# CCA-101: Fundamentals of IT & Programming

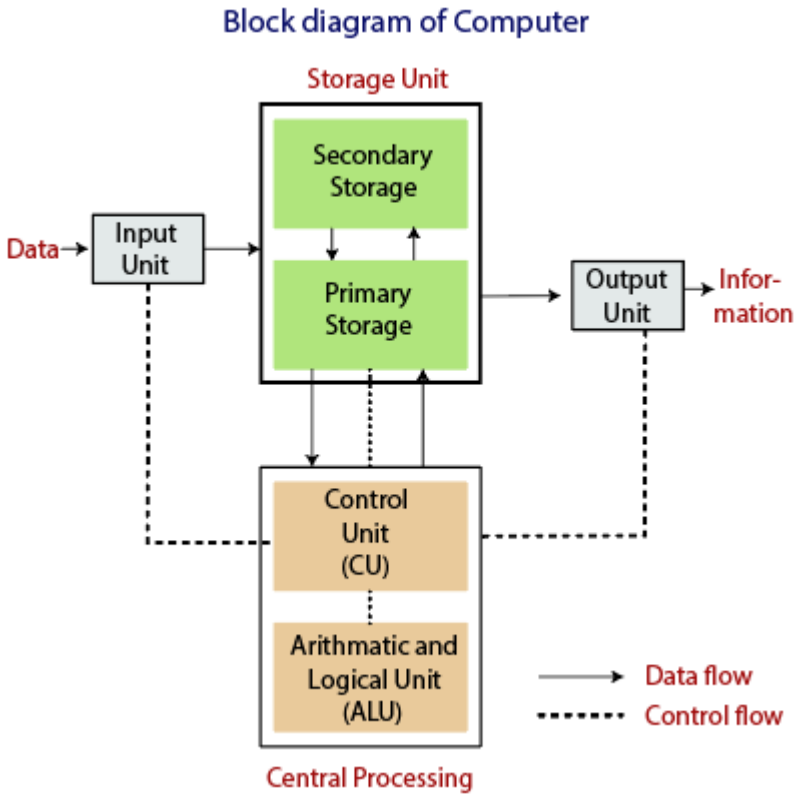
## Assignment -1

Q1: What are the four fundamental parts of computer? Explain it with the help of diagram.

ANS.

**Computer Block Diagram**

Mainly computer system consists of three parts, that are central processing unit (CPU), Input Devices, and Output Devices. The Central Processing Unit (CPU) is divided into two parts again: arithmetic logic unit (ALU) and the control unit (CU). The set of instruction is in the form of raw data.




The data is entered through input devices such as the keyboard, mouse, etc. This set of instruction is processed by the CPU after getting the input by the user, and then the computer system produces the output. The computer can show the output with the help of output devices to the user, such as monitor, printer, etc.

- CPU (Central Processing Unit)
- Storage Unit
- ALU(Arithmetic Logic Unit)
- Control Unit

## Central Processing Unit (CPU)

The computer system is nothing without the Central processing Unit so, it is also known as the brain or heat of computer. The CPU is an electronic hardware device which can perform different types of operations such as arithmetic and logical operation.
The CPU contains two parts: the arithmetic logic unit and control unit. We have discussed briefly the arithmetic unit, logical unit, and control unit which are given below:

**Control Unit**

The control unit (CU) controls all the activities or operations which are performed inside the computer system. It receives instructions or information directly from the main memory of the computer.
When the control unit receives an instruction set or information, it converts the instruction set to control signals then; these signals are sent to the central processor for further processing. The control unit understands which operation to execute, accurately, and in which order

## Arithmetic and Logical Unit

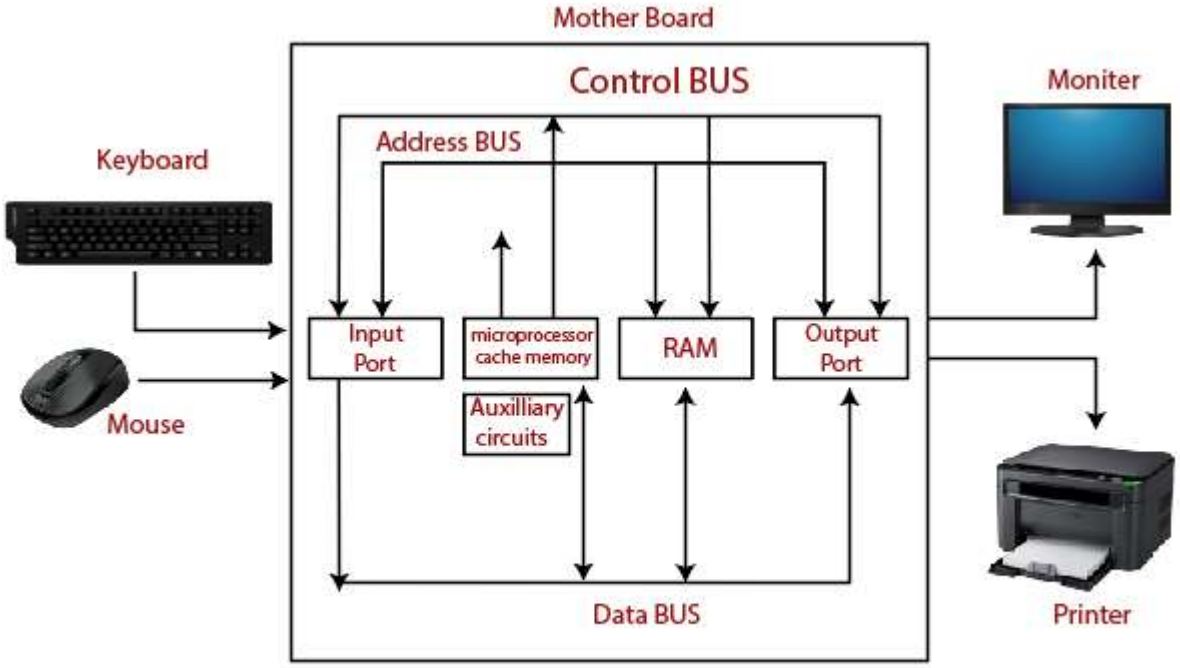
The arithmetic and logical unit is the combinational digital electronic circuit that can perform arithmetic operations on integer binary numbers.It presents the arithmetic and logical operation. The outputs of ALU will change asynchronously in response to the input. The basic arithmetic and bitwise logic functions are supported by ALU.

**Storage Unit**

The information or set of guidelines are stored in the storage unit of the computer system. The storage unit provides the space to store the data or instruction of processed data. The information or data is saved or hold in computer memory or storage device. The data storage is the core function and fundamental of the computer components.

## Components of Computer System

The hardware and software exist on the computer**.** The information which is stored through the device is known as computer software. The hardware components of the computer system are related to electronic and mechanical parts, and the software component is related to data and computer programs. Many elements are connected to the main circuit board of the computer system called a “motherboard.”




Components of a Computer System

- Processor.
- Main Memory.
- Secondary Memory.
- Input Devices.
- Output Devices.
    - These are mainly five components of the computer system. The computer hardware, computer software, and liveware exist in the element of the computer system.
    - **Processor**
    - The processor is an electric circuitry within the computer system. The Central processing unit is the central processor or main processor of the computer system. The processor carries out the instructions of the computer program with the help of basic arithmetic and logic, input/output operations.
    - **Main Memory**
    - The Random Access Memory is the main memory of the computer system, which is known as RAM. The main memory can store the operating system software, application software, and other information. The Ram is one of the fastest memory, and it allows the data to be readable and writeable.
    - **Secondary memory**
    - We can store the data and programs on a long-term basis in the secondary memory. The hard disks and the optical disks are the common secondary devices. It is slow and cheap memory as compare to primary memory. This memory is not connected to the processor directly.
    - It has a large capacity to store the data. The hard disk has a capacity of 500 gigabytes. The data and programs on the hard disk are organized into files, and

the file is the collection of data on the disk. The secondary storage is direct access by the CPU; that's why it is different from the primary storage.

The hard disk is about 100 times the capacity of the main memory. The main difference between primary and secondary storage is speed and capacity. There are several large blocks of data which are copied from the hard disk into the main memory.

**Input Devices**

The user provides the set of instruction or information to the computer system with the help of input devices such as the keyboard, mouse, scanner, etc. The data representation to the computer system is in the form of binary language after that the processor processes the converted data. The input unit implements the data which is instructed by the user to the system.

We can enter the data from the outside world into the primary storage as the input through input devices. The input devices are the medium of communication between the outside world and the computer system. There are some important features of input devices which are given below:

1. The input devices receive or accept the data or instruction from the user, who exist in the outside world.
2. These devices convert the data or instruction into the machine-readable form for further processing.
3. The input device performs like the connection between the outside world and our computer system.
4. The keyboard and mouse are common examples of input devices.
5. When the whole procedure is finished, we get the desired output from the output devices such as monitor, printer, etc.

**Output Devices**

The output devices produce or generate the desired result according to our input, such as a printer, monitor, etc. These devices convert the data into a human-readable form from binary code.

The computer system is linked or connected to the outside world with the help of output devices. The primary examples of output devices are a printer, projector, etc. These devices have various features which are given below:

1. These devices receive or accept the data in the binary form.
2. The output devices convert the binary code into the human-readable form.

These devices produce the converted result and show to the user.

Q2: Discuss about the classification of computers based on size and capacity.

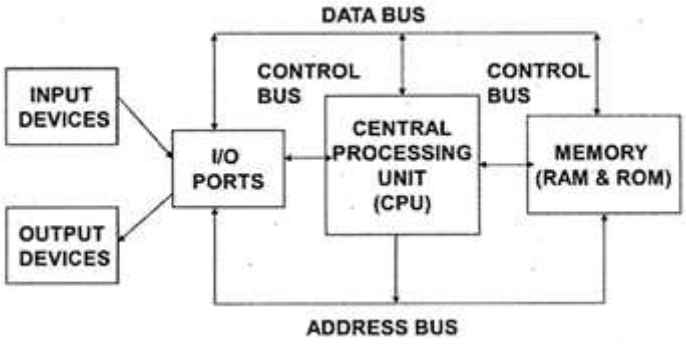
ANS.

**Introduction**

Classification of computers are based on their architecture, speed of executing commands or instructions, peripheral used and also their uses. Microcomputers are usually used in home and offices and only a single user can perform the task using a microcomputer. Its storage and data handling capacity are limited as per the requirement for home and office work. The another type of computer is called minicomputer which has usually larger storage and can handle multiuser at a time. This chapter includes the classification of computers.

**Computer's Classification**

Computers are classified on different parameters, such as, storage capacity, processing speed and component (CPU) used in computers. Depending upon the components used and features of different computers, they are classified into four groups, Microcomputers, Minicomputers, Mainframe computers and Supercomputers.




**Micro Computers**

Micro Computer is a computer whose CPU (Central Processing Unit) is a microprocessor. All the components of a microprocessor are on a single integrated circuit chip. Micro computer can be categorized as the desktop, programmable and workstation. The microprocessor based computers are called third generation computers. They are the backbone of the modern computer era. The first and second generation computers are based on vacuum tubes and bipolar junction transistors.

***Desktop Computers***

Desktop computer is a type of microcomputer. A desktop computer has a keyboard for input data, a LCD or CRT monitor to display information and Central processing unit tower contains storage, memory, different types of drives, such as, CD drive, hard drive, etc. A desktop computer is mainly used at home and office applications.

***Programmable Computers (PDA)***

Personal digital assistance is a type of hand held programmable digital computer. It is used as notepads, address books and can connect to world web wave to share information. A PDA is equipped with mobile phone hence, called smallest computer.

### *Workstation*

A workstation computer has greater memory capability and more extensive mathematical abilities. It is connected with other workstation computers or personal computer to exchange data and mostly used for scientific applications. It also supports multitasking applications.

### *Mini Computers*

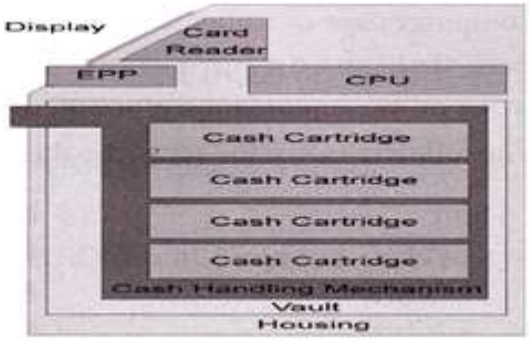
Minicomputers were introduced in early 1960s. They were faster than micro computers. Basically these computers were mainly multi-user systems, where many users work on the systems. Generally these types of computers had larger memories and greater storage capacity. They had large instruction set and address field. These kinds of computers have efficient storage for handling of text, in comparison to lower bit machines. Due to more efficient processor, speed and memory size, minicomputer was used in variety of applications and could support business applications along with the scientific applications. Minicomputer was a multi-user system which means more than one user could use this system simultaneously.

**Comparison of Micro and Mini computers**

| Features | Microcomputer | Minicomputer |
|---|---|---|
| Primary memory | Shall memory | Larger memory |
| Word length | Small word length | Larger word length |
| Cost low | Low | High |
| Processor | Low | High |

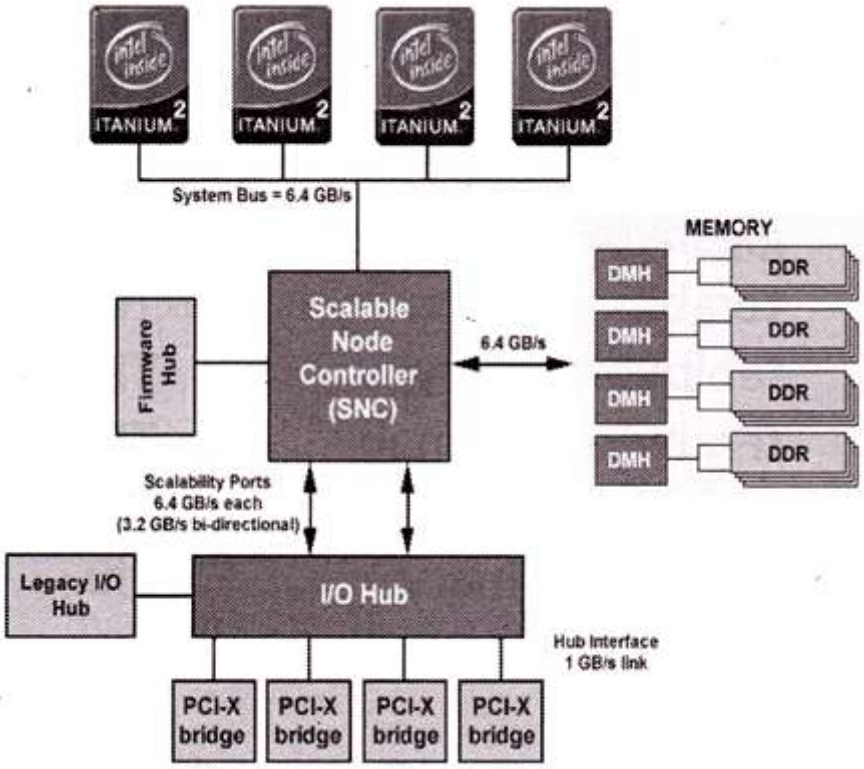
### Mainframe Computers

Mainframe computers are large and expensive machines. The word length of mainframe computers may be 48, 60 or 64 bits, memory capacity being in some megabytes and storage capacity in some terabytes. Generally they handle huge volumes of information and data. In terms of speed, they are having significant processing capacity. They are used in research organizations, large industries, airlines reservation where a large database has to be maintained.



**Super Computers**

Super Computers are the fastest computer in current era. The processing capabilities of super computer lies in the range of GIPS2, word length 64-128 or may be in 256 or so. The memory capacity of super computer is in some gigabytes or in terabytes. The storage capacity of this type of computer is in exabytes.




The parallel processing of a super computer makes it very fast because it contains number of CPU that operates parallel. They are used at some research centers and government agencies involving sophisticated scientific and engineering tasks.

***Super computers are used for the followings:***

- ❖ Weapons research and development
- ❖ Nuclear and plasma physics
- ❖ Rocket research and development
- ❖ Atomic research
- ❖ Aerodynamics

**Units For Measuring Word Length, Data, And Storage Capacity of a Computer**

Computers are classified on the basis of their data processing speed better known as clock speed and the word length. The word length that is processed by a CUP at a time is one of the important feature of that CPU.

The followings are the units for the measurement of data volume:

| | | |
|---|---|---|
| **bit** | **bit** | **0 or 1** |
| **Byte** | **B** | **8 bite** |
| **Kibibit** | **Kibit** | **1024 bits** |
| **kilobit** | **Kbit** | **1000 bits** |
| **kibibyte (binary)** | **KiB** | **1024 bytes** |
| **kilobyte (decimal)** | **kB** | **1000 bytes** |
| **megabit** | **Mbit** | **1000 kilobits** |
| **mebibyte (binary)** | **MiB** | **1024 kibibytes** |
| **megabyte (decimal)** | **MB** | **1000 kilobytes** |
| **gigabit** | **Gbit** | **1000 megabits** |
| **gibibyte (binary)** | **Gibbs** | **1024 mebibytes** |
| **gigabyte (decimal)** | **GB** | **1000 megabytes** |
| **terabit** | **Tbit** | **1000 gigabits** |
| **tebibyte (binary)** | **TIB** | **1024 gibibytes** |
| **terabyte (decimal)** | **TB** | **1000 gigabyte** |
| **Petabit** | **Pbit** | **1000 terabyte** |
| **pebibyte (binary)** | **PiB** | **1024 tebibytes** |
| **petabyte (decimal)** | **PB** | **1000 terabytes** |
| **exabit** | **Ebit** | **1000 petabits** |
| **exbibyte (binary)** | **EiB** | **1024 pebibytes** |
| **exabyte (decimal)** | **EB** | **1000 petabytes** |

Q3: What is the meaning of computer generation? How many Computer Generations are defined? What technologies were/are used?

ANS. Generation in computer terminology is a change in technology a computer is/was being used. Initially, the generation term was used to distinguish between varying hardware technologies. Nowadays, generation includes both hardware and software, which together make up an entire computer system.

There are five computer generations known till date. Each generation has been discussed in detail along with their time period and characteristics. In the following table, approximate dates against each generation has been mentioned, which are normally accepted.

Following are the main five generations of computers.

| S.No | Generation & Description |
|---|---|

| | |
|---|---|
| 1 | First Generation<br><br>The period of first generation: 1946-1959. Vacuum tube based. |
| 2 | Second Generation<br><br>The period of second generation: 1959-1965. Transistor based. |
| 3 | Third Generation<br><br>The period of third generation: 1965-1971. Integrated Circuit based. |
| 4 | Fourth Generation<br><br>The period of fourth generation: 1971-1980. VLSI microprocessor based. |
| 5 | Fifth Generation<br><br>The period of fifth generation: 1980-onwards. ULSI microprocessor based. |

**First Generation of the computer** invented between the years 1940 to 1956. During the Second World War different countries had started developing computer to work fast.

The First generation electronic computer Mark – 1 and other of this time were made possible by the invention of **Vacuum Tubes** which was the triangle glass device that could control and amplify electronic signals.

First generation computers were very large in size, they needed room to keep them.

Those vacuum tubes computers are effort as First Generation of the computer.


Vacuum Tube

Vacuum Tube

## Advantage of First Generation

The Some **Feature & Characteristics** of First Generation.

# Second Generation of Computer ( 1956 - 1963 )

The second **generation of the computer** invented in the year between 1956 to 1963 is said to the second-generation computer.

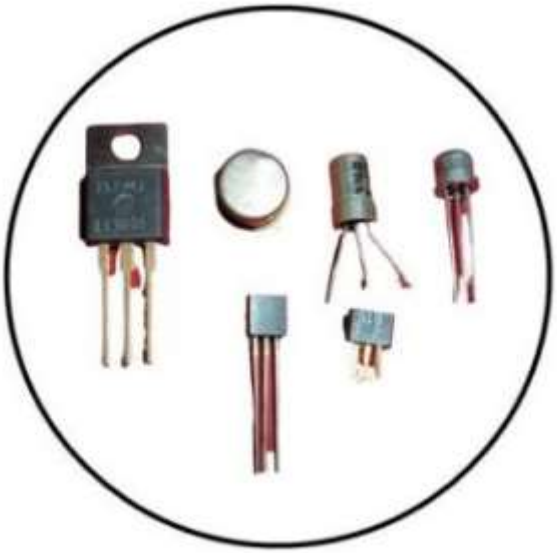
The second generation of computer was manufactured in using a **Transistor** instead of vacuum tubes.
The second generations of computer were more powerful, more reliable, and less expensive smaller true operated then the first-generation computer.

The memory of the second generation computer was compared to magnetic core.

Magnetic disk and magnetic tape were the main memory storage media used in secondary memory.

The **Transistors** were smaller than the vacuum tube, and the Transistors were much faster than the vacuum tube in speed.

The computers used batch processing and multi programming operating system.



Transistors

# Third Generation of Computer ( 1964 - 1971 )

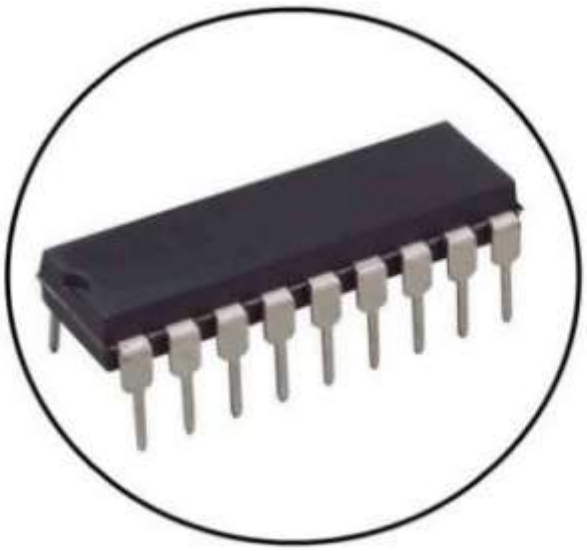
Third generation of computer advantage in electronic technology communicated and advantage of microelectronics technology may it possible to an integrated a large number of circuits elements into the very small surface of silicon known as a chip.

This new technology was called the **Integrated Circuit (IC).**

The third generation was test integrated technology and the computer than designed with the use of an integrated circuit where called the third generation of computer.

The third generation computer is smaller in size than the second generation of computer, and faster than the second generation compared to the speed. Integrated circuits are also used in today's computers.

**Integrated circuits** ( IC ) was invented by Robert Noyce and Jack Kilby Scientist.



Integrated Circuit ( IC )

# Fourth Generation of Computer ( 1972 - 2010 )

Initially, the integrated circuit contained only about 10 to 20 components this technology was named small scale integrated (SSI). Latter with an advantage in technology for manufacturing **Integrated Circuit** ( I.C ).

It becomes possible to integrate up to a hundred components into a single chip. This technology can be known as **Medium-scale integrated** (M.S.I).

Then the come era of large scale integrated than it was possible to integrate over 5000 comments in a single chip.

It is accepted that more than one million components will be integrated or a single chip knows as **very large scale integration (VLSI) technology.**

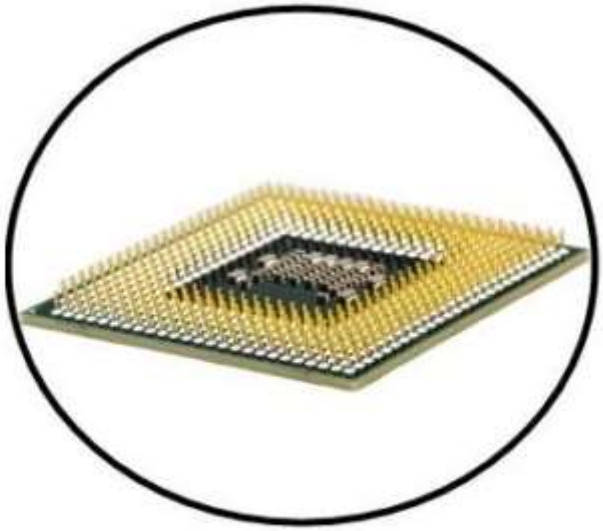
Fourth generation computers became more powerful and smaller in size and cheaper with the use of microprocessors.

The computer speed of this generation is much faster than the first, second and third generation computers.

In a Microprocessor, many **transistors, resistors**, and **diodes** work together.

This generation used time-sharing, real-time networks, distributed operating system.

This Generation of a computer used high level language like - c, c++, java and DBASE and etc.



Microprocessor

# Fifth Generation of Computer ( 2010 - Present )

Fifth Generation of computer is based on **Artificial Intelligence**. This generation uses **Ultra Large Scale Integration** ( ULSI ) technology. It is used to make the microprocessor chip.

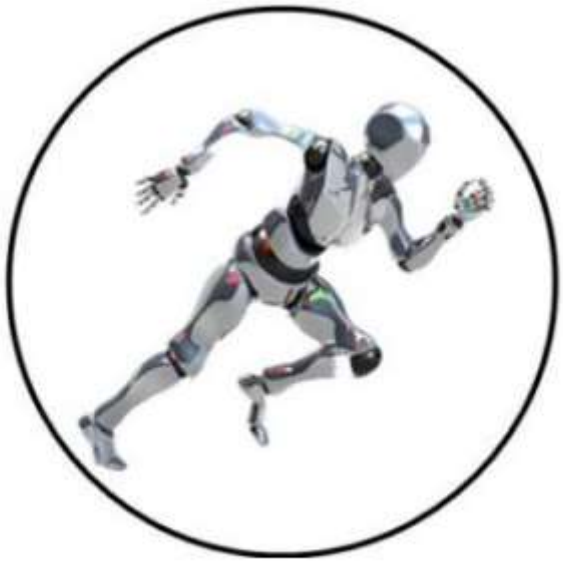
This chip contains ten million electronic components. Use of this technology will also be in the future, and this technology will be updated from time to time.

This technology works on a **parallel processing system**, Google search engine also uses this technology. This Generation of a computer used high level language like - c, c++, java and .Net and etc.

This Generation made than a very useful of multimedia applications (Text, graphics, audio, video and animation).

Includes the various terms in artificial intelligence which are given below:

1. Robotics.
2. Neural Networks.
3. Game playing.
4. Natural language processing.
5. Develop the expert system to decide a real-life situation.




Q4: Differentiate between Volatile & Non- Volatile memories.

**ANS.** **Difference between Volatile Memory and Non-Volatile Memory**

Volatile and Non-Volatile Memory are both types of computer memory. Volatile Memory is used to store computer programs and data that CPU needs in real time and is erased once computer is switched off. RAM and Cache memory are volatile memory. Where as Non-volatile memory is static and remains in the computer even if computer is switched off. ROM and HDD are non-volatile memory.

Following are the important differences between Volatile and Non-Volatile Memory.

| Sr. No. | Key | Volatile Memory | Non-Volatile Memory |
|---|---|---|---|
| 1 | Data Retention | Data is present till power supply is present. | Data remains even after power supply is not present. |
| 2 | Persistence | Volatile memory data is not permanent. | Non-volatile memory data is permanent. |
| 3 | Speed | Volatile memory is faster than non-volatile memory. | Non-volatile memory access is slower. |

| Sr. No. | Key | Volatile Memory | Non-Volatile Memory |
|---|---|---|---|
| 4 | Example | RAM is an example of Volatile Memory. | ROM is an example of Non-Volatile Memory. |
| 5 | Data Transfer | Data Transfer is easy in Volatile Memory. | Data Transfer is difficult in Non-Volatile Memory. |
| 6 | CPU Access | CPU can access data stored on Volatile memory. | Data to be copied from Non-Volatile memory to Volatile memory so that CPU can access its data. |
| 7 | Storage | Volatile memory less storage capacity. | Non-Volatile memory like HDD has very high storage capacity. |
| 8 | Impact | Volatile memory such as RAM is high impact on system's performance. | Non-volatile memory has no impact on system's performance. |
| 9 | Cost | Volatile memory is costly per unit size. | Non-volatile memory is cheap per unit size. |

Q5: Distinguish among system software, application software and open source software on the

basis of their features.

ANS. **Difference between System software and Application software.**

As we know that software is a set of instructions or programs instructing a computer to do specific tasks. Software is basically a generic term used to describe computer programs. In general Scripts, applications, programs and a set of instructions are all terms often used to describe software.

Now the basis of language in which software is developed and platform which is required for its execution we can classified software as in two divisions which are

System software and Application software. Following are some basic differences between System software and Application software.

| Sr. No. | Key | System Software. | Application Software. |
|---|---|---|---|
| 1 | Definition | System Software is the type of software which is the interface between application software and system. | On other hand Application Software is the type of software which runs as per user request. It runs on the platform which is provide by system software. |
| 2 | Development Language | In general System software are developed in low level language which is more compatible with the system hardware in order to interact with. | While in case of Application software high level language is used for their development as they are developed as some specific purpose software. |
| 3 | Usage | System software is used for operating computer hardware. | On other hand Application software is used by user to perform specific task. |
| 4 | Installation | System software are installed on the computer when operating system is installed. | On other hand Application software are installed according to user's requirements. |
| 5 | User interaction | As mentioned in above points system software are specific to system hardware so less or no user interaction available in case of system software. | On other hand in application software user can interacts with it as user interface is available in this case. |
| 6 | Dependency | System software can run independently. It provides platform for running application software. | On other hand in application software can't run independently. They can't run without the presence of system software.. |

| Sr. No. | Key | System Software. | Application Software. |
|---|---|---|---|
| 7 | Examples | Some examples of system software's are compiler, assembler, debugger, driver, etc. | On other hand some examples of application software's are word processor, web browser, media player, etc. |

Q6. a) Create a file in MS-word to insert a paragraph about yourself and save it with file name

"yourself". Describe all steps involved in it.

ANS. Q6. a) Create a file in MS-word to insert a paragraph about yourself

and save it with file name

Ans.

"yourself". Describe all steps involved in it.

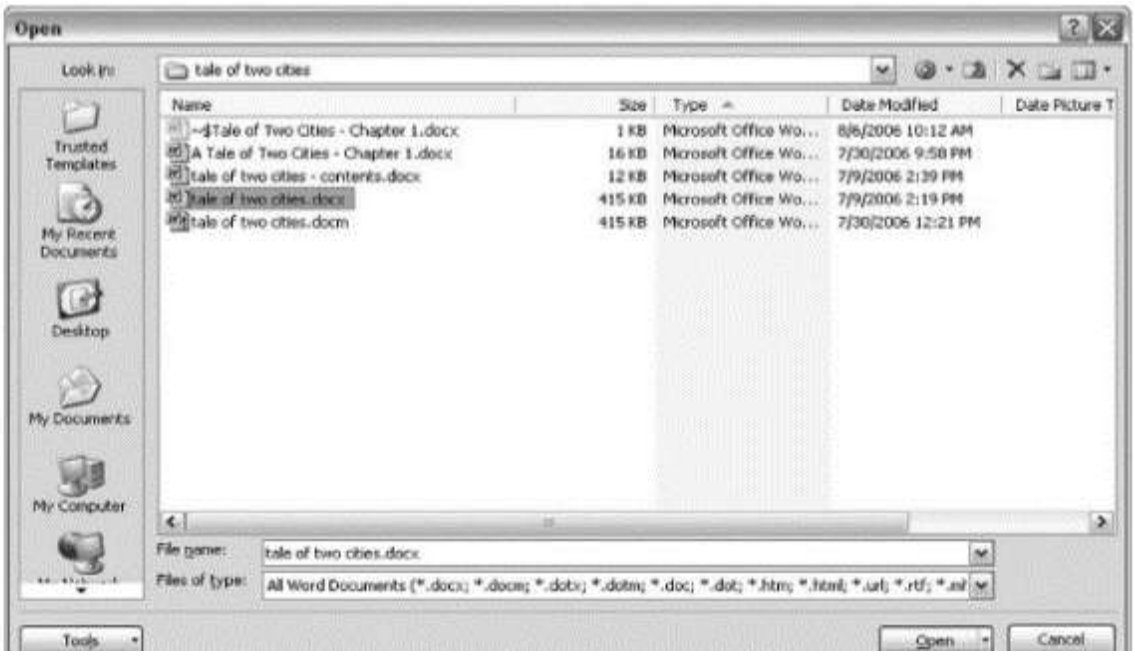
Chapter 1. Creating, Opening, and Saving Documents

When you start Word without opening an existing document, the program gives you an empty one to work in. If you're eager to put words to page, then type away. Sooner or later, though, you'll want to start another new document. Word gives you three ways to do so:


Instead of the usual Open button at the bottom of the box, the button in the New from Existing Document box reads Create New—your clue that this box behaves differently in one important respect: Instead of opening an existing file, you're making a copy of an existing file. Once open, the file's name is something

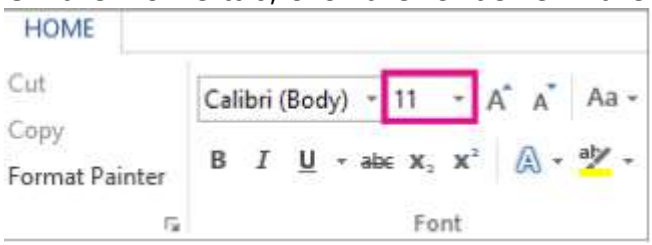
like Document2.docx instead of the original name. This way, when you save the file, you don't overwrite the original document. (Still, it's best to save it with a new descriptive name right away.)


The Open box goes away and your document opens in Word. You're all set to get to work. Just remember, when you save this document (Alt+F, S or Ctrl+S), you write over the previous file. Essentially, you create a new, improved, and only copy of the file you just opened. If you don't want to write over the existing document, use the Save As command (Alt+F, A), and then type a new name in the File Name text box.




To change the font size of selected text in desktop Excel, PowerPoint, or

Word:
Select the text or cells with text you want to change. To select all text in a Word document, press Ctrl + A.
On the Home tab, click the font size in the Font Size box.




# Change the font color

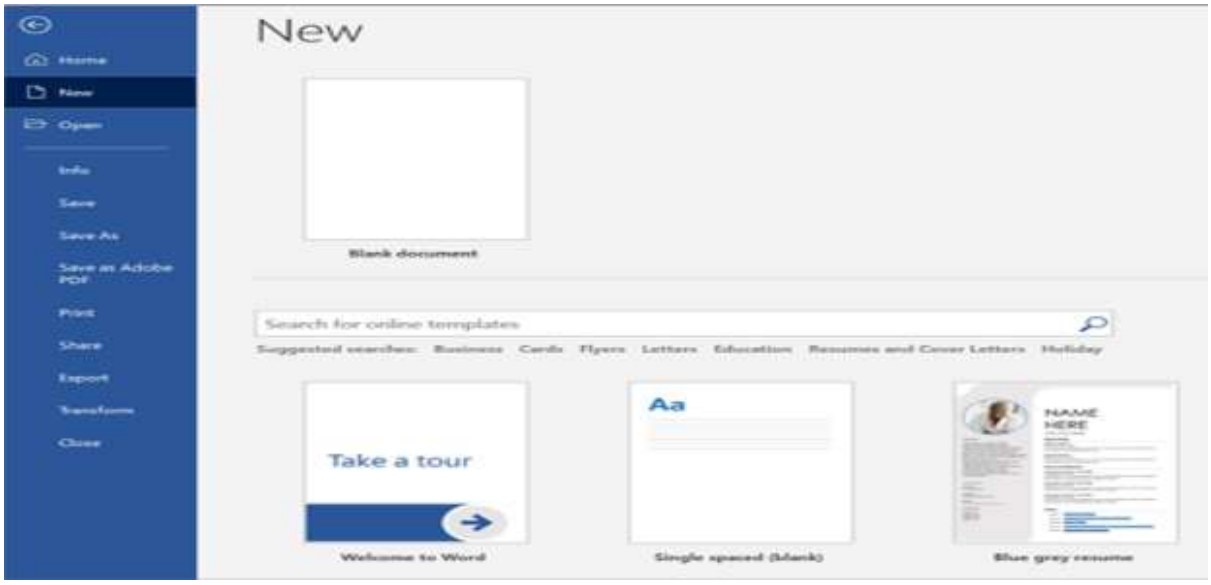
**You can change the color of text in your Word document.**
**1. Select the text that you want to change.**
**2. On the Home tab, in the Font group, choose the arrow next to Font Color, and then select a color.**


**Q7. Create a file in MS-Word for the following document and save it with file name 'ms_word'. Describe all steps involved in it.**

**ANS.**

## Create a document

**1. On the File tab, click New.**
**2. In the Search for online templates box, enter the type of document you want to create and press ENTER.**




# Editing

Word provides many options to customize the process of editing documents. There are several views
and tools in Word that allow you to make and see changes to your document in a preferable method.
The following Editing articles will also explain how to utilize the Review tab of the ribbon, which is
crucial to personalizing the editing process in Word.

**Q8. Create a file in MS-word for the following document and save it with file name 'equations'. Describe**
**all steps involved in it.**

**ANS.**
Insert Equations in Word: Overview
This lesson shows you how to insert equations in Word within a document. This lesson
covers inserting a preset equation and also manually entering an equation.
To insert equations in Word from one of the preset equations, first place your cursor at
the insertion point in your document where you want the equation to appear. Then click the

"Insert" tab in the Ribbon. At the right end of the tab is the "Symbols" button group. Click the
drop-down arrow on the "Equation" button in this button group to then open the menu of

**Q9. Create a file in MS-word that convert existing highlight text to table as shown below and save it as file name 'text_to_table'. Describe all steps involved in it.**

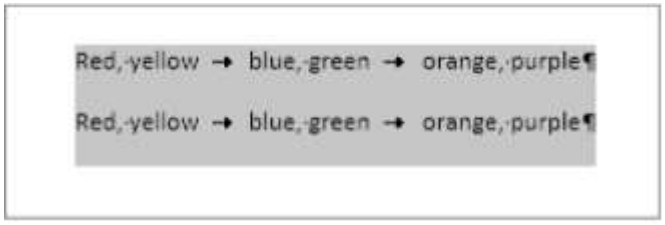
**ANS.**

# Convert text to a table or a table to text

**To convert text to a table or a table to text, start by clicking the Show/Hide paragraph mark on the Home tab so you can see how text is separated in your document.**


## Convert text to a table

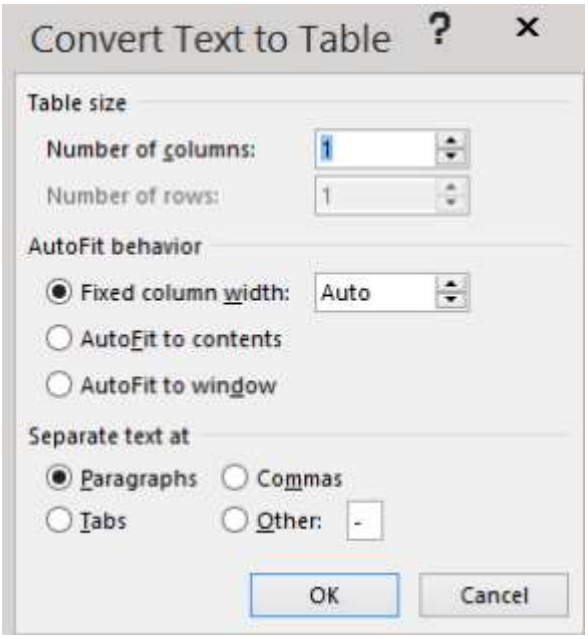
1. Insert separator characters—such as commas or tabs—to indicate where to divide the text into table columns.
2. Use paragraph marks to indicate where you want to begin a new table row.
3. In this example, the tabs and paragraph marks will produce a table with 3 columns and 2 rows:




Select the text that you want to convert, and then click Insert > Table > Convert Text to

**Table.**


**In the Convert Text to Table box, choose the options you want.**




Under Table size, make sure the numbers match the numbers of columns and rows you want.
Under AutoFit behavior, choose how you want your table to look. Word automatically chooses a width for the table columns. If you want a different column width, choose one of these options:

1. Under Separate text at, choose the separator character you used in the text.

2. Click OK. The text converted to a table should look something like this:

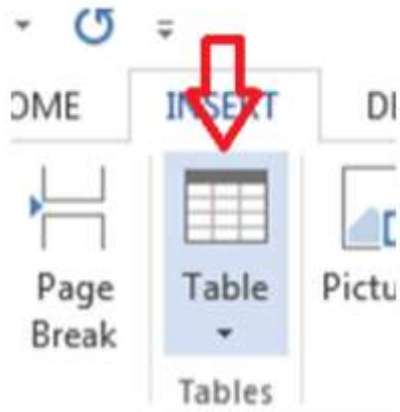
| | | |
|---|---|---|
| Red, yellow | blue, green | orange, purple |
| Red, yellow | blue, green | orange, purple |

**Q10. Create a file in MS-Word to insert a table in the document. Describe all steps involved in it.**

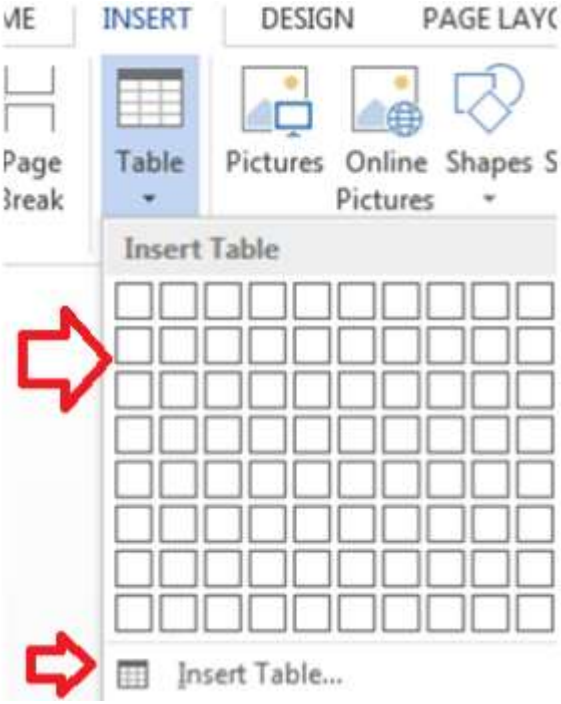
**ANS**.

he basic steps for creating a standard table in Microsoft Word (2013) are:
1. Open a blank Word document
2. In the top ribbon, press Insert


3. Click on the *Table* button




4. Either use the diagram to select the number of columns and rows you need, or click Insert Table and a dialog box will appear where you can specify the number of columns and rows.

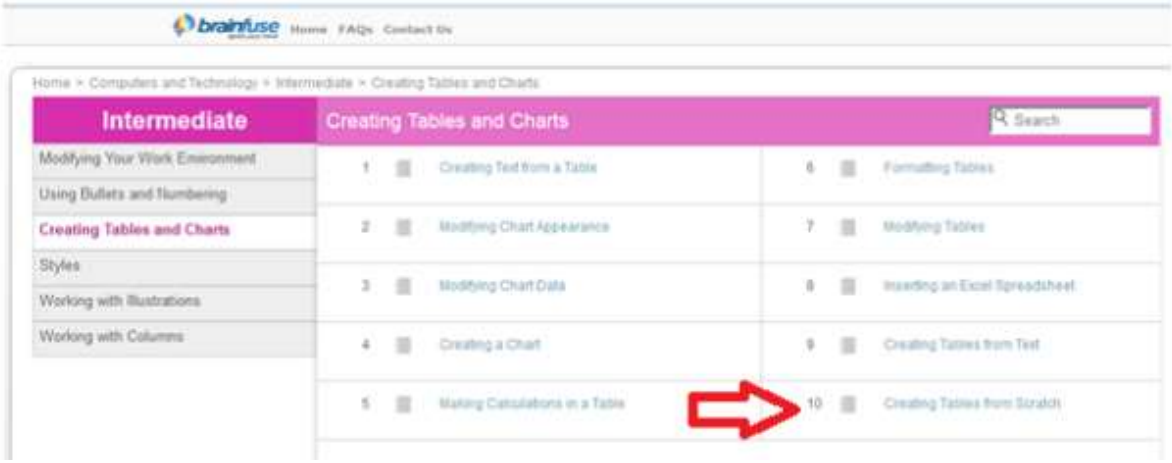



5. The blank table will now appear on the page. Alter it as necessary. Standard features like bold, italics, and underline are still available! These items may be helpful for creating headings or calling out certain items in the table.

6. Follow these instructions for ensuring your table meets APA formatting guidelines.

Need additional help? The tutoring service has self-paced table and chart lessons/tutorials within

SkillSurfer. Follow these steps to access:
1. Log into the tutoring service (click on the blue hyperlink to the left to login!)
2. Click on SkillSurfer
3. Click on Computers and Technology
4. Click on Intermediate underneath Microsoft Word
5. Select Creating Tables and Charts
6. Choose the exact item(s) you wish to learn about (likely Creating Tables from Scratch).




**Q11. Create a following worksheet in MS-excel and save it with name 'book1L;**

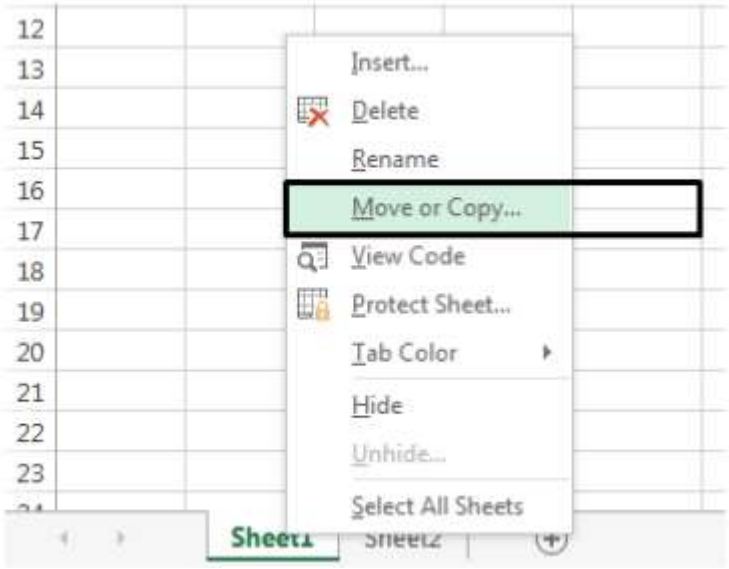
# Save a worksheet

When you have multiple worksheets in an Excel workbook, you might want to save only one worksheet as its own workbook. Use the Move or Copy function to save one worksheet in Excel 2013 or Excel 2016.

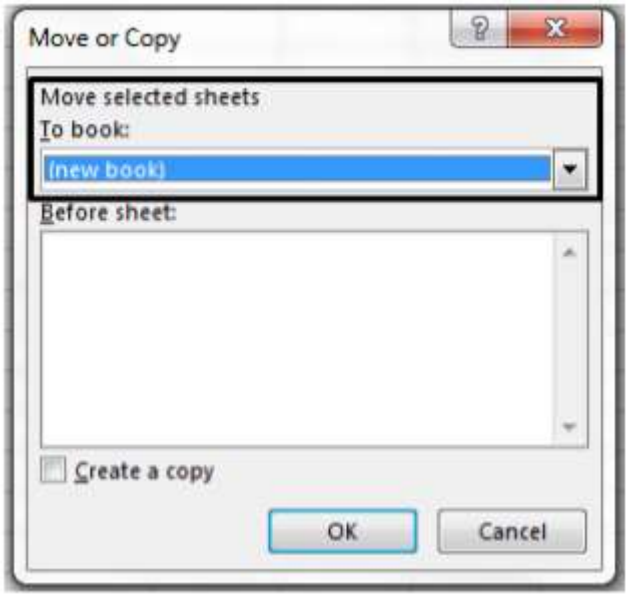
Save a single worksheet

1. Right-click the worksheet name tab.

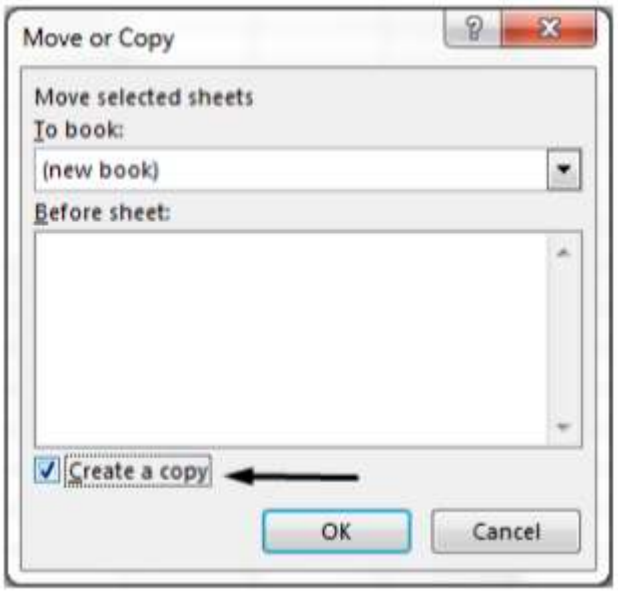

2. Click select **Move or Copy.**




3. Click on the **Move selected sheets to Book** drop-down menu. Select **(new book).**




4. Click **OK**. Your new workbook opens with your moved worksheet.




5. Click **File >Save** in your new workbook.

## Q12. Calculate the following things of a range (C2:C11) of data in the worksheet created in question no

**ANS.**

**1. the sum of the marks using AutoSum in a range of cells (C2:C11)**

**The SUM function adds values. You can add individual values, cell references or ranges or a mix of all three.**

## =SUM(A2:A10) Adds the values in cells A2:10

## 2. average of the marks in a range of cells (C2:C11)

Returns the average (arithmetic mean) of the arguments. For example, if the range A1:A20 contains numbers, the formula **=AVERAGE(A1:A20)** returns the average of those numbers

## 4. highest marks in a range of cells (C2:C11)

## 5.

MAX will return the largest value in a given list of arguments. From a given set of numeric values, it will return the highest value. Unlike MAXA function,

the MAX function will count numbers but ignore empty cells, text, the logical values TRUE and FALSE, and text values.

=MAX(number1, [number2], ...)

## 4. minimum marks in a range of cells (C2:C11)

The Microsoft Excel MIN function returns the smallest value from the numbers provided.

```
=MIN(A2, A3)
```

# Q13 a) Describe various steps involved in the Following

**ANS.**

## 1. To modify column width of a worksheet

If you find yourself needing to expand or reduce Excel's row widths and column heights,
there are several ways to adjust them. The table below shows the minimum, maximum and
default sizes for each based on a point scale.

## 2. To modify the row height of a worksheet

If you find yourself needing to expand or reduce Excel's row widths and column heights,
there are several ways to adjust them. The table below shows the minimum, maximum and
default sizes for each based on a point scale.

## 3. To delete rows and columns of a worksheet

Insert or delete a column
1. Select any cell within the column, then go to **Home > Insert >Insert Sheet Columns** or **Delete Sheet Columns**.
2. Alternatively, right-click the top of the column, and then select **Insert** or **Delete**.

Insert or delete a row
1. Select any cell within the row, then go to **Home > Insert > Insert Sheet Rows** or **Delete Sheet Rows.**
2. Alternatively, right-click the row number, and then select **Insert** or **Delete**.

## Q13 b) Describe following terms in the Worksheet

**ANS.**

## 1. Absolute reference and relative reference in formula

## Relative references

By default, all cell references are relative references. When copied across multiple cells, they change based on the relative position of rows and columns. For example, if you copy the formula =A1+B1 from row 1 to row 2,
the formula will become =A2+B2. Relative references are especially convenient whenever you need to repeat the same calculation across multiple rows or columns.

# 2. Cell address

## What is the Cell ADDRESS Function?

The cell ADDRESS function is categorized under Excel Lookup and Reference functions. It will provide a cell reference (its “address”) by taking the row number and column letter. The cell reference will be provided as a string of text. The function can return an address in a relative or absolute format and can be used to construct a cell reference inside a formula.

As a financial analyst, cell ADDRESS can be used to convert a column number to a letter, or vice versa. We can use the function to address the first cell or last cell in a range.

## Formula

### =ADDRESS(row_num, column_num, [abs_num], [a1], [sheet_text]

### Q14. a) What tools are available to customize our PowerPoint presentation?

### ANS.

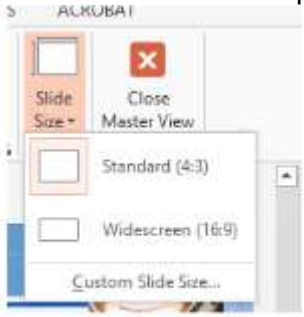
# Customize presentation options and views

**Changing page setup options**
Presentations are created mainly to project either on a projector or more and more frequently to a plasma or TV screen. There are times when a presentation can be created for delivery in different formats.

- On-screen show (4:3)
- Letter Paper (8.5 x 11 in)
- Ledger Paper (11 x 17 in)
- A3 Paper (297 x 420 mm)
- A4 Paper (210 x 297 mm)
- B4 (ISO) Paper (250 x 353 mm)
- B5 (ISO) Paper (176 x 250 mm)
- 35mm Slides
- Overhead
- Banner
- On-screen Show (16:9)
- On-screen Show (16:10)
- Widescreen
- Custom

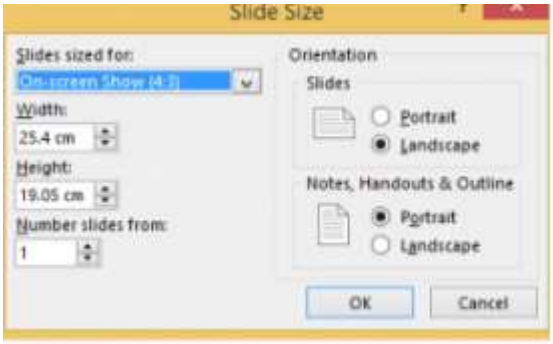
To select a slide size other than the standard one:

1. In Slide Master View
2. Click on Slide Size
3. Select from one of the two options
4. For more choices, click Custom
5. Select one of the options



Slide Size

Figure 89- standard or widescreen



Slide Size box

Figure 90 – other options

If you change the orientation to Portrait for the presentation it will apply to all the slides.

## Changing to view in color/grayscale

Why change to view the presentation in grayscale? You might want to print the presentation and to print in colour is more expensive than printing to greyscale, so you need to see what the presentation looks like in grayscale before you print.


Figure 91- colour/grayscale options

On the View Ribbon, click on the option you want, Colour, Grayscale or Black and White.

Then from the Grayscale Ribbon select the option you want to see:

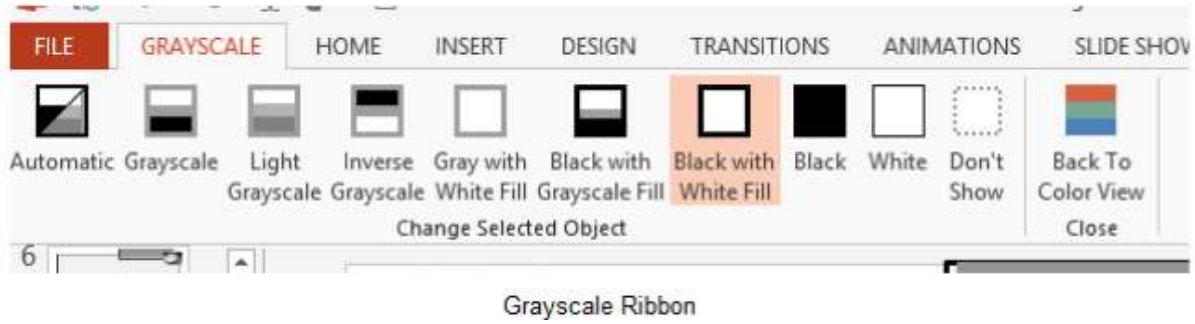



Figure 92- grayscale options

To get back to the colour view, click Back to Colour View.

# Navigating using presentation views

There are several different views in PowerPoint as we saw earlier and you can navigate through the presentation in each in different ways.

**In Normal View**

- Click on the thumbnail of the slide you want to see
- Use the Vertical Scrollbar to move between slides
- Use the up and down arrow keys on the keyboard to move one slide backwards or forwards

**In Slide Sorter View**

- Click on the slide you want to select
- Use the arrow keys to move up, down, left and right

**In Reading View**

Use the next and back icons in the status bar to move back or forwards or use the menu which is accessed from the icon in the middle

Figure 94 – icons

Back and Next icons move between slides.

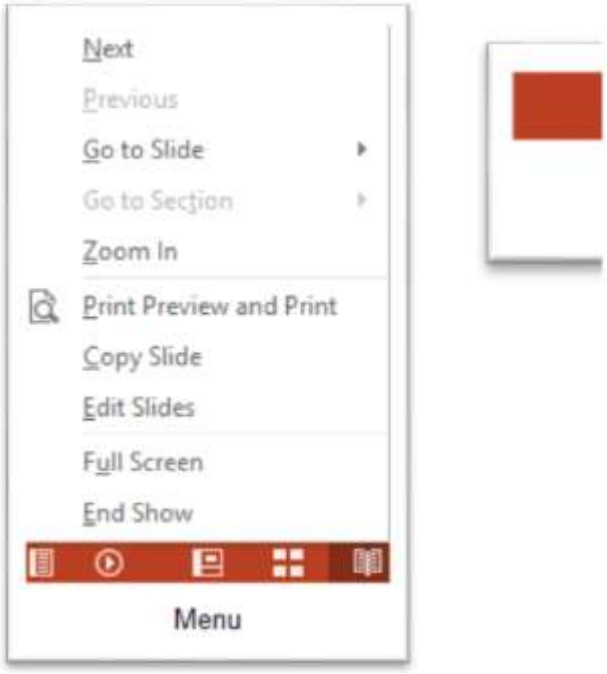



Figure 93- reading view

Pick from the menu – you can use Go to Slide to pick the slide number

**In Slide Show view**

When presenting you can use the mouse or the arrows on the keyboard to move through the presentation one slide at a time.

You can also type the number of the slide you want to see and press Enter.

When you hover the mouse over the bottom left corner of the slide on display you will notice some faint icons, there is a back arrow and forward arrow which move you through one slide at a time.

Slide show icons

Figure 95- slide show icons

Use the fourth icon along to show the slides in a presentation view of Slide Sorter View. This lays the slides on the screen and you can click on the one you want to See

Slide Sorter in Presentation View

Figure 96- Slide Sorter in presentation view

Use the back arrow at the top left to get back to the slide you started from.

To end the slide show, press the Escape Key on the keyboard – this takes you back to PowerPoint in the edit mode which means that your audience will see the back end of your presentation.

You can also use the End Presentation option which is on the small ellipse icon on the bottom left of the slide when you hover the mouse.

**Q14 b) Write the steps for the following action for creation of power point presentation**

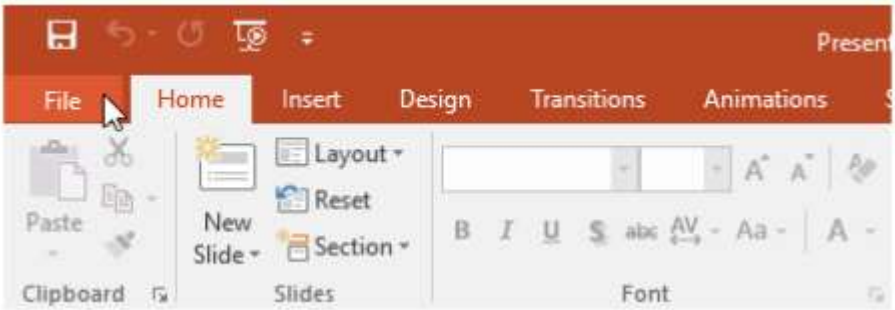
**ANS.**

## 1. Open a Blank presentation

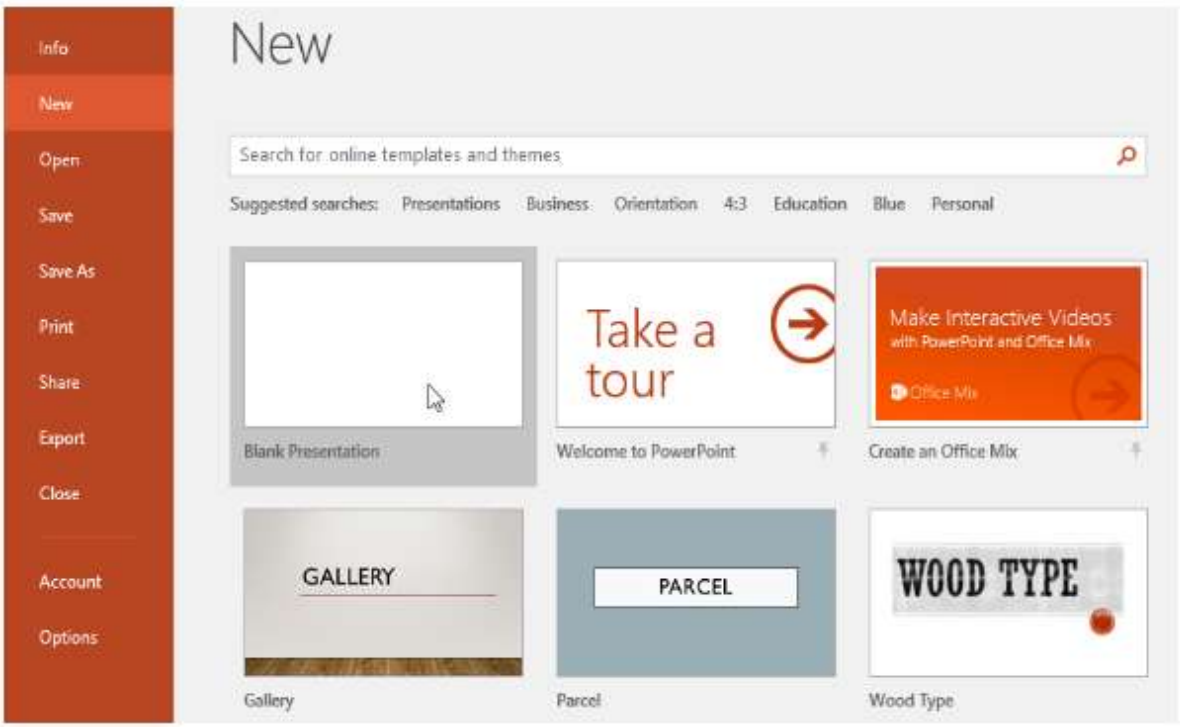
## To create a new presentation:

When beginning a new project in PowerPoint, you'll often want to start
with a new blank 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.**

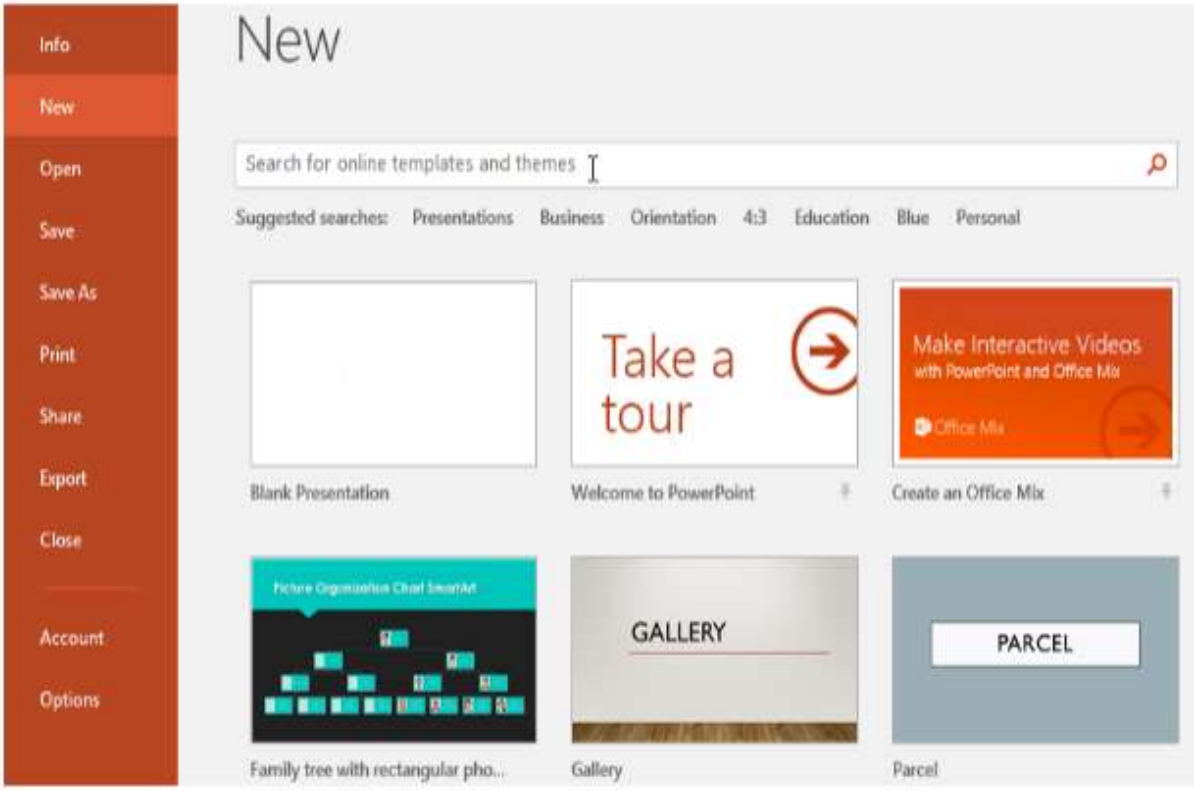



### 3. A new presentation will appear.

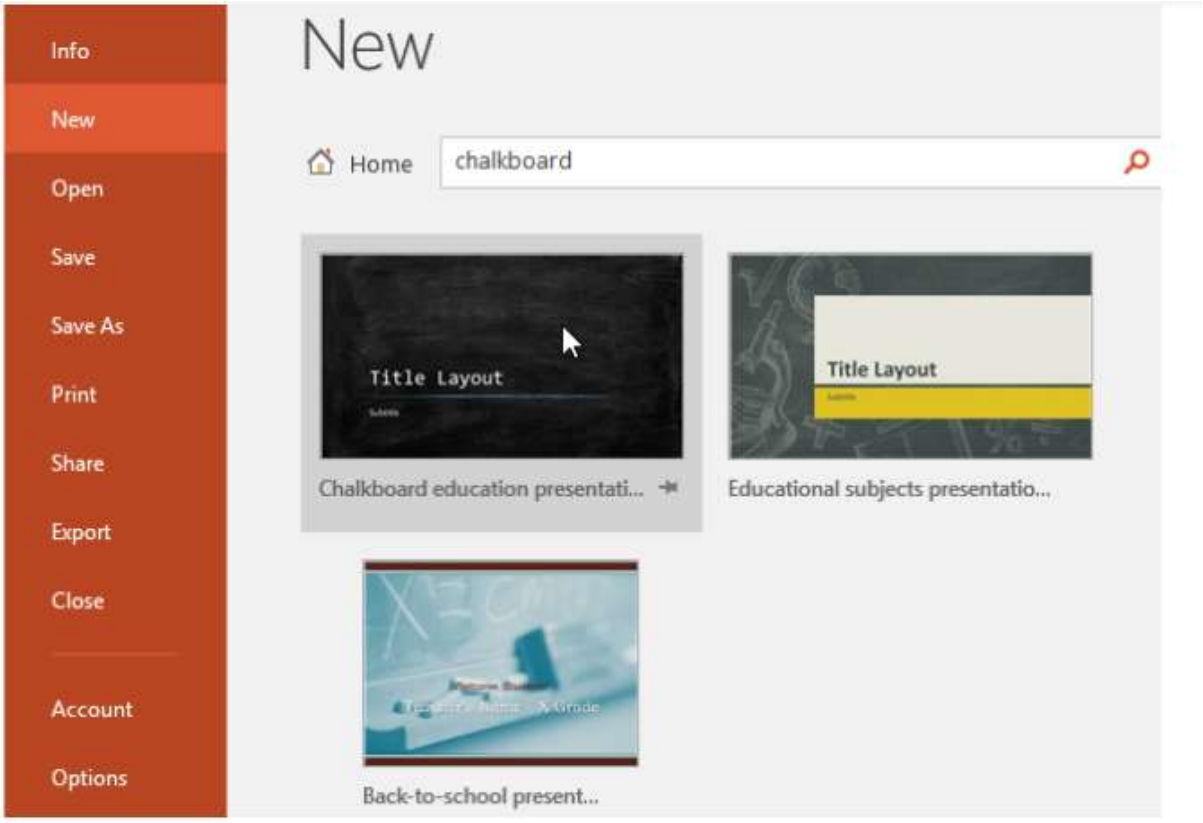
## To create a new presentation from a template:

A **template** is a **predesigned presentation** you can use to create a new slide show quickly. Templates often include **custom formatting** and **designs**, so they can save you a lot of time and effort when starting a new project.

1. Click the **File** tab to access **Backstage** view, then select **New**.
2. You can click a suggested search to find templates or use the **search bar** to find something more specific. In our example, we'll search for the keyword **chalkboard**.




3. Select a template to review it.



1. A **preview** of the template will appear, along with **additional information** on how the template can be used.


2. Click **Create** to use the selected template.

3. A new presentation will appear with the **selected template.**

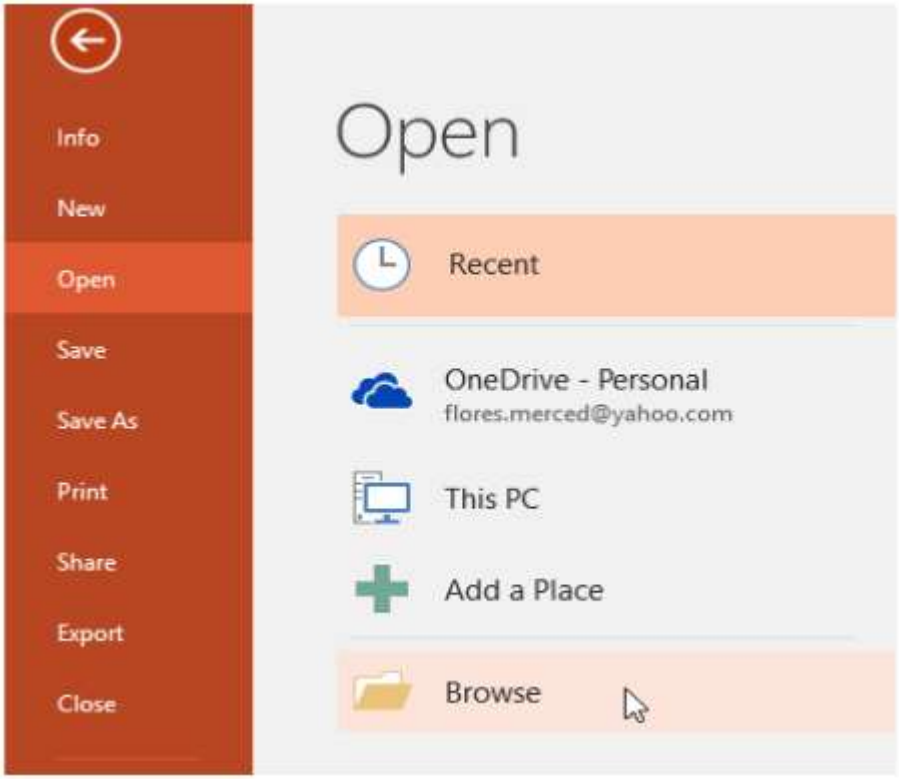
It's important to note that not all templates are created by Microsoft. Many are created by third-party providers and even individual users, so some templates may work better than others.

## To open an existing presentation:

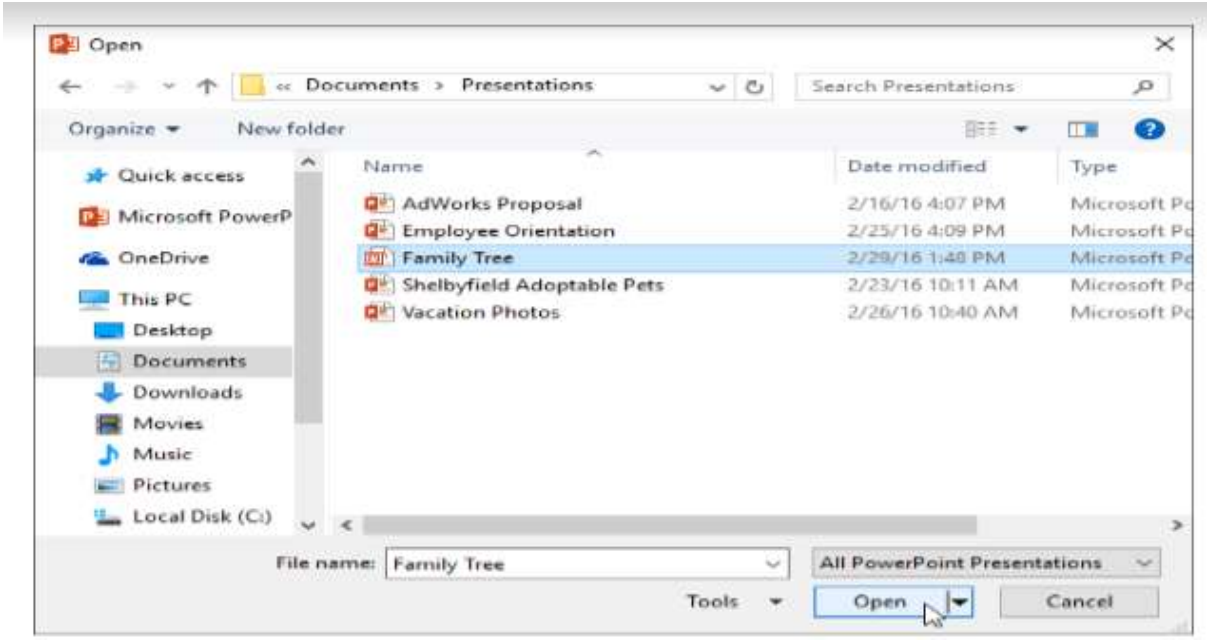
In addition to creating new presentations, you'll often need to open a presentation that was previously saved. To learn more about saving presentations, visit our lesson on **Saving Presentations.**

1. Select the **File** tab to go to **Backstage view**, then click **Open**.

2. Click **Browse**. Alternatively, you can choose **OneDrive** to open files stored on your OneDrive.



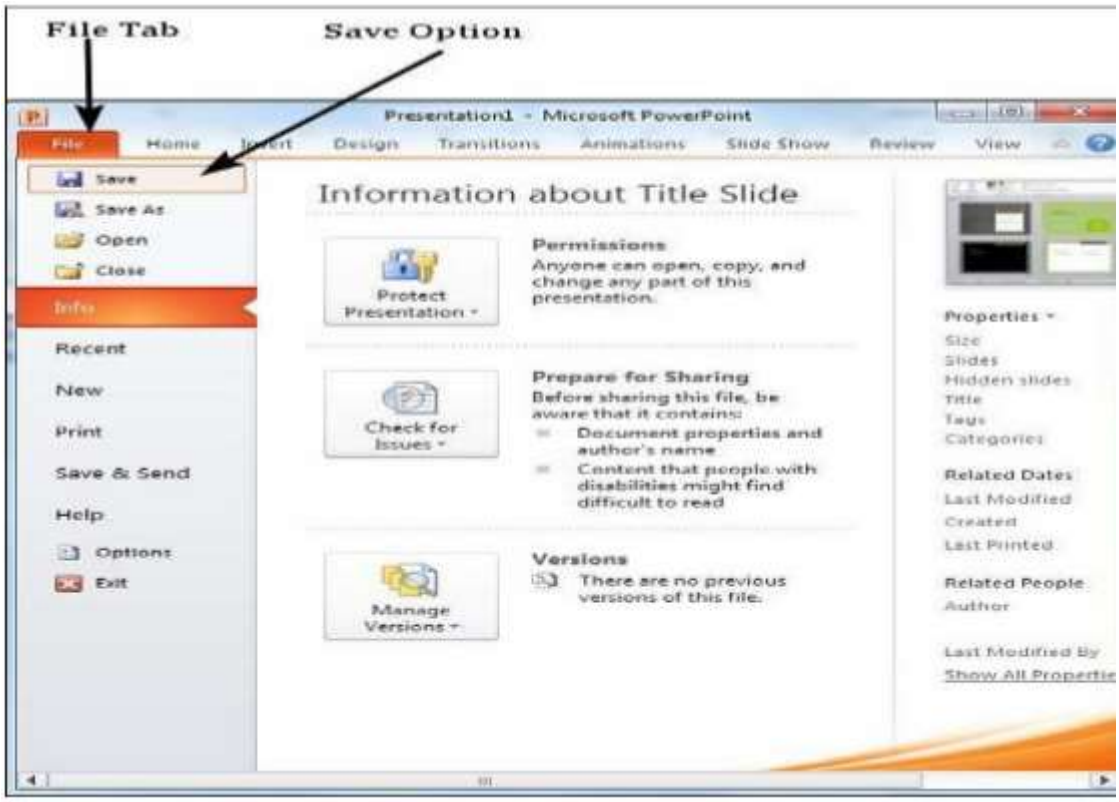

3. The **Open** dialog box will appear. Locate and select your **presentation**, then click **Open**.



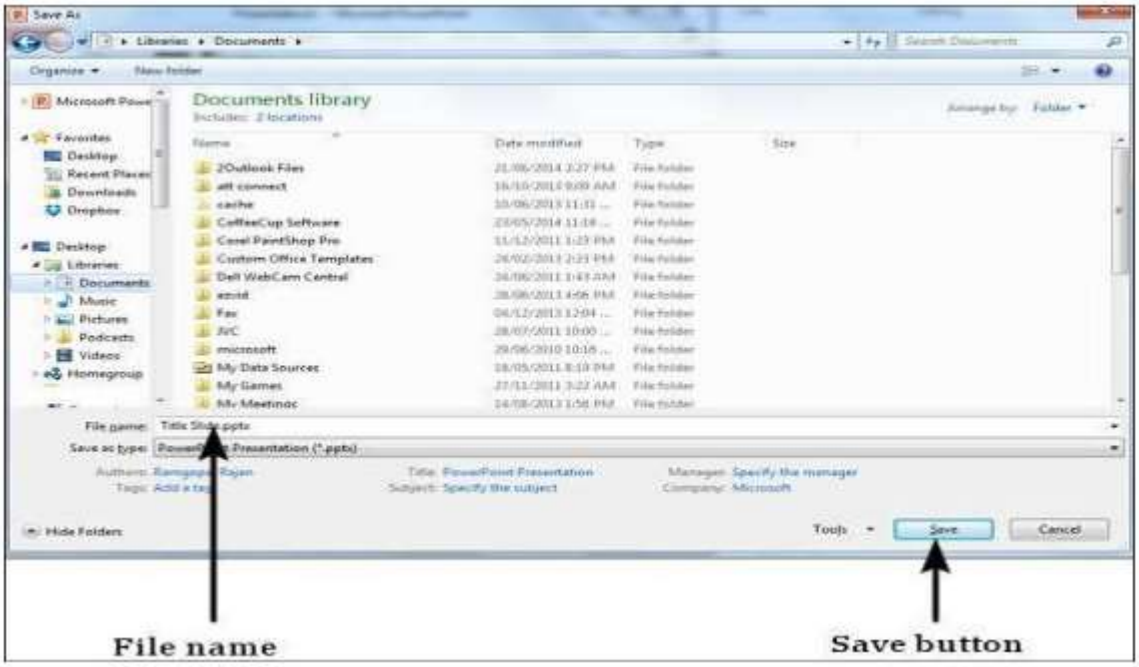

## 2.Save the presentation as Lab1.pptx

**ANS.**

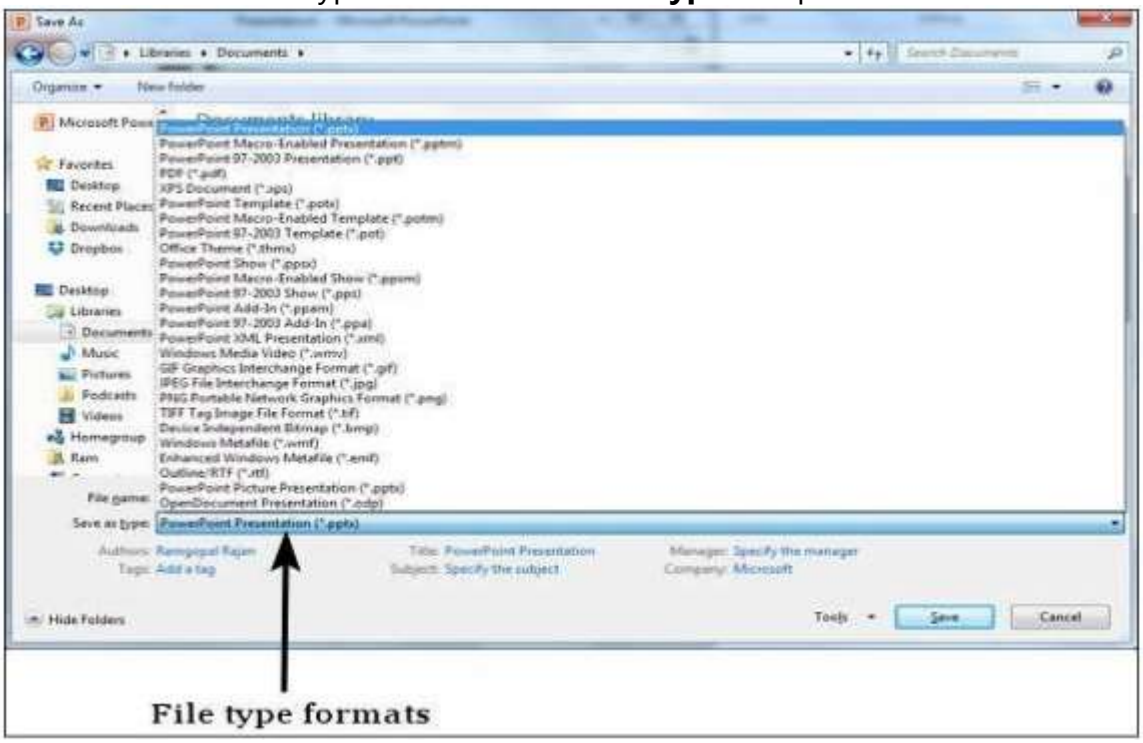
- One of the most basic tasks in PowerPoint is being able to save your work;
- this is probably the most important task as well. There are many users who
- have burnt their fingers for not saving their work in time and losing hours of
- hard work. The following are the basic steps to save a presentation.
- **Step 1** – Click on the File tab to launch the Backstage view and select Save.



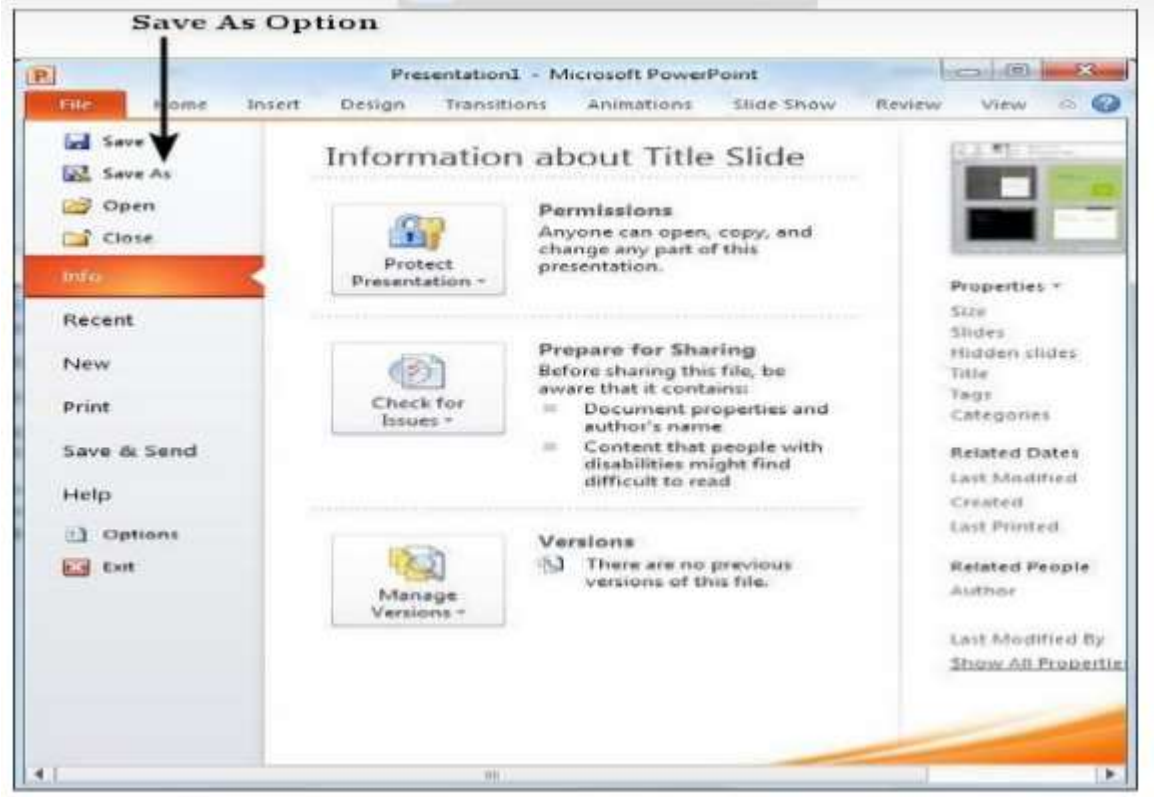

**Step 2** – In the **Save As** dialog, type in the file name and click "Save"




**Step 3** – The default file format is .**pptx**. If you want to save the file with a different name,
choose one of the file types from the **"Save as type"** dropdown list.




If you are working on an already saved file, the "Save" option in
the **Backstage** view will
directly save the file in the existing format with the existing name. If you want to change the
format or filename of an existing file, use the **Save As** option instead.




# 3. Add a Title to the first slide: the name of your college

**Ans**.

1. Open a Blank **presentation**
2. Save the presentation as **PowerPointLabOne.pptx**
3. Add a **Title** to the first slide: **the name of your college**
4. Type your first name and last name in the **Subtitle** section
5. Add a **New Slide** which has a **Title and Content**
6. Add a title to the second slide "**My Future Goals**"

7. In the Content section of the second slide, add at least three Personal Goals

8. Right click on the second slide from the left panel, then choose **Duplicate Slide**
9. Highlight the text in the Content area of the third slide. Under the Home tab, click **Convert to SmartArt**, then choose **Basic Cycle**
10. Change the SmartArt Colors to **Colorful—Accent Colors**
11. Change the SmartArt Styles to **3D Polished**
12. From the left panel, **drag** the third slide between the first and second slide
13. Change the **layout** of the third slide, the slide that does not have the SmartArt,
to **Comparison**
14. Leave the title "**My Future Goals**"

15. In the head of the first column, type "**Goals in College,"** then center the heading
16. In the head of the second column, type **"Goals after College,"** then center the heading

17. Add at least **three goals** in each section
18. Make sure that **slide #3** is selected from the left panel, then add a New Slide
19. Change the layout of the new slide to **Blank**
20. Insert a Graduation **Online Picture** from the **Office ClipArt**—Choose any image of your
choice
21. Change the ClipArt **size to 3" X 3"** and position it in the middle of the slide
22. Apply the **Wisp Design Theme**
23. Save and upload **PowerPointLabOne.pptx** to your instructor

# 5. Add a New Slide which has a Title and Content

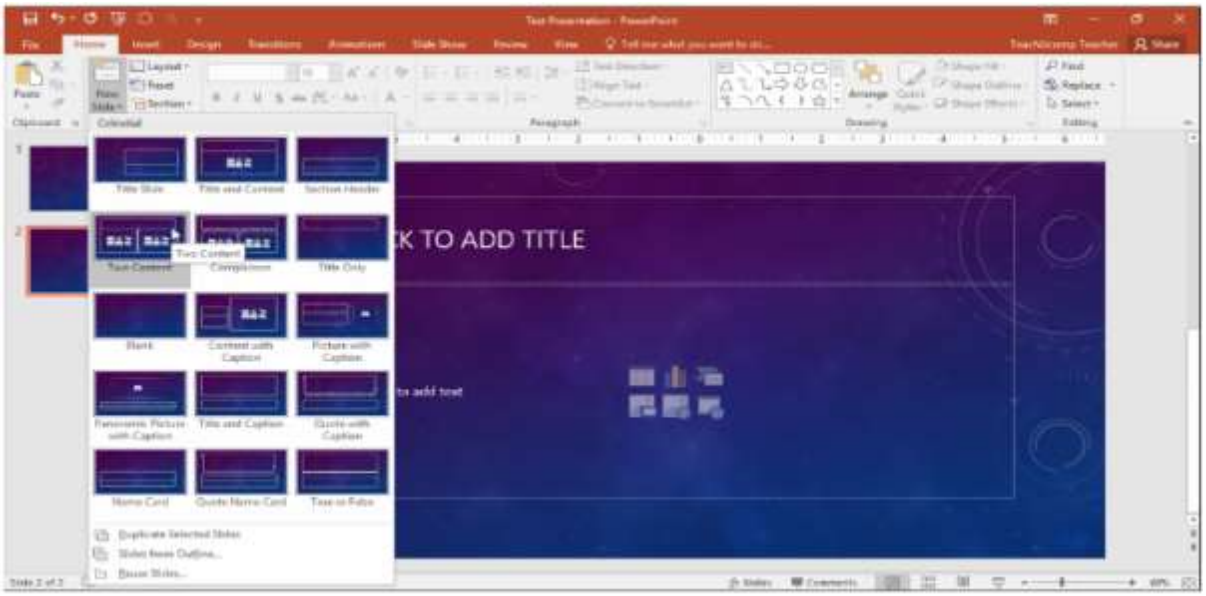
## ANS. Insert a New Slide in PowerPoint: Overview

In this tutorial, you will learn how to insert a new slide in PowerPoint. When you create a new presentation, PowerPoint gives you one default slide that contains a "Title Slide" layout. You can click into the placeholders shown in the title slide. Then type the text
you want to appear as the title and subtitle of your presentation.

To add another presentation slide, you must then insert a new slide and determine which placeholders appear in it. The slide layout you apply determines which placeholders
appear within the new slide. However, you can also change the slide layout to change the placeholders after it is applied.

To insert a new slide in PowerPoint with a "Title and Content" slide layout, click the "Home" tab in the Ribbon. Then click the "New Slide" button in the "Slides" button group.

To insert a new slide in PowerPoint with a different slide layout, click the drop-down




**Q15. Write steps for creation of a set of PowerPoint slides that demonstrates your skill to usethe tools of PowerPoint. It should include the following things**

**A) Title slide &bullet list**

**ANS.**

# Title a slide

**There are multiple way to add titles to your slides in PowerPoint. Use the Layout option to create a standalone title slide or to add a title to a slide that contains other text. You can also use the Outline view to create and update the titles of your slides**

## Show each bullet point with a click

1. Select the text box that contains the slides you want to animate.


2. Click the **Animations** tab, and then choose a motion effect like **Appear** or **Fly In.**

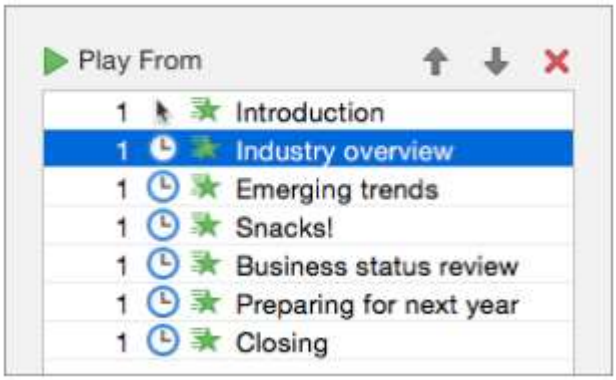

3. The slide displays the animation sequence in a box to the left of each point.


Show each bullet point after a delay

1. Select all the bullet points you want to animate, click the **Animations** tab, and then choose a motion effect

like **Appear** or **Dissolve In.**


2. In the **Animations** pane, select the second animation in the list.




3. Under **Timing**, change the **Start** setting to **After Previous**, and then enter the amount of time you want to delay between each bullet point.


**B) Inserting Excel Sheet**

## Ans. Insert an object in your Excel spreadsheet

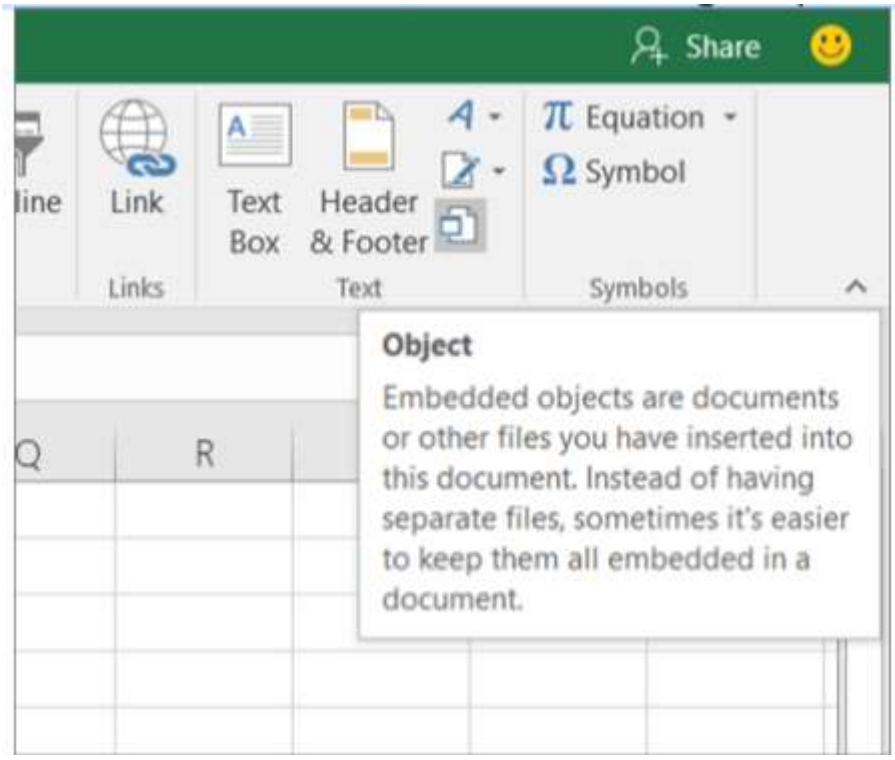
You can use Object Linking and Embedding (OLE) to

include content from other programs, such as Word or Excel.

OLE is supported by many different programs, and OLE is used to make content that is created in one program available in another program. For example, you can insert an Office Word document in an Office Excel workbook. To see what types of content that you can insert, click **Object** in the **Text** group on the **Insert** tab. Only programs that are installed on your computer and that support OLE objects appear in the **Object type** box.

## Embed an object in a worksheet

1. Click inside the cell of the spreadsheet where you want to insert the object.
2. On the **Insert** tab, in the **Text** group, click **Object** .




3. In the **Object** dialog box, click the **Create from File** tab.
4. Click **Browse**, and select the file you want to insert.
5. If you want to insert an icon into the spreadsheet instead of show the contents of the file, select the **Display as icon** check box. If you don't select any check boxes, Excel shows the first page of the file. In both cases, the complete file opens with a double click. Click **OK**.

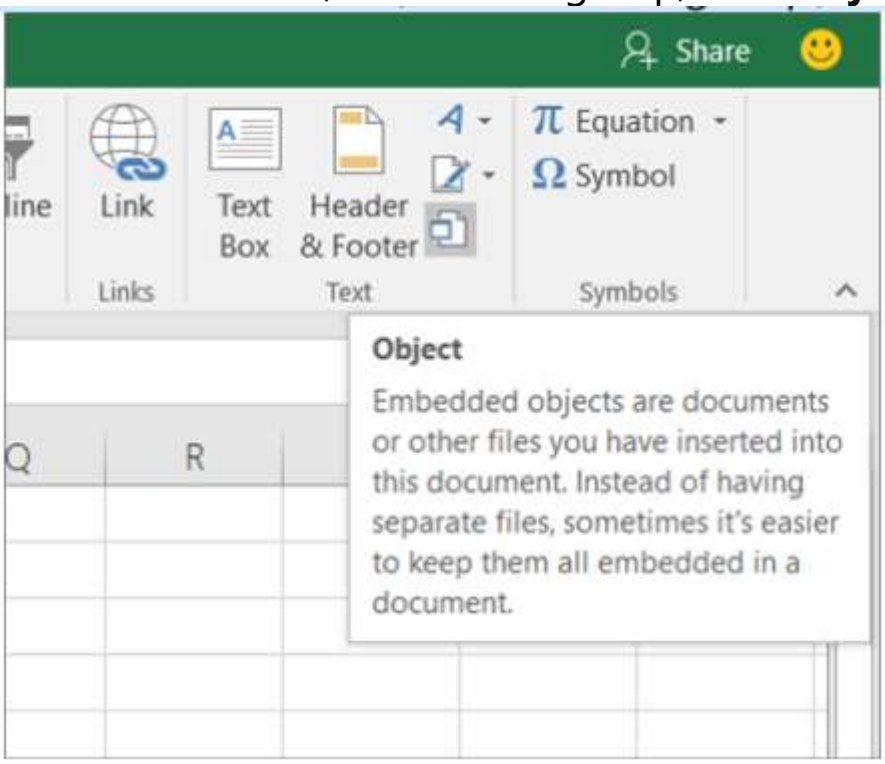
## Insert a link to a file

You might want to just add a link to the object rather than fully embedding it. You can do that if your workbook and the object you want to add are both stored on a SharePoint site, a shared network drive,

or a similar location, and if the location of the files will remain the same. This is handy if the linked object undergoes changes because the link always opens the most up-to-date document

.

1. Click inside the cell of the spreadsheet where you want to insert the object.
3. On the **Insert** tab, in the **Text** group, click **Object** .

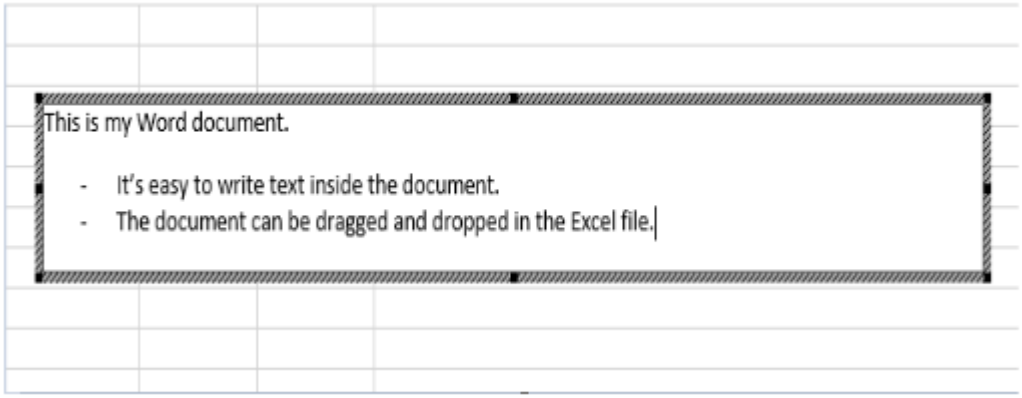



3. Click the **Create from File tab.**
4. Click **Browse**, and then select the file you want to link.
5. Select the **Link to file** check box, and click **OK**.

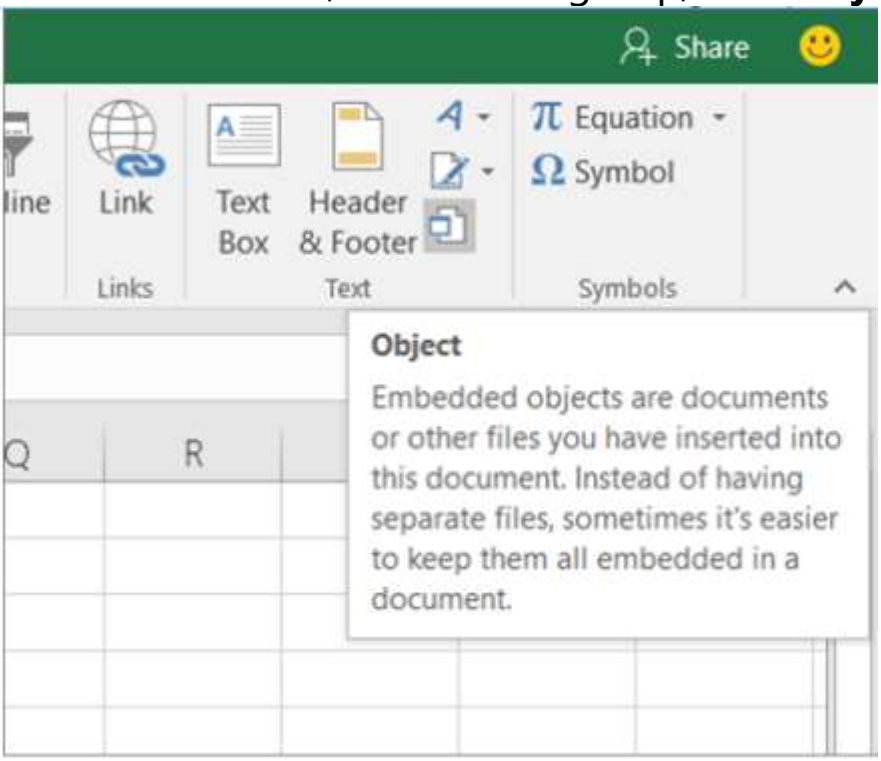
## Create a new object from inside Excel

You can create an entirely new object based on another program without leaving your workbook. For

example, if you want to add a more detailed explanation to your chart or table, you can create an embedded document, such as a Word or PowerPoint
file, in Excel. You can either set your object to be displayed right in a worksheet or add an icon that opens the file.



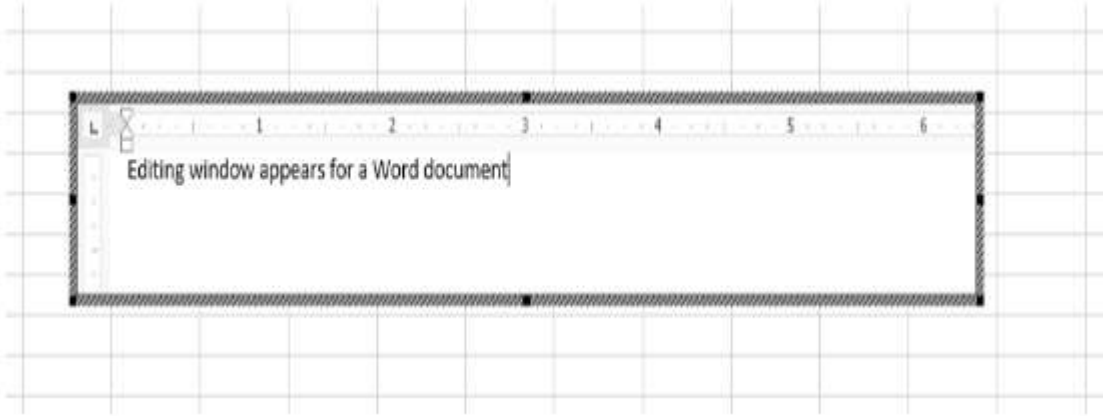

1. Click inside the cell of the spreadsheet where you want to insert the object.
2. On the **Insert** tab, in the **Text** group, click **Object** .




3. On the **Create New** tab, select the type of object you

want to insert from the list presented. If you want to insert an icon into the spreadsheet instead of the object itself, select the **Display as icon** check box.
4. Click **OK**. Depending on the type of file you are inserting, either a new program window opens or an editing window appears within Excel.

5. Create the new object you want to insert.
When you're done, if Excel opened a new program window in which you created the object, you can work directly within it.




When you're done with your work in the window, you can do other tasks without saving the embedded object. When you close the workbook your new objects will be saved automatically.

## C) Clip art and Text

**Ans.** Clip art (also clipart, clip-art), in the graphic arts, is pre-made images used to illustrate any medium. Today, clip art is used extensively. Clip art comes in many forms, both electronic
and printed. However, most clip art today is created, distributed, and used in an electronic form.
Since its inception, clip art has evolved to include a wide variety of content, file formats,

illustration styles, and licensing restrictions. Clip art is generally composed exclusively of
illustrations (created by hand or by computer software), and does not include

## Text

the main body of matter in a manuscript, book, newspaper, etc., as distinguished from notes, appendixes, headings, illustrations, etc.
the original words of an author or speaker, as opposed to a translation, paraphrase, commentary, or the like: the actual wording of anything written or printed:

## D) Slide show effects

**Ans. Slide Effect** is a presentation tool providing enhanced transitions and effects. Using a standard Presentation Software user interface, people can create slide presentation with movies and images in a simpler way than using a video editing software.