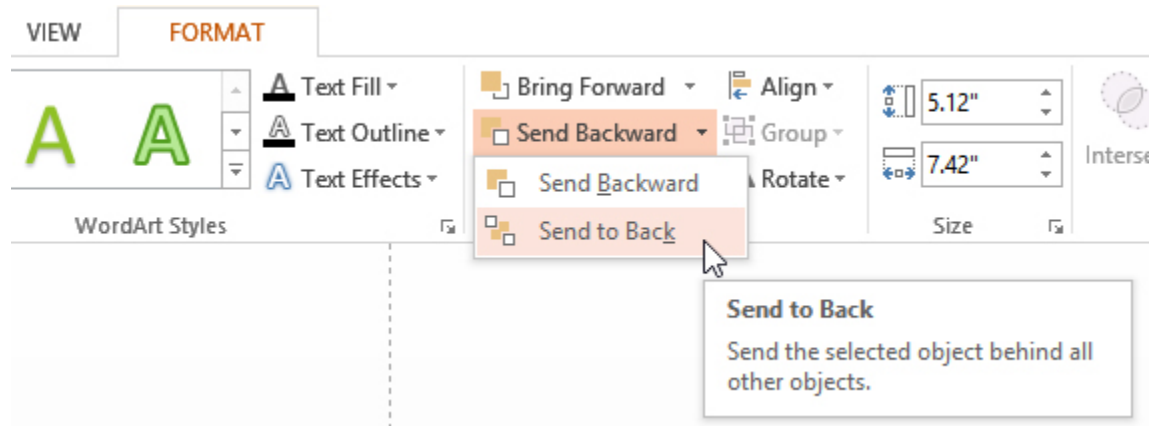
3. The objects will reorder.



### **To bring an object to the front or back:**

If you want to move an object behind or in front of several objects, it's usually faster to **bring it to front** or **send it to back** instead of clicking the ordering commands multiple times.

1. Select an object.
2. From the **Format** tab, click the **Bring Forward** or **Send Backward** drop-down box.
3. From the drop-down menu, select **Bring to Front** or **Send to Back**.

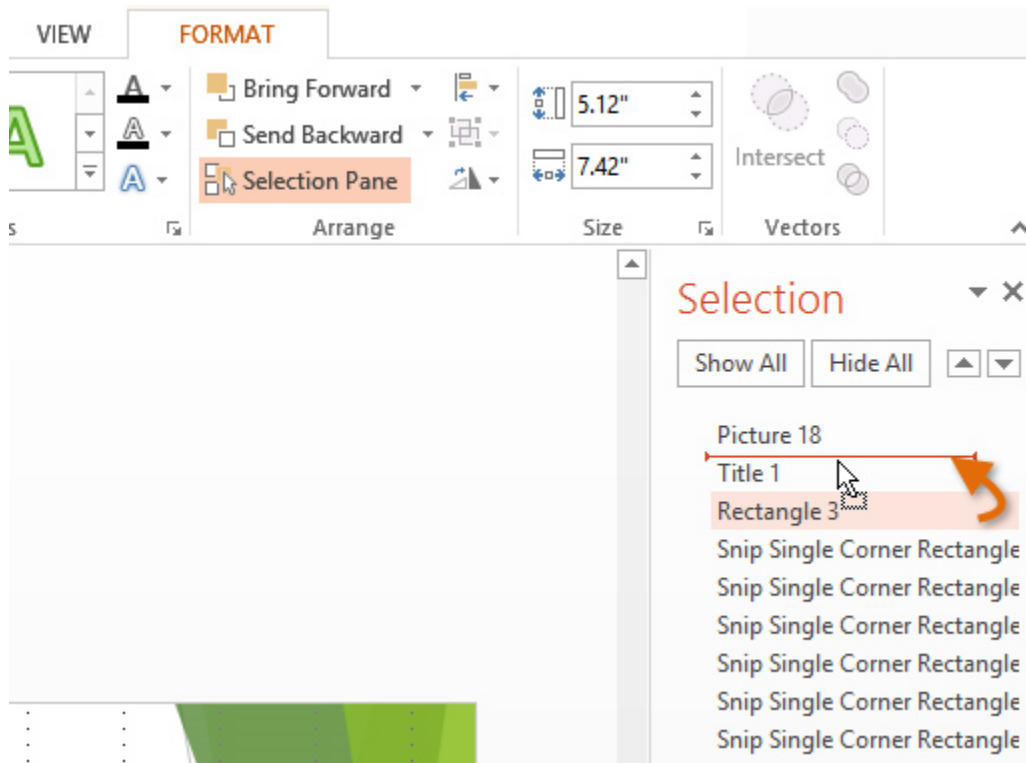


4. The objects will reorder.



If you have several objects placed on top of each other, it may be difficult to select an individual object. The **Selection Pane** allows you to easily drag an object to a new location. To access the Selection pane, click **Selection Pane** on the **Format** Tab.



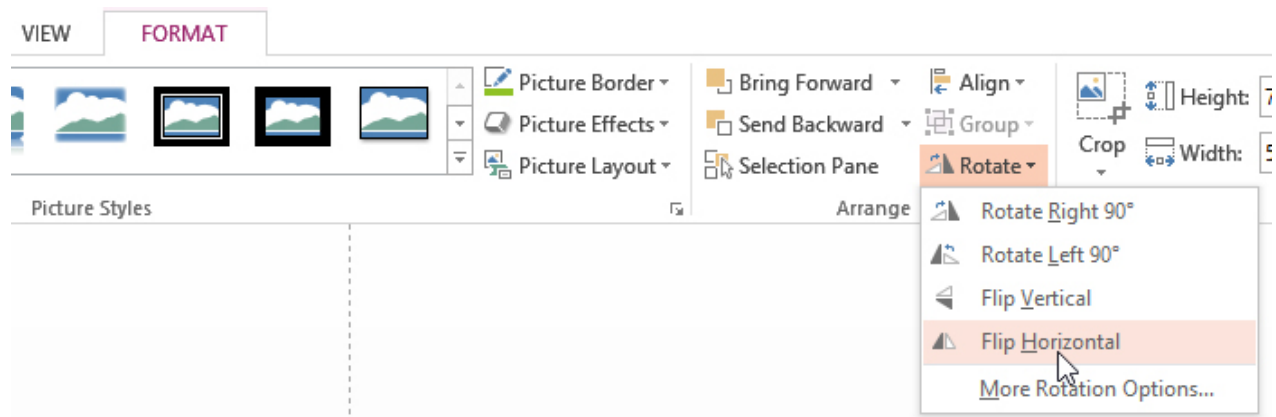


### Rotating objects

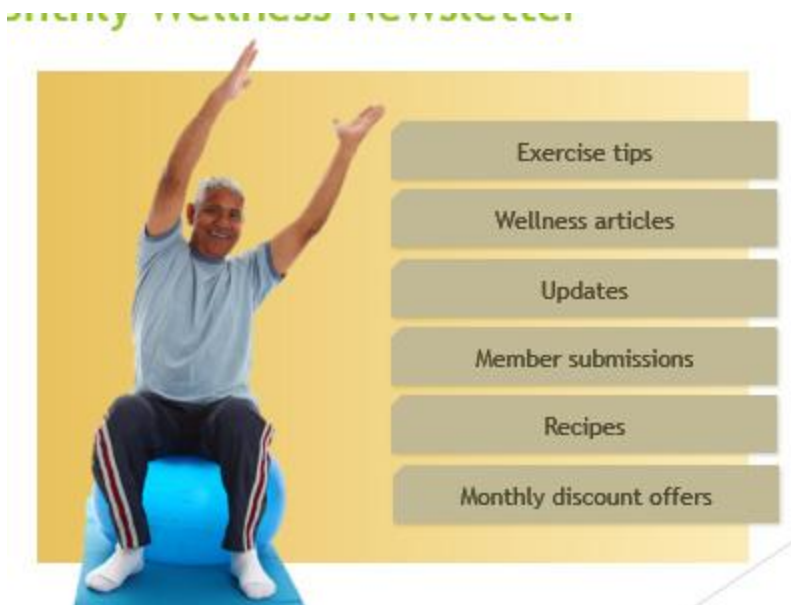
If you need to turn an object so it faces a different direction, you can **rotate it to the left or right** or **flip it horizontally or vertically**.

### To rotate an object:

1. Select an object. The Format tab will appear.
2. From the **Format** tab, click the **Rotate** command. A drop-down menu will appear.
3. Select the desired **rotation option**.



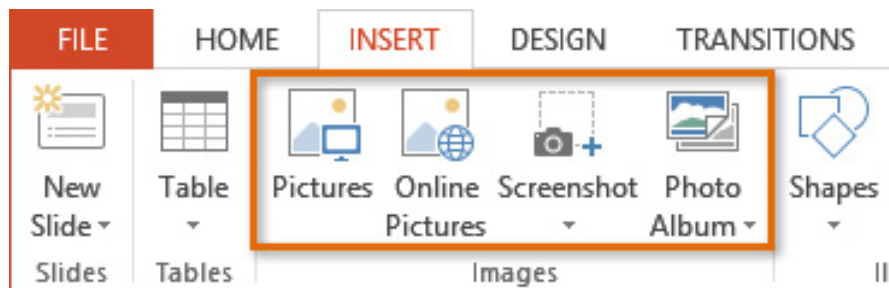
4. The object will rotate.



### Grouping objects

You may want to **group** multiple objects into **one object** so they will stay together if they are moved or resized. This is often easier than selecting all of the objects each time you want to move them.

Pictures, shapes, clip art, and text boxes can all be grouped together; however, **placeholders** cannot be grouped. If you will be grouping pictures, use one of the commands in the **Images** group on the **Insert** tab to insert pictures instead of the picture icon inside the placeholder.

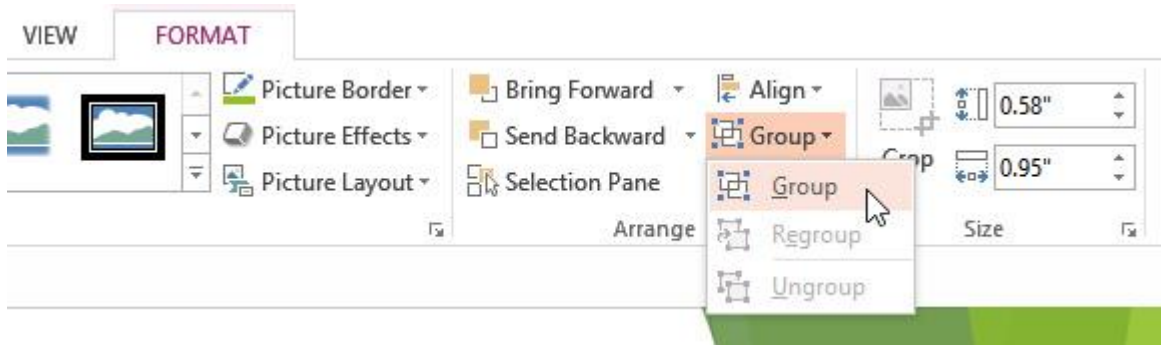


### To group objects:

1. Click and drag your mouse to form a **selection box** around the objects you want to group. The **Format** tab will appear.



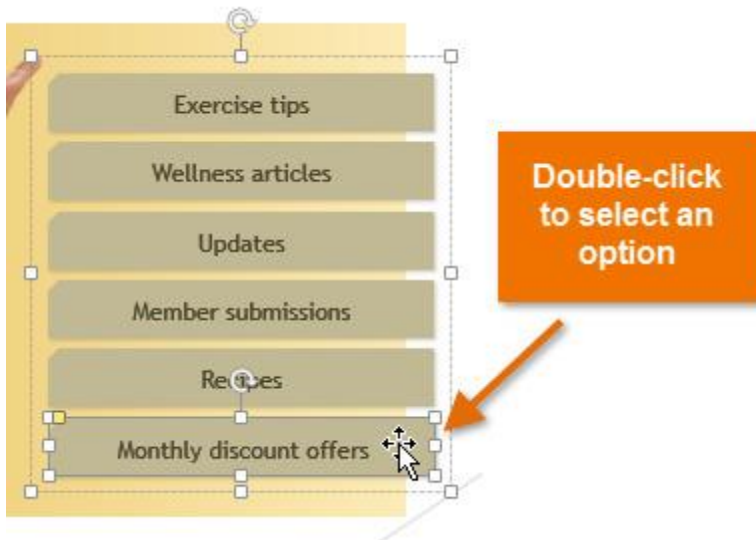
2. From the **Format** tab, click the **Group** command, then select **Group**.



3. The selected objects will now be grouped. There will be a **single box with sizing handles** around the entire group to show that they are one group. You can now move or resize all of the objects at once.



If you want to edit or move one of the objects in the group, double-click to select the object. You can then edit it or move it to the desired location.

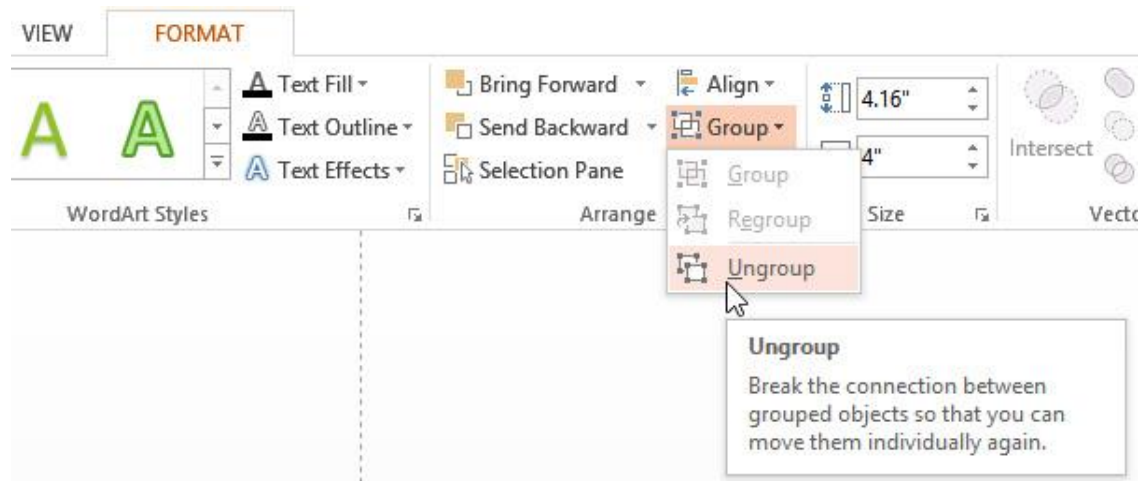


If you select the objects and the **Group** command is disabled, it may be because one of the objects is inside a **placeholder**. If this happens, try **reinserting** the images by using the **Pictures** command on the **Insert** tab.



**To ungroup objects:**

1. Select the grouped object you want to ungroup.
2. From the **Format** tab, click the **Group** command, then select **Ungroup**.



3. The objects will be ungrouped.



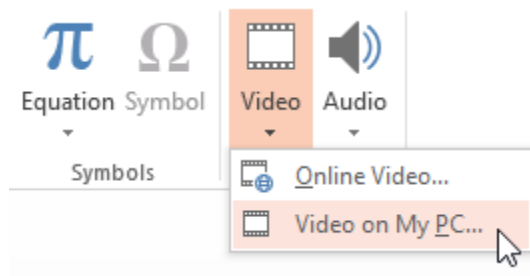
## Inserting Videos

### Introduction

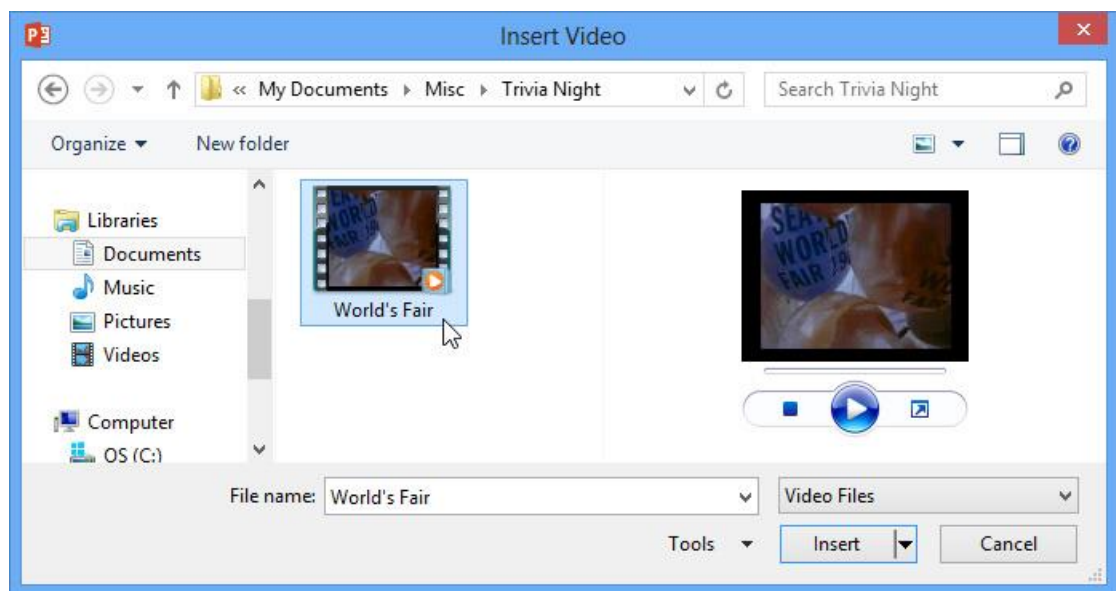
PowerPoint allows you to **insert a video** onto a slide and play it during your presentation. This is a great way to make your presentation more engaging for your audience. You can even **edit** the video within PowerPoint and customize its appearance. For example, you can **trim** the video's length, add a **fade in**, and much more.

### To insert a video from a file:

1. From the **Insert** tab, click the **Video** drop-down arrow, then select **Video on My PC**.



2. Locate and select the desired video file, then click **Insert**.

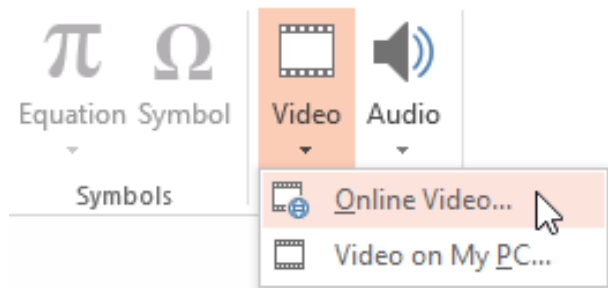


3. The video will be added to the slide.



**To insert an online video:**

Some websites—like YouTube—allow you to **embed** videos into your slides. An embedded video will still be hosted on its original website, meaning the video itself won't be added to your file. Embedding can be a convenient way to reduce the file size of your presentation, but you'll also need to be connected to the Internet for the video to play.



## Inserting Audio

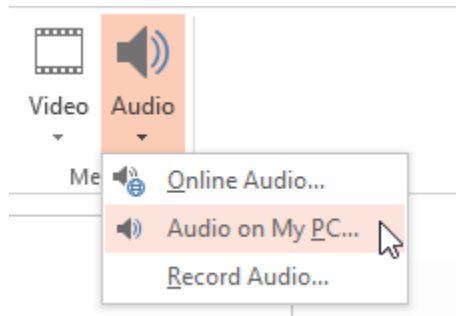
### Introduction

PowerPoint allows you to add **audio** to your presentation. For example, you could add **background music** to one slide, a **sound effect** to another, and even record your own **narration** or **commentary**. You can then **edit** the audio to customize it for your presentation.

Previously, you also had the option to add clip art audio from Office.com, but this service has been discontinued.

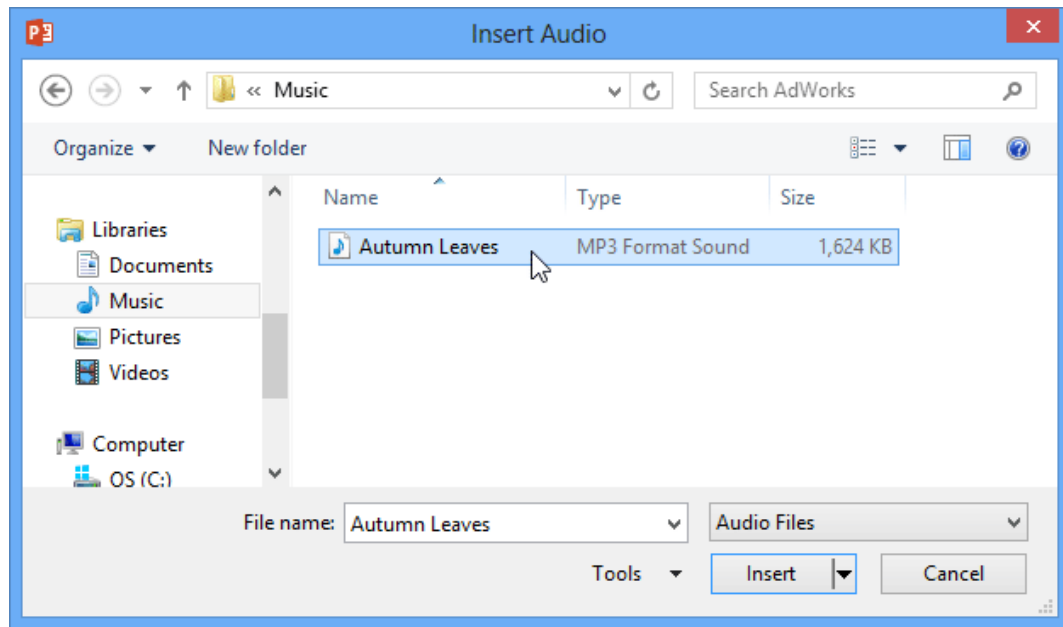
### To insert audio from a file:

1. From the **Insert** tab, click the **Audio** drop-down arrow, then select **Audio on My PC**.



2. Locate and select the desired audio file, then click **Insert**.





3. The audio file will be added to the slide.

## Reviewing Presentations

### **Introduction**

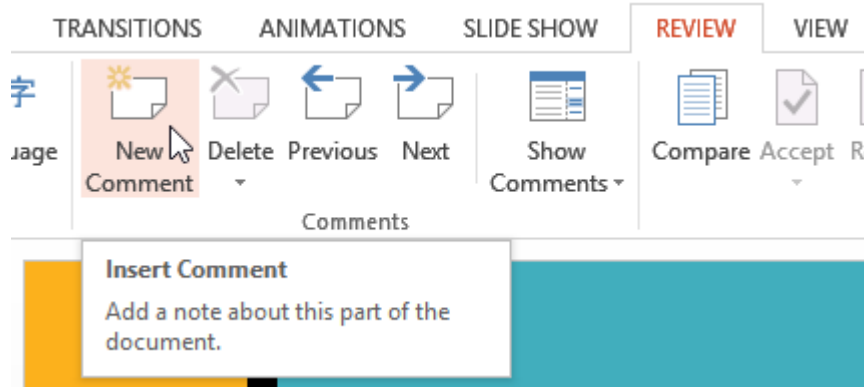
Before presenting your PowerPoint, you might decide to ask someone else to look over it. The two of you might even collaborate on a presentation. If you were revising a hard copy of a report, you might add **comments** in the margins or **compare** your rough and final drafts side by side. You can also do these things in PowerPoint using the Comments and Compare features

### **Commenting on presentations**

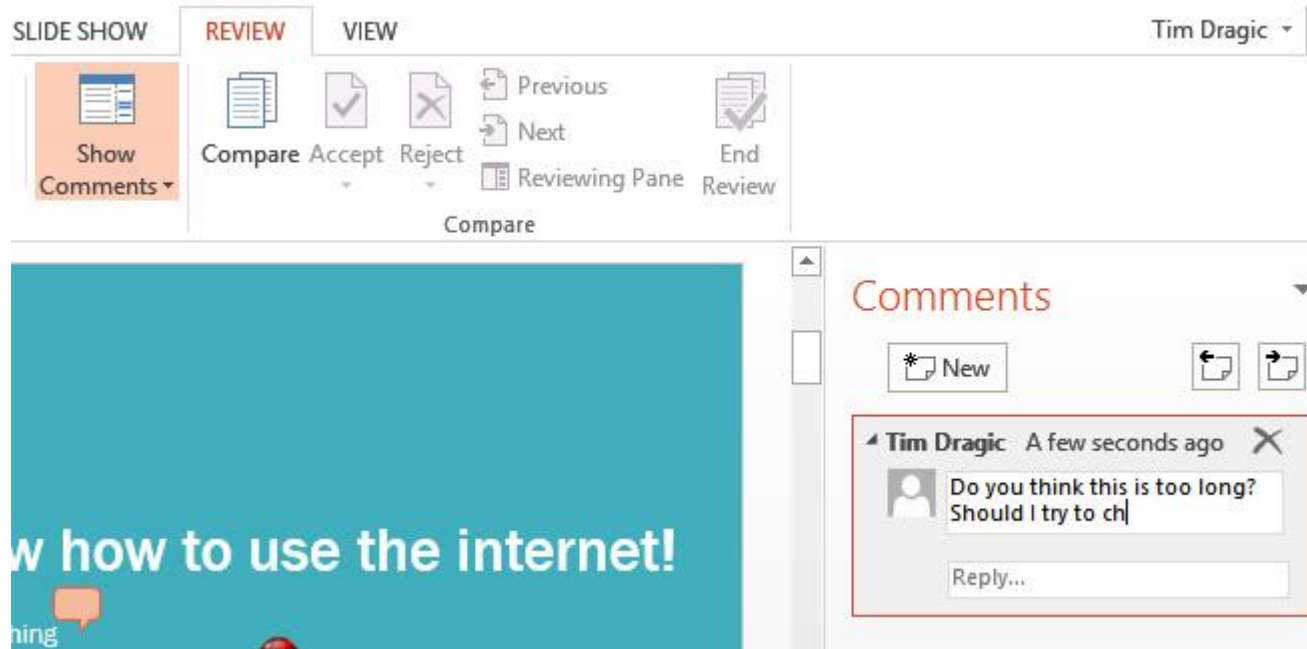
When you are revising or collaborating on a presentation, you might want to make notes or suggestions without actually changing anything on the slide. Using **comments** allows you to take note of anything on a slide without altering the slide itself. Comments can be added and read by the original author or any other reviewers.

**To add a comment:**

1. **Select the text** or **click on the area** of the slide where you want the comment to appear.
2. Select the **Review** tab, then locate the **Comments** group.
3. Click the **New Comment** command.



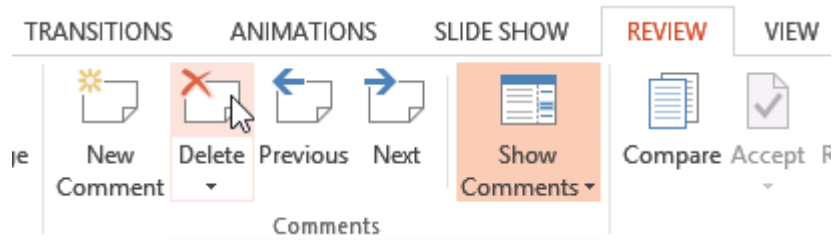
4. The **Comments** pane will appear on the right side of the window. Type your comment.



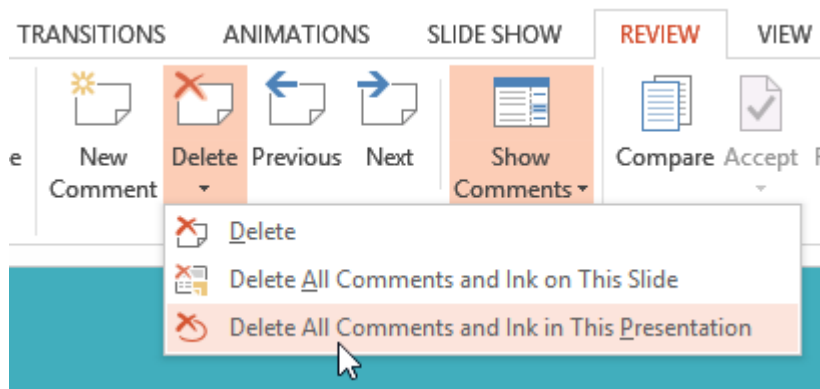
5. Press **Enter** or click anywhere on the slide to return to your presentation.

**To delete a comment:**

1. Select the comment you want to delete.
2. From the **Review** tab, click the **Delete** command.



To delete multiple comments, click the **Delete** drop-down arrow and select **Delete All Comments and Ink on This Slide** or **Delete All Comments and Ink in This Presentation**.



## Hyperlinks

### Introduction

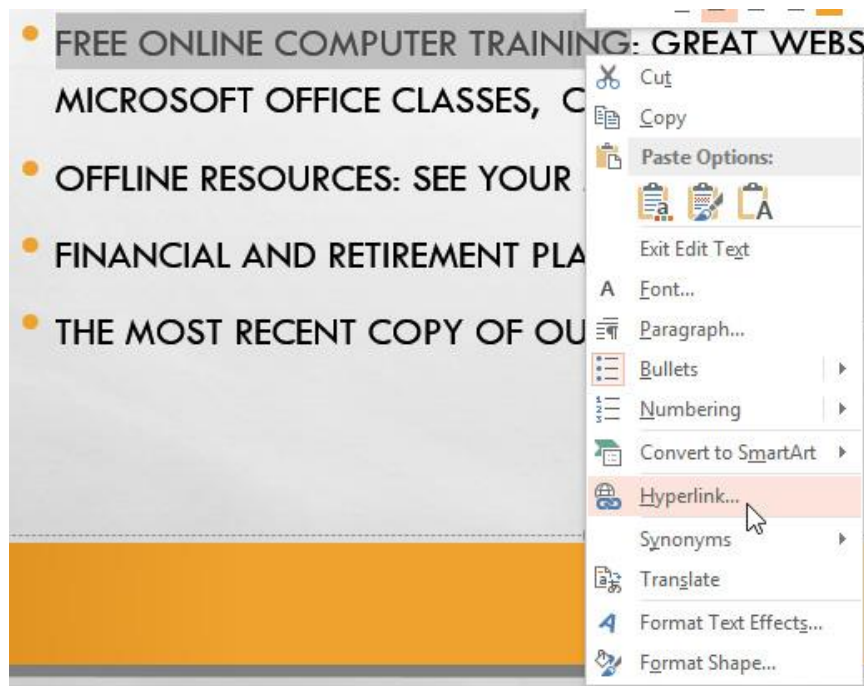
Whenever you use the Internet, you use **hyperlinks** to navigate from one webpage to another. If you want to include a **web address** or **email address** in your PowerPoint presentation, you can choose to format it as a hyperlink so a person can easily click it. It's also possible to link to files and other slides within a presentation. It's easy to do all of this using two tools: hyperlinks and action buttons

### About hyperlinks

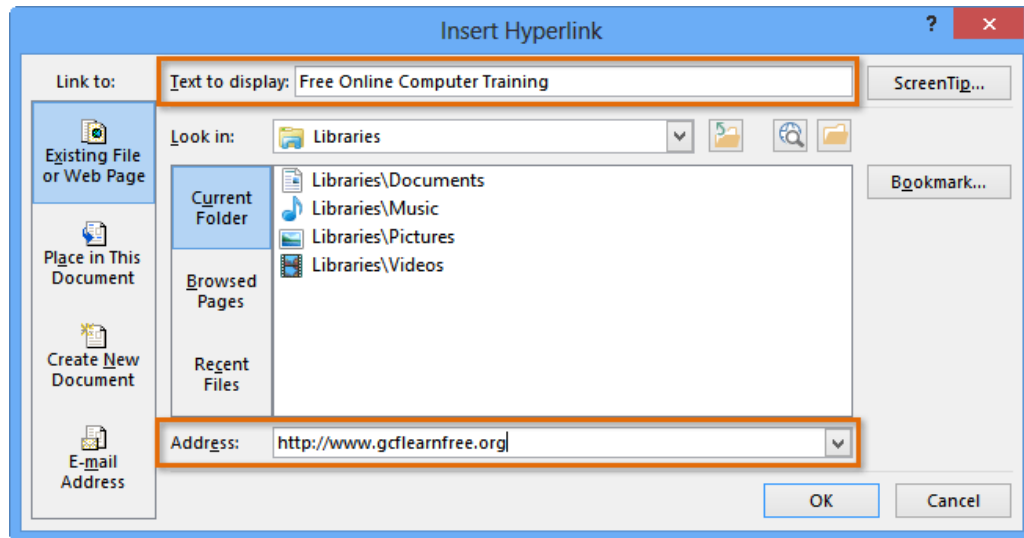
Hyperlinks have **two basic parts**: the **address** of the webpage, email address, or other location they are linking to, and the **display text** (which can also be a picture or shape). For example, the address could be <https://www.youtube.com>, and **YouTube** could be the display text. In some cases, the display text might be the same as the address. When you're creating a hyperlink in PowerPoint, you'll be able to choose both the address and the display text or image.

### To insert a hyperlink:

1. Select the image or text you want to make a hyperlink.
2. Right-click the selected text or image, then click **Hyperlink**.



3. The **Insert Hyperlink** dialog box will open. You can also get to this dialog box from the **Insert** tab by clicking **Hyperlink**.



4. If you selected text, the words will appear in the **Text to display** field at the top. You can change this text if you want.
5. Type the address you want to link to in the **Address** field.
6. Click **OK**. The text or image you selected will now be a hyperlink to the web address.

## Lesson 8:

- **Animating Text and Objects**
  - **Table**
  - **Chart**
  - **SmartArt Graphics**
- 

## **Animations**

To animate text or objects on a slide:

1. Select the text or object you want to animate.
2. On the **Animations** tab, select **Add Animation**, and select the animation you want from the drop-down.

To animate one line of text at a time, select one line of text, select an animation, select the next line of text, select an animation, ...

3. For **Start**, select **When Clicked**, **With Previous**, or **After Previous**.

## **Animating Text and Objects**

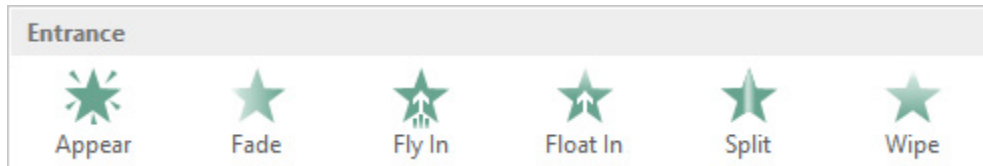
### **Introduction**

In PowerPoint, you can **animate** text and objects such as clip art, shapes, and pictures. Animation—or movement—on the slide can be used to **draw the audience's attention** to specific content or to make the slide easier to read.

### **The four types of animations**

There are several animation effects you can choose from, and they are organized into four types:

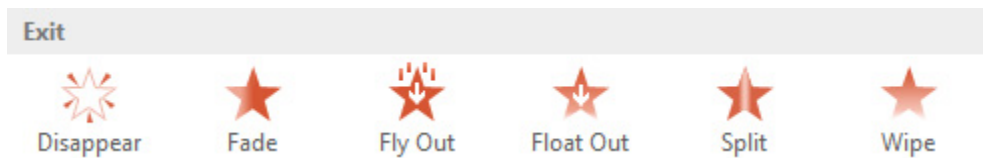
- **Entrance:** These control how the object enters the slide. For example, with the **Bounce** animation the object will "fall" onto the slide and then bounce several times.



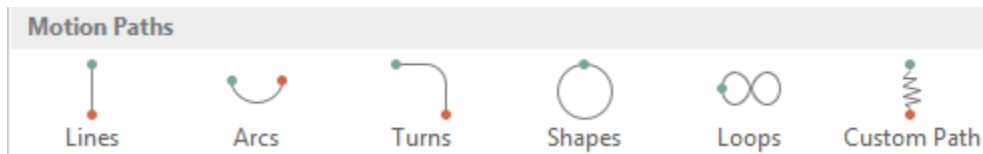
- **Emphasis:** These animations occur while the object is on the slide, often triggered by a **mouse click**. For example, you can set an object to **spin** when you click the mouse.



- **Exit:** These control how the object exits the slide. For example, with the **Fade** animation the object will simply fade away.

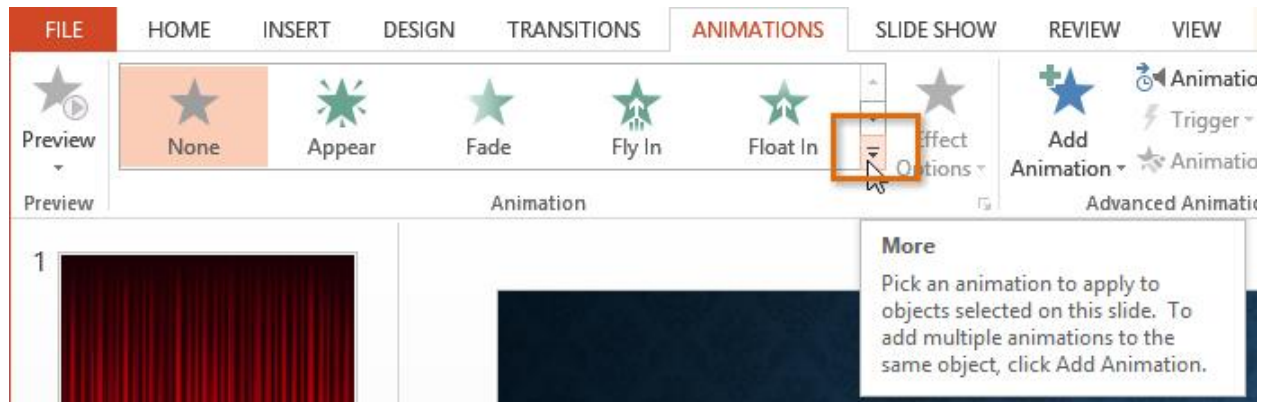


- **Motion Paths:** These are similar to **Emphasis** effects, except the object moves within the slide along a predetermined path, like a **circle**.

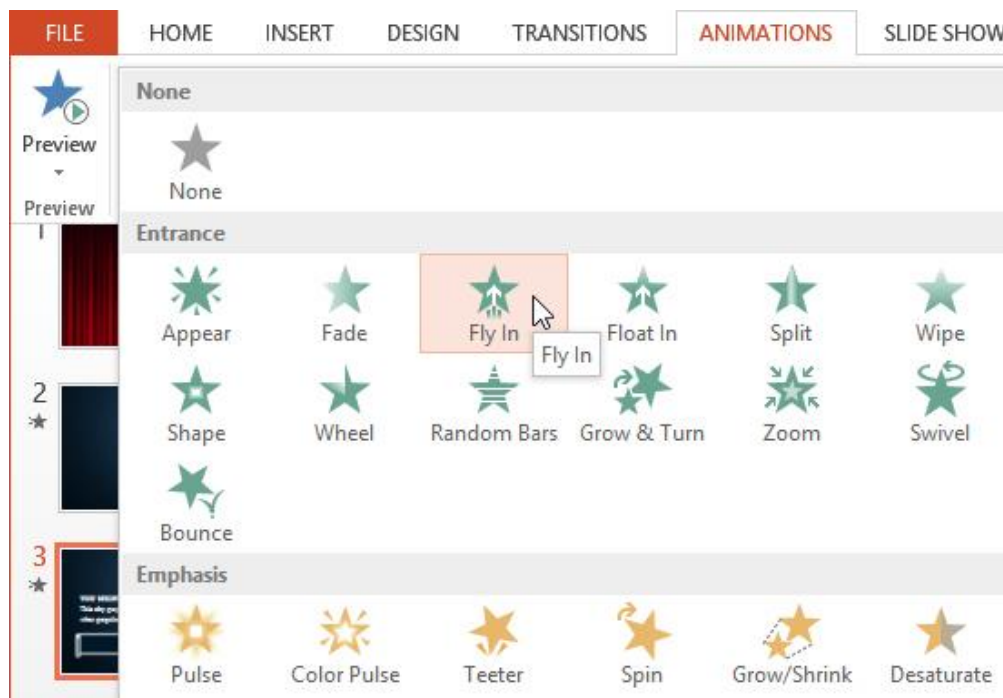


**To apply an animation to an object:**

1. Select the object you want to animate.
2. On the **Animations** tab, click the More drop-down arrow in the **Animation** group.



3. A drop-down menu of animation effects will appear. Select the desired effect.

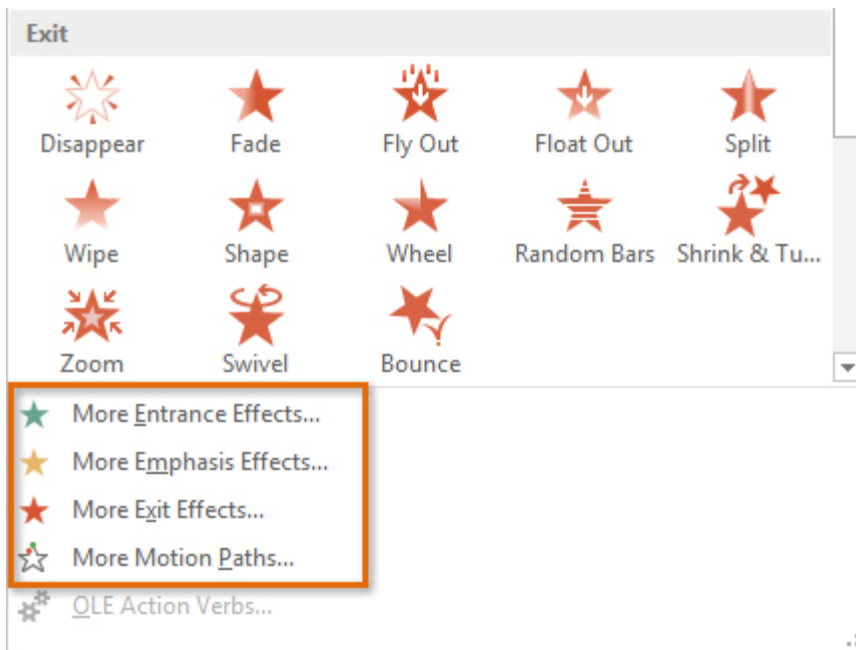


4. The effect will apply to the object. The object will have a small **number** next to it to show that it has an animation. In the Slide pane, a **star** symbol also will appear next to the slide.



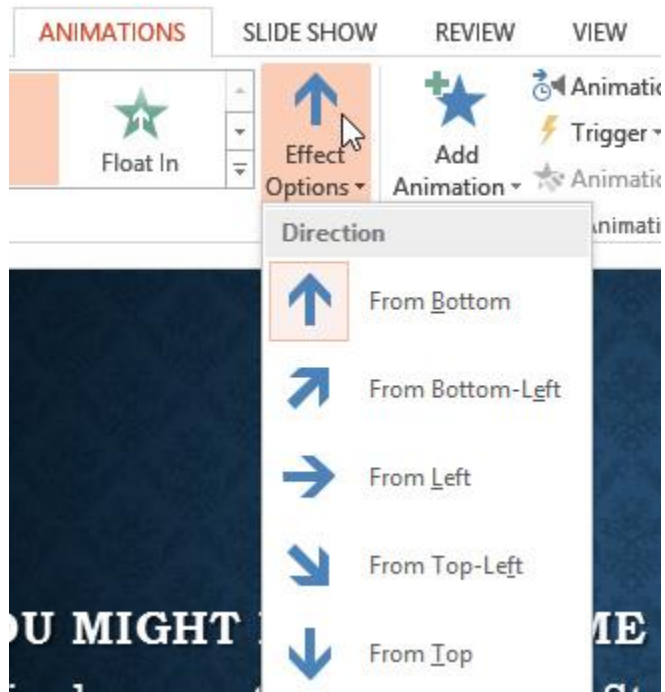


At the bottom of the menu, you can access even more effects.



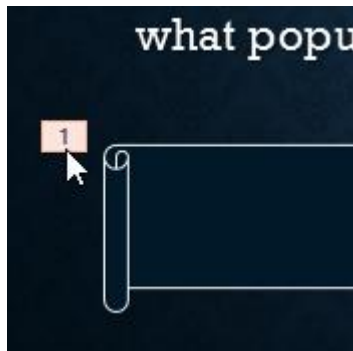
### Effect options

Some effects will have **options** you can change. For example, with the **Fly In** effect you can control **which direction** the object comes from. These options can be accessed from the **Effect Options** command in the Animation group.



### To remove an animation

1. Select the small **number** located next to the animated object.



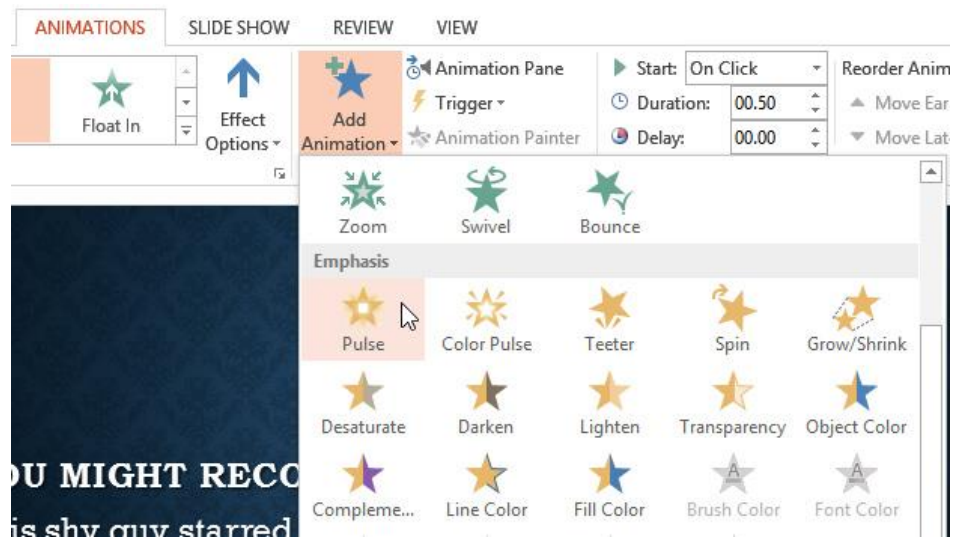
2. Press the **Delete** key. The animation will be deleted.

### Working with animations

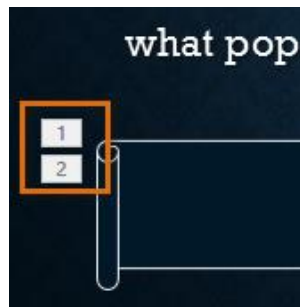
To add multiple animations to an object:

If you select a new animation from the the menu in the Animation group, it will **replace the object's current animation**. However, you'll sometimes want to place **more than one animation** on an object, like an **Entrance** and an **Exit** effect. To do this, you'll need to use the **Add Animation** command, which will allow you to keep your current animations while adding new ones.

1. Select an object.
2. Click the **Animations** tab.
3. In the **Advanced Animation** group, click the **Add Animation** command to view the available animations.
4. Select the desired animation effect.



5. If the object has more than one effect, it will have a different **number** for each effect. The numbers indicate the **order** in which the effects will occur.



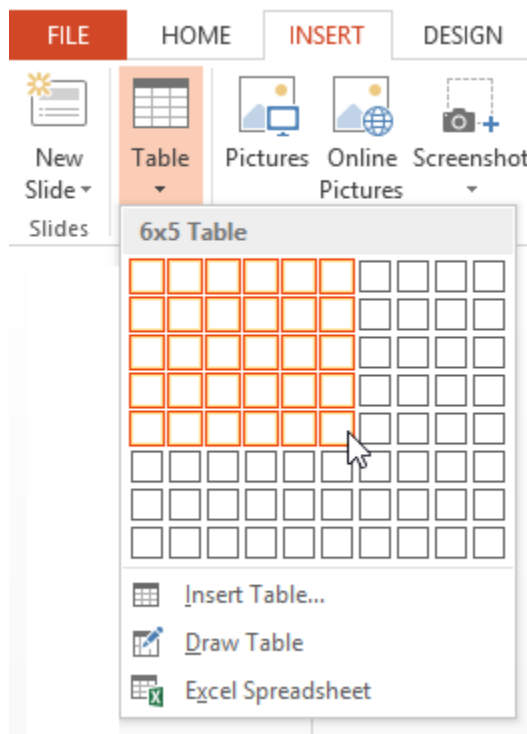
## Tables

### Introduction

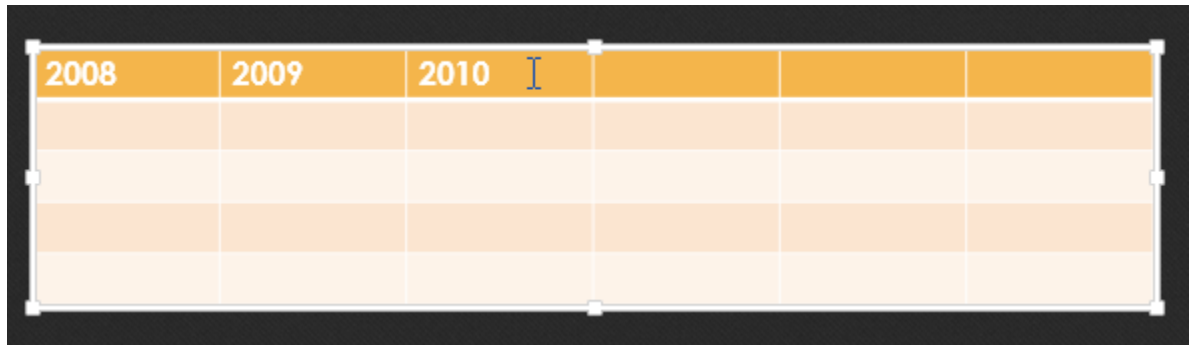
**Tables** are another tool you can use to display information in PowerPoint. A table is a grid of cells arranged in **rows** and **columns**. Tables are useful for various tasks, such as presenting text information and numerical data. You can even **customize** tables to fit your presentation.

### To insert a table:

1. From the **Insert** tab, click the **Table** command.
2. A drop-down menu containing a grid of squares will appear. Hover the mouse over the grid to select the number of **columns** and **rows** in the table.

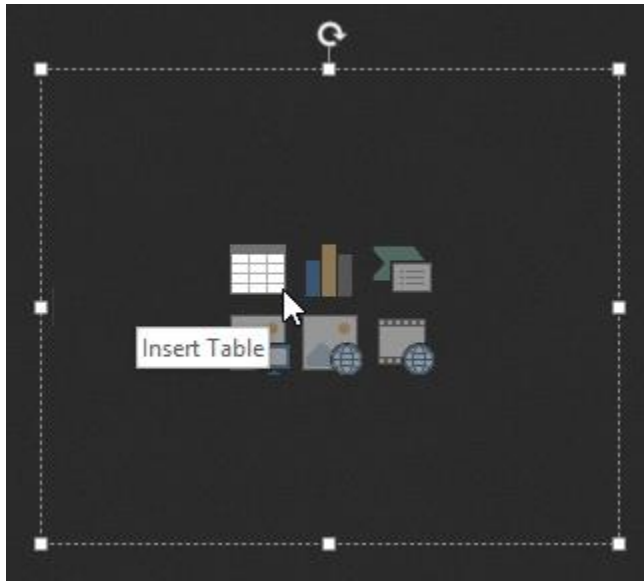


3. Click the slide where you want to place the table. The table will appear.
4. Click anywhere in the table, and begin typing to add text.



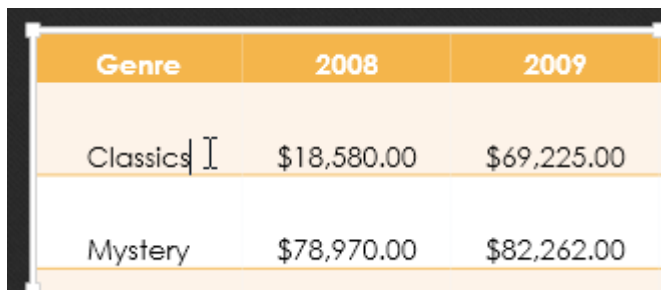
2008	2009	2010			

You can also insert a table by clicking the **Insert Table** command in a **placeholder**.



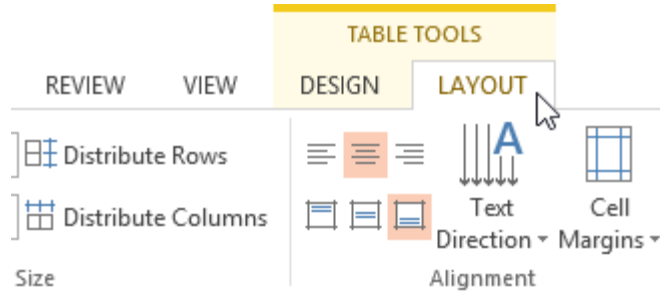
**To add a row or column:**

1. Click a cell **adjacent to** the location where you want to add a row or column.

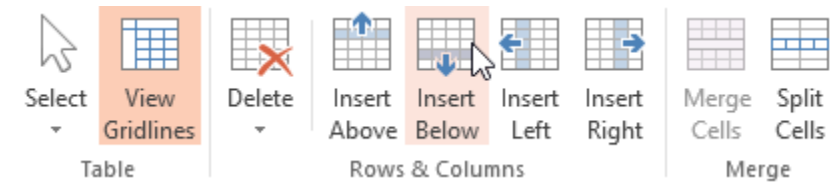


Genre	2008	2009
Classics	\$18,580.00	\$69,225.00
Mystery	\$78,970.00	\$82,262.00

2. Click the **Layout** tab on the right side of the Ribbon.



3. Locate the **Rows & Columns** group. If you want to insert a new **row**, select either **Insert Above** or **Insert Below**. If you want to insert a new **column**, select either **Insert Left** or **Insert Right**.

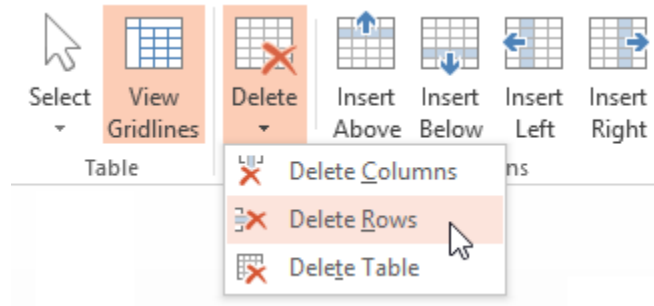


4. The new row or column will appear.

Genre	2008	2009	2010	2011	2012
Classics	\$18,580.00	\$69,225.00	\$16,326.00	\$10,017.00	\$26,134.00
Mystery	\$78,970.00	\$82,262.00	\$48,640.00	\$49,985.00	\$73,428.00
Romance	\$94,236.00	\$131,390.00	\$79,022.00	\$71,009.00	\$81,474.00
Sci-Fi & Fantasy	\$16,730.00	\$19,730.00	\$12,109.00	\$11,355.00	\$17,686.00
Young Adult	\$35,358.00	\$42,685.00	\$20,893.00	\$16,065.00	\$21,388.00

**To delete a row or column:**

1. Select the desired row or column by clicking any cell in that row or column, then select the **Layout** tab.
2. In the **Rows & Columns** group, click the **Delete** command, then select **Delete Rows** or **Delete Columns** from the menu that appears.

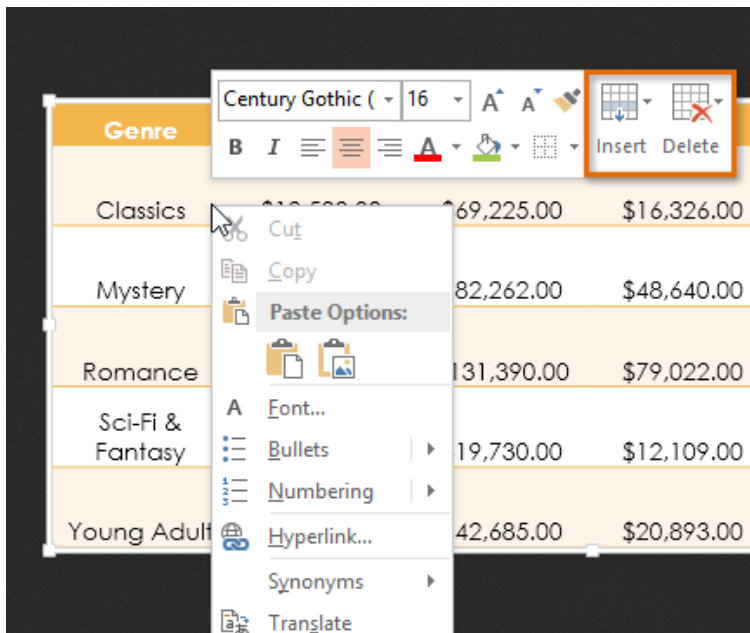


3. The selected row or column will be deleted.

**To delete a table:**

- Select the table you want to delete, then press the **Backspace** or **Delete** key on your keyboard.

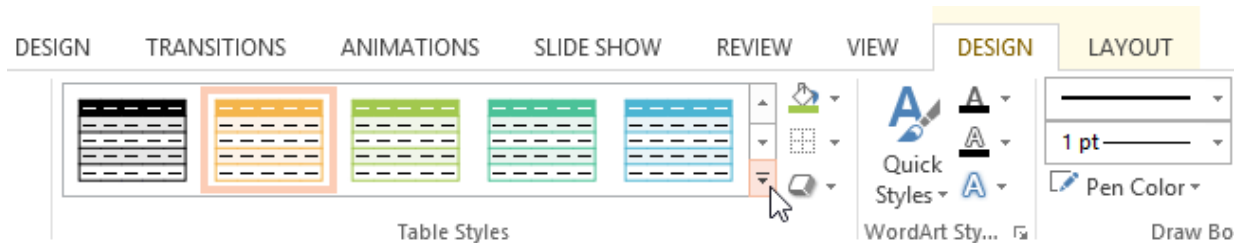
You can also access the **Insert** and **Delete** commands by right-clicking a table.



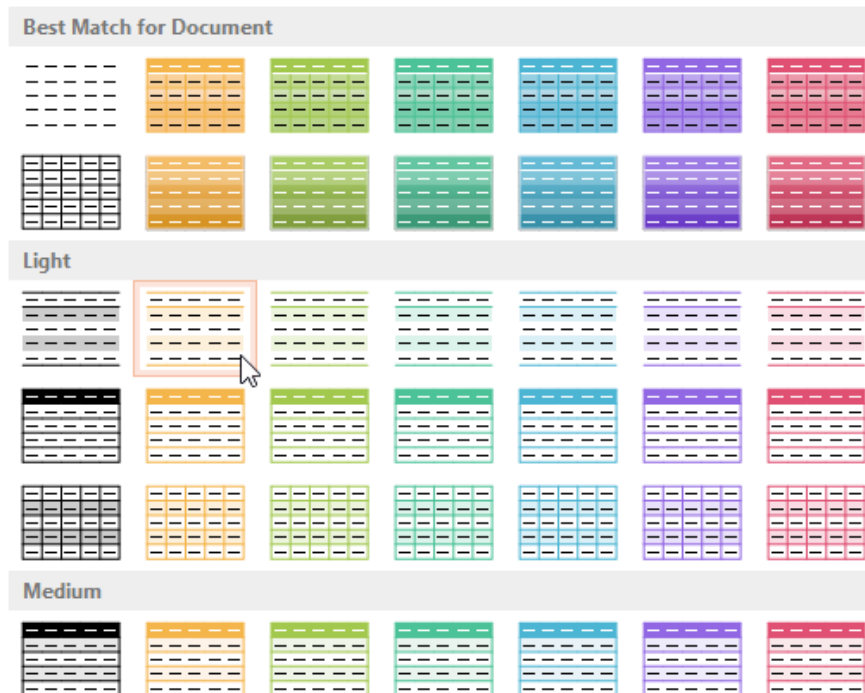
## Customizing tables

### To apply a table style:

1. Select **any cell** in your table, then click the **Design** tab on the right side of the Ribbon.
2. Locate the **Table Styles** group, then click the **More** drop-down arrow to see available table styles.



3. Select the desired style.





## Charts

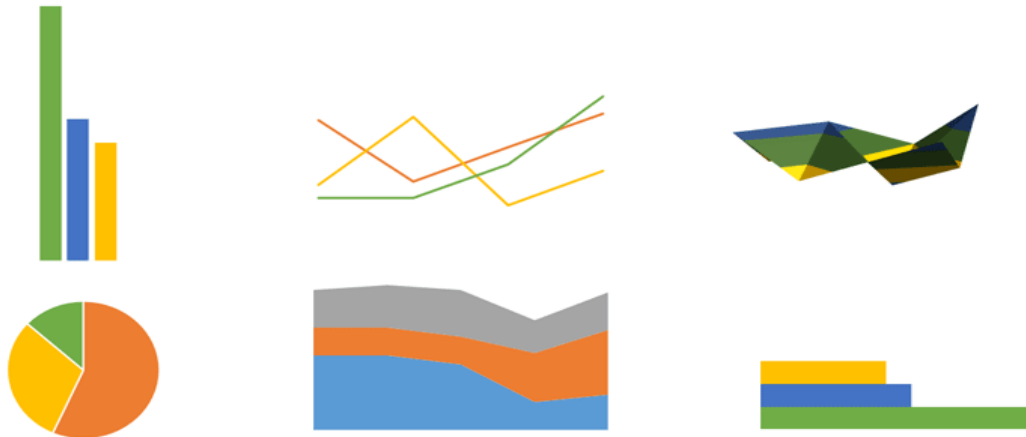
### Introduction

A **chart** is a tool you can use to **communicate data graphically**. Including a chart in a presentation allows your audience to see the **meaning behind the numbers**, which makes it easy to visualize **comparisons** and **trends**.

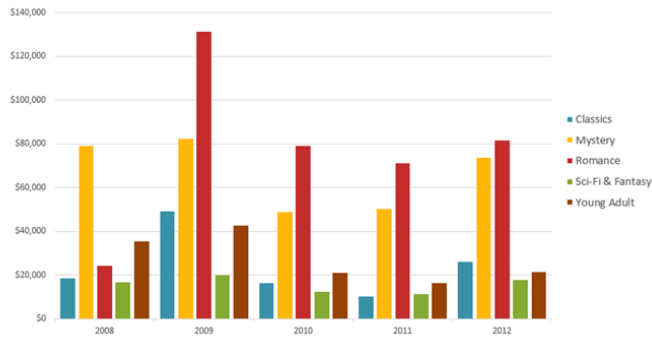
### Types of charts

PowerPoint has many different types of charts, allowing you to choose the one that best fits your data. In order to use charts effectively, you'll need to understand how different charts are used.

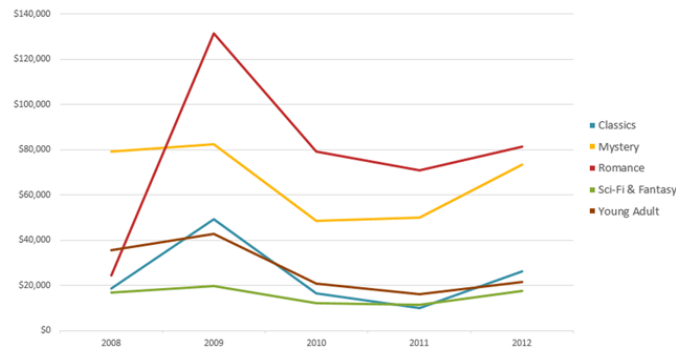
## Types of Charts



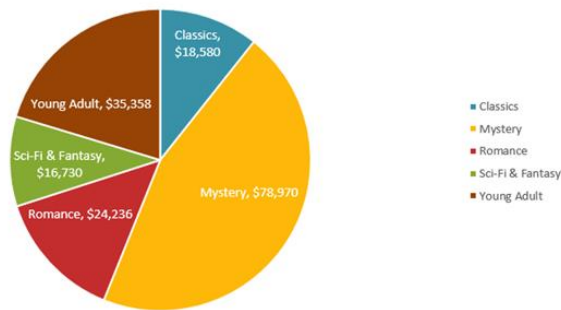
## Column



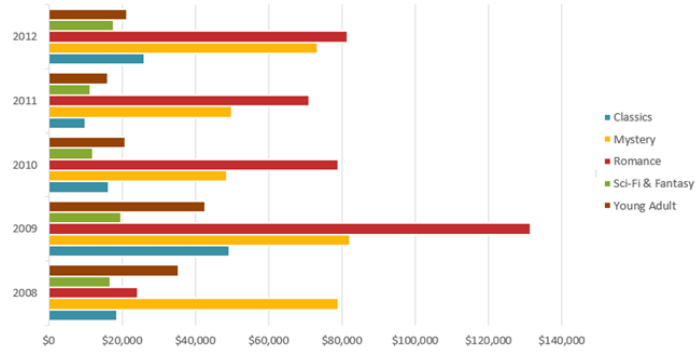
## Line



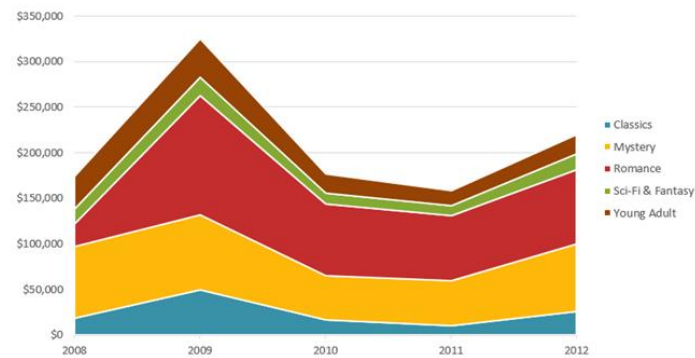
## Pie



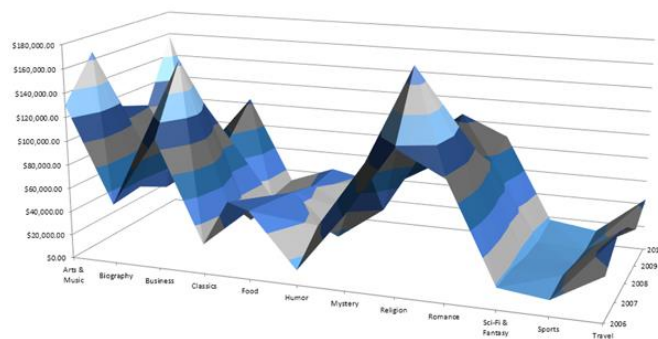
## Bar



## Area



## Surface

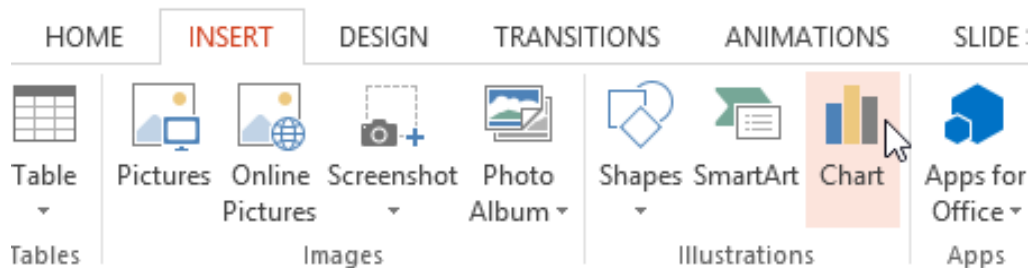


## Inserting charts

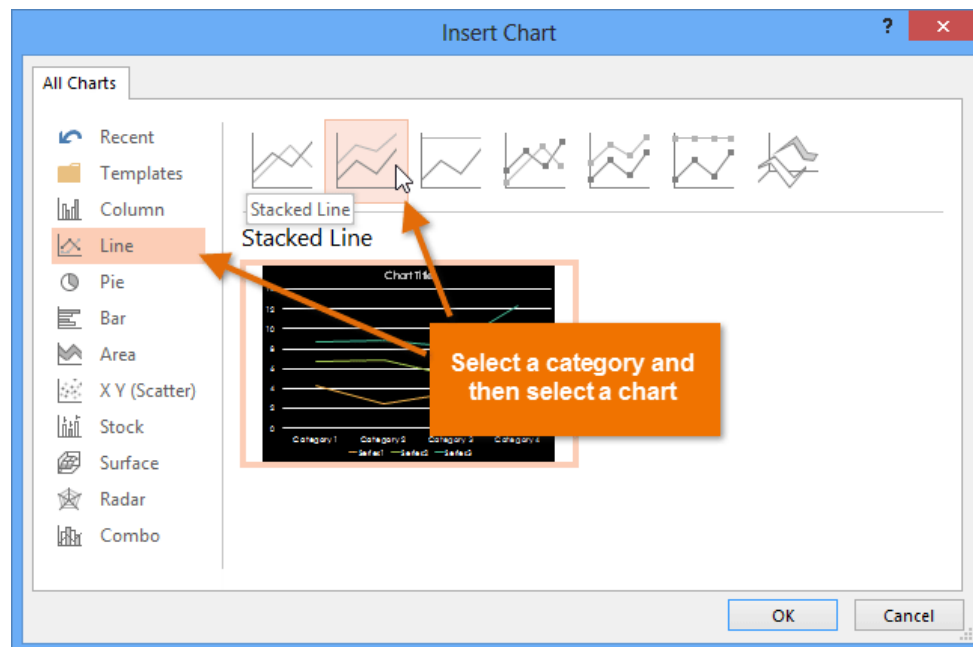
PowerPoint uses a **spreadsheet** as a placeholder for entering chart data, much like **Excel**.

### To insert a chart:

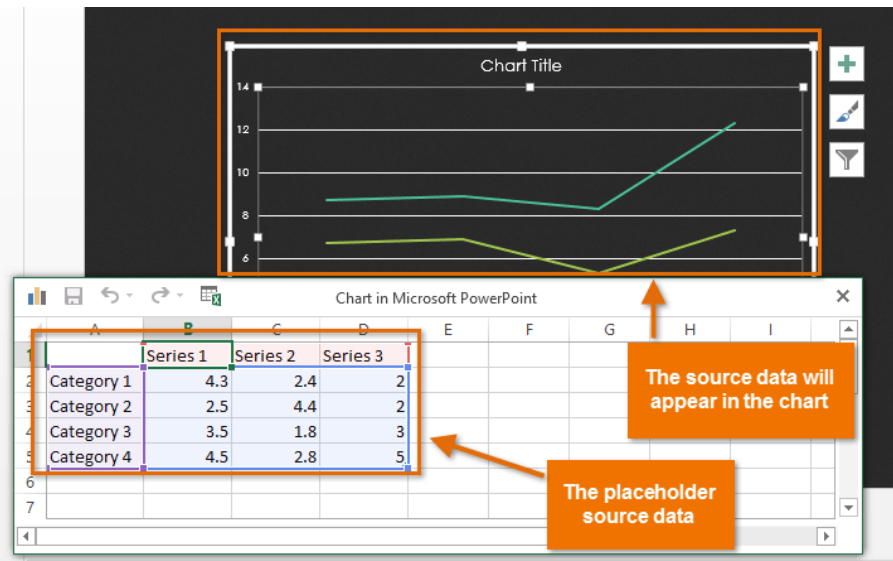
1. Select the **Insert** tab, then click the **Chart** command in the **Illustrations** group.



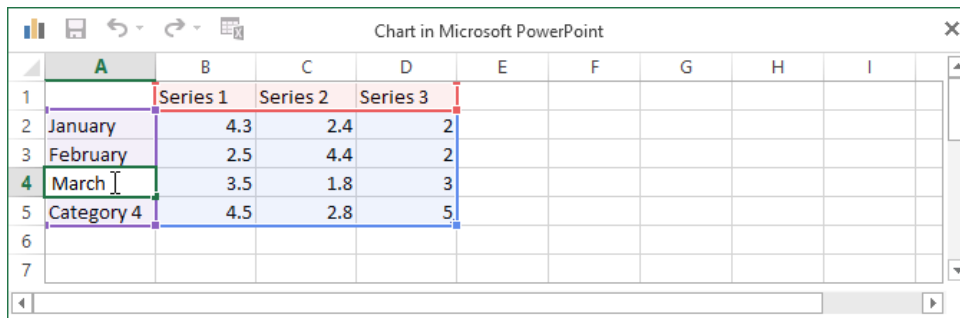
2. A dialog box will appear. Select a **category** from the left pane, and review the **charts** that appear in the right pane.
3. Select the desired **chart**, then click **OK**.



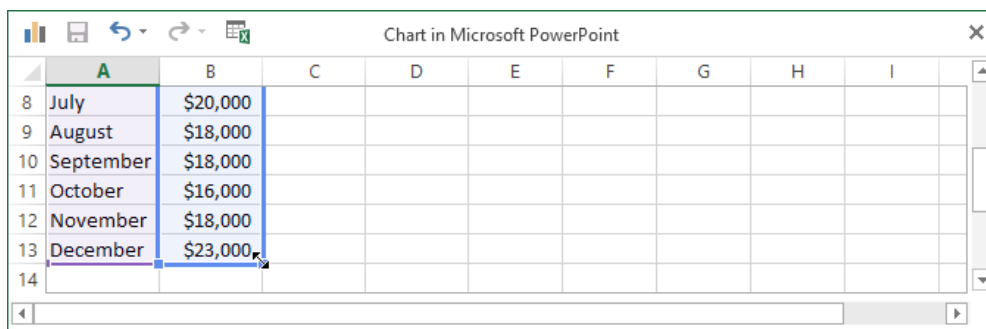
4. A chart and a spreadsheet will appear. The data that appears in the spreadsheet is **placeholder source data** you will replace with your own information. The source data is used to create the chart.



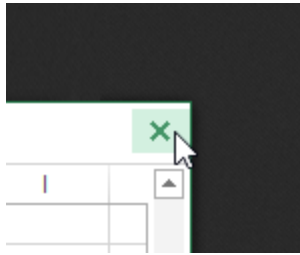
5. Enter **data** into the worksheet.



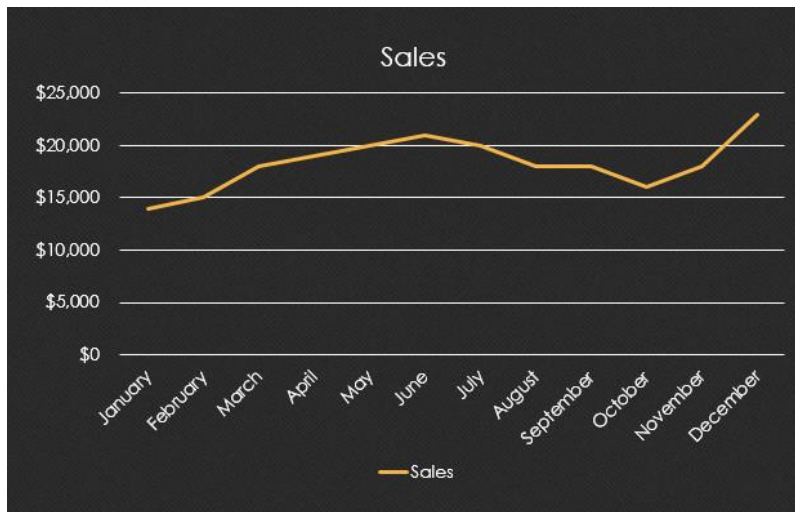
6. If necessary, click and drag the **lower-right corner** of the **blue line** to increase or decrease the **data range** for rows and columns. Only the data enclosed by the blue lines will appear in the chart.



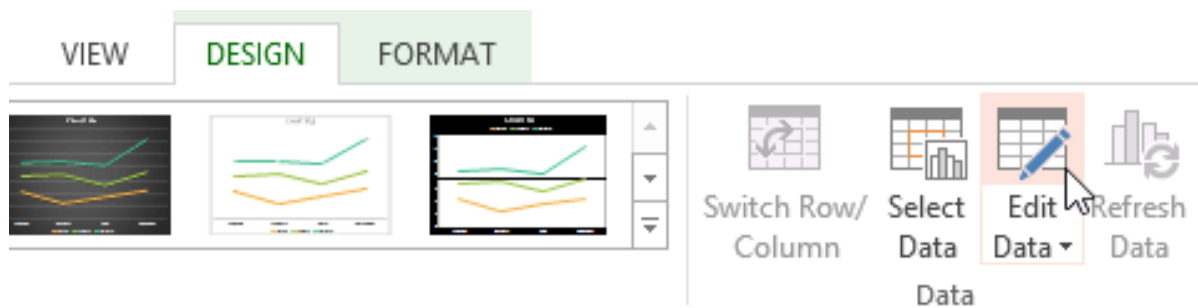
7. When you're done, click the **X** to close the spreadsheet.



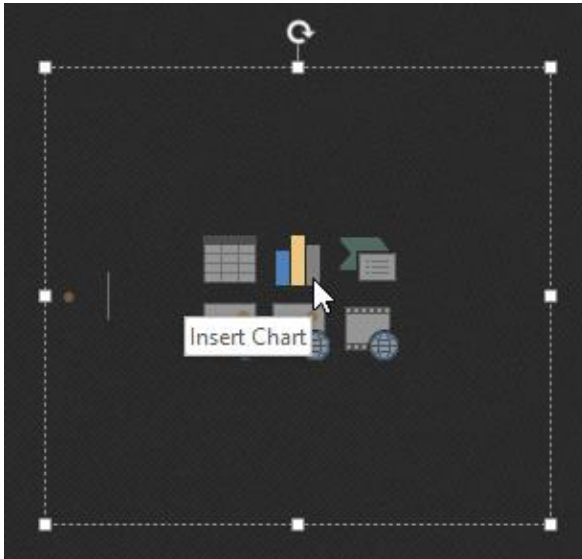
8. The chart will be completed.



You can edit the chart data at any time by selecting your chart and clicking the **Edit Data** command on the **Design** tab.



You can also click the **Insert Chart** command in a placeholder to insert a new chart.



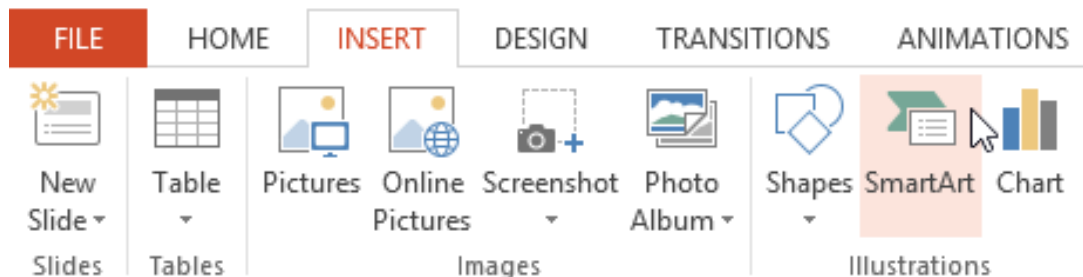
## SmartArt Graphics

### Introduction

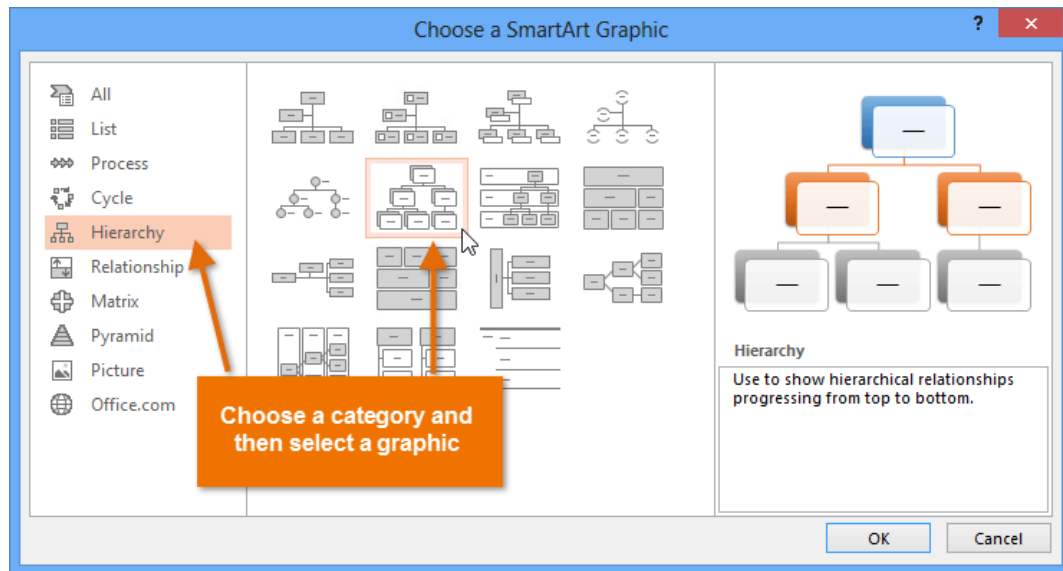
SmartArt allows you to communicate information with **graphics** instead of just using text. There are a variety of styles to choose from, which you can use to illustrate many different types of ideas

### To insert a SmartArt graphic:

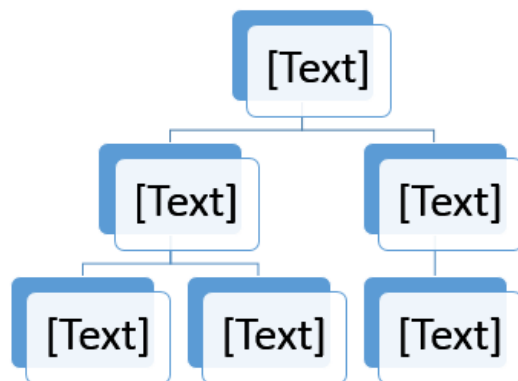
1. Select the slide where you want the SmartArt graphic to appear.
2. From the **Insert** tab, select the **SmartArt** command in the **Illustrations** group.



3. A dialog box will appear. Select a **category** on the left, choose the desired SmartArt graphic, and click **OK**.

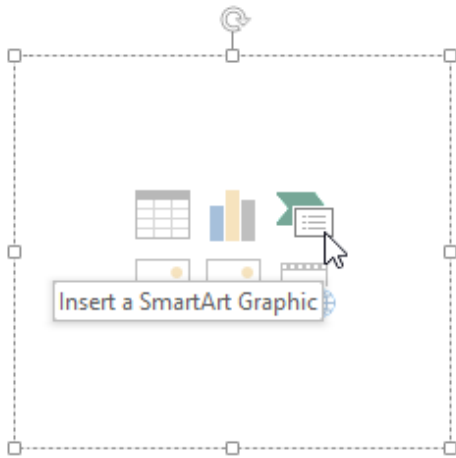


4. The SmartArt graphic will appear on the current slide.



You can also click the **Insert a SmartArt Graphic** command in a **placeholder** to add SmartArt.





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