ATOMIC ENERGY EDUCATION SOCIETY

CLASS - 4

COMPUTER STUDY MATERAIL

ATOMIC ENERGY EDUCATION SOCIETY

STUDY MATERIAL FOR COMPUTER

CLASS-IV

Split-up of Syllabus

Quarter	Period	Units
I	April to June	1,2 and 3
II	July to September	4
III	October to December	5
IV	January to March	6 and 7

UNIT 1

COMPUTER HISTORY

1.1 Understanding Generations

The computers are classified into 5 generations based on the technology used during the period.

Generations of computer

- **First-Generation Computer**
  - **Period:** 1945 to 1956
  - **Technology**: Vacuum tubes were used.
  - **Language:** Machine language was used for storing and processing data.
  - **Examples:** Some of the first-generation computers are:
    - ENIAC (Electronic Numerical Integrator And Calculator)
    - EDVAC (Electronic Discrete Variable Automatic Computer)
    - Univac-I (**Univ**ersal Automatic Computer).
  - **Advantages:**
    - Fastest calculating devices at that period.
    - ENIAC was capable of performing 5000 additions and 350 multiplications per second.
  - **Disadvantages**
    - It was huge in size, so occupied more space.
    - They emitted large amounts of heat because they used lots of vacuum tubes and a Water cooling environment was required to control the heat generated.
    - They were prone to frequent failure hence they were unreliable.
    - Not portable. (Cannot carry from one place to another).

> Vacuum tube is a device that controls electric current between electrodes in an evacuated container.

- **Second-Generation Computer**
  - **Period:** 1956-1963
  - **Technology**: **Transistors** were used.
  - **Language: Assembly language** was used for storing and processing data.
  - **Examples:** Some of second generation computers are:
    - IBM 1620 , IBM 1401 and Honeywell 400.

> Transistors are more compact than vacuum tubes as they are made up of semiconductors.

Advantages:

- ➢ Its size was smaller as compared to the first-generation computers.
  - o **Disadvantages**
    - ➢ Required Air Conditioning environment to control the heat generated.
    - ➢ Frequent maintenance was required.
    - ➢ Quite expensive.

- **Third -Generation Computer**
  - o **Period:** 1964-1975
  - o **Technology:** Integrated Circuits (ICs) were used. A Single IC has many transistors, registers and capacitors, placed on a single thin silicon.
  - o **Language:** High-Level language such as BASIC, C, COBOL and FORTRAN.
  - o **Examples:** Some of third generation computers are:
    - ➢ IBM- 360, PDP – 8 , PDP- 11 and CRA 1.
  - o **Advantages**
    - ➢ Smaller in size as compared to the second-generation computers.
    - ➢ Cost is less compared to the second generation computers.
    - ➢ Generated less heat.
    - ➢ Reduced computational time. (Increased calculation speed)
    - ➢ Maintenance cost was less.
    - ➢ Easily portable.

- **Fourth-Generation Computer**
  - o **Period:** 1976-1989
  - o **Technology: Very Large Scale Integration (VLSI) technology** was used.
  - o **Language: Object Oriented Programming** language such as C++ and Java.
  - o **Examples:** Some of forth generation computers are:
    - ➢ IBM-PC, Apple Macintosh and Sun SPARC station
  - o **Advantages**
    - ➢ Cost is less compared to the third generation computers
    - ➢ Huge memory capacity and high functional speed.
    - ➢ Consumed less power.
    - ➢ Generated a negligible amount of heat.

- **Fifth-Generation Computer**
  - **Period:** 1990-Till date.
  - **Technology: SLSI technology**.

  - ➢ The fifth generation computers are using Super Large Scale Integrated (SLSI) chips that are able to store millions of components on a single chip.
  - ➢ **Language:** Prolog, Mercury are the examples of fifth generation languages. They are based on **Artificial Intelligence (AI)**. They try to simulate the human way of thinking and reasoning. Artificial Intelligence includes areas like Expert System, Natural Language Processing. Speech Recognition, Voice Recognition, Robotics, etc.
  - **Examples:** Some of fifth generation computers are:
    - ➢ IBM notebooks, Pentium PCs, SUN Workstations and PARAM 10000
  - **Advantages**
    - ➢ These computers are much faster than other generation computers.
    - ➢ Much smaller in size than other generation computers
    - ➢ Easily portable and easy to handle.
    - ➢ Advancement in Superconductor technology.

Artificial intelligence is Intelligence displayed by machines, in contrast with the natural intelligence (NI) displayed by humans and other animals. AI research is defined as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of success at some goal.

Applications of AI include Natural Language Processing, Gaming, Speech Recognition, Vision Systems, Health care, Automotive etc.

Vaccum Tubes - Technology used in 1st Generation Computers	**Transistors** - Technology used in 2nd Generation Computers
Integrated Circuits - Technology used in 3rd Generation Computers	**Very Large Scale Integration** - Technology used in 4th Generation Computers
Super-Large Scale Integration – Technology used in 5th Generation Computers	

Figure 1. 1: Technologies used in different Generations of Computers

1.2 Classification of Computers

Computers can be classified based on the size, purpose, working principle etc.,

In this chapter we will discuss the classification based on Size and Purpose.

Classification of computer based on the size

- Micro Computer
- Mini Computer
- Mainframe Computer
- Super Computer

- **Micro Computer**

   o Micro Computers are the smallest, most affordable and most reliable.
   o Micro Computer is a computer that has a microprocessor chip as its CPU.
   o Microcomputers include (i) portable computers and (ii) Desktop computers.
      (i) Portable Computer
      ➢ Portable (users can carry it) computer is a very small, easy to use microcomputer.
      ➢ Portable Computer includes personal digital assistant (PDA), notebook computer and laptop.
      (ii) Personal Computer or Desktop Computer
      ➢ The Personal computer is a microprocessor based, single user computer.
      .

Figure 1.2: Micro Computer

- **Mini Computer**

  o A Minicomputer is a medium sized computer developed in 1960s.

  o An early and highly successful minicomputer was Digital Equipment Corporation's (DEC) 12-bit PDP-8.

Figure 1.3 : PDP-8

- **Mainframe Computer**

  o A mainframe computer is a large, powerful computer that handles the processing for many users simultaneously (up to several hundred users).

  o The mainframe computers have large storage capacities, very high speed of processing (compared to micro and mini computers).

  o They are kept in air-conditioned environment.

  o **Applications:** They are used by big companies, banks, government departments, etc.

Figure 1.4: Mainframe Computer

- **Supercomputer**

  o It is the largest computer.

  o A supercomputer is the fastest and the most expensive computer.

  o This has extremely large storage capacities and computing speeds that are at least ten times faster than that of other computers.

  o It can perform hundreds of millions of instructions per second.

  o **Applications:** The super computer is used for specialised applications such as large-scale numerical problems in scientific and engineering disciplines. These include applications in electronics, petroleum engineering, weather forecasting, medicine and nuclear energy research.

Figure 1.5: Supercomputer

Classification of computer based on usage

- Special purpose computer
- General purpose computer

- **Special Purpose Computer**

  o Special purpose computers are designed for the requirements of a particular task or application.

  o **A**pplication **S**pecific **I**ntegrated **C**ircuit, Pronounced "**a**-sick." A chip that is custom designed for a specific application rather than a general-purpose chip such as a microprocessor.

  o For example,computers used for weather forecasting. It incorporates the instructions to perform the specific application into the design of internal storage.

Figure 1.6 : Special Purpose Computer

- **General Purpose Computer**

  o The general-purpose computer is designed to meet the needs of many different applications.

  o The instructions needed to perform a particular task are not wired permanently into the internal memory. When one job is over, instructions for another job can be loaded into the internal memory for processing.

  o Thus, a general-purpose computers can be used to prepare paybills, manage inventories, print sales reports, do scientific calculations and so on.

Figure 1.7: General Purpose Computer

EXERCISES

I. Match the following Computer Generations given in the column-I against the technology used during that generation given in the second column and write the respective alphabets in the below given line.

Column-I Computer Generation	Column-II Technology Used
1. 1st Generation	A. Very Large Scale Integration
2. 2nd Generation	B. Vacuum Tube
3. 3rd Generation	C. Super Large Scale Inegration
4. 4th Generation	D. Transistors
5. 5th Generation	E. Integrated Circuits

Answers: 1.____ 2. ____ 3. ____ 4. ____ 5. ____

II. True or False

1. 1st generation computers emited large amounts of heat.

2. Object Oriented Langages were used in 4th generation computers.

3. Prolog, Mercury are the examples of 1st generation language.

4. A mainframe computer has large storage capacities.

5. Portable computers cannot be moved from one place to another.

III. Solve the crossword puzzle. (Clue: Use, the terms of "Types of computers").

ACROSS

4   Large computer

DOWN

1   Smallest computer
2   Largest comp
3   Medium sized computer

UNIT II

WORD PROCESSOR

2.1 File Menu

In MS Office 2007, the basic commands of File Menu such as New, Open, Save as, Close are available in Office button.

2.1.1 Create a new file

- **Steps to Create a new file**
  - Click on Office button.
  - Click on **New** option.
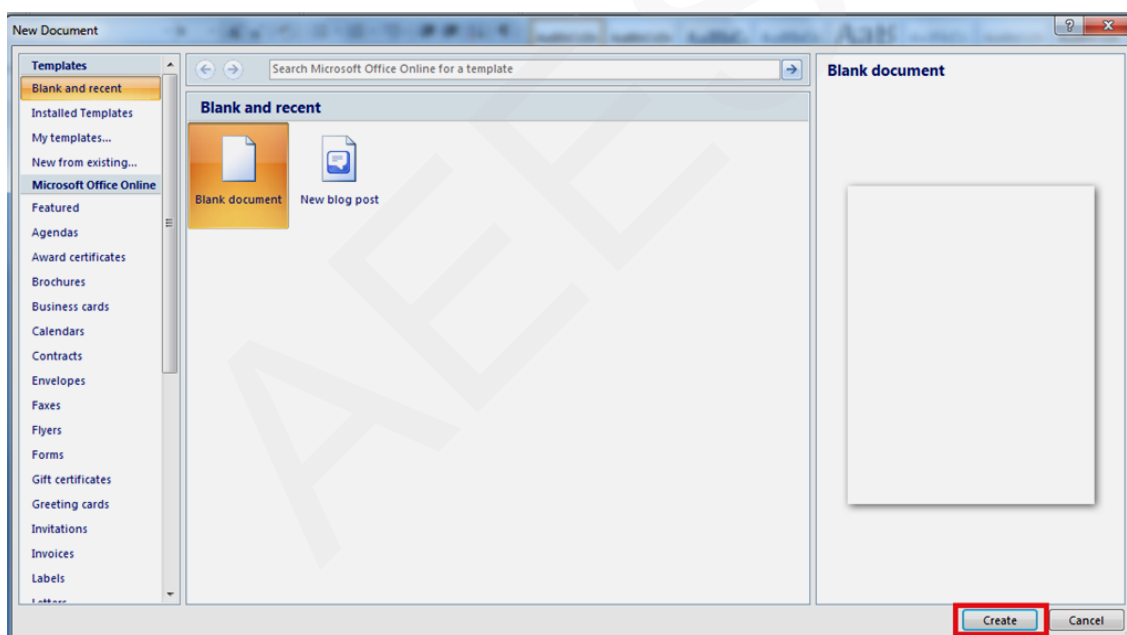 - The New Dialog box will appear as shown below.

Figure 2.1 : New document dialog box

  - Select **Blank Document** option.
  - Click on **Create button**.
  - A new document will be displayed.

2.1.2 Open an Existing file

- **Steps for Opening an Existing file**
  - Click on Office button.
  - Click on **Open** option.
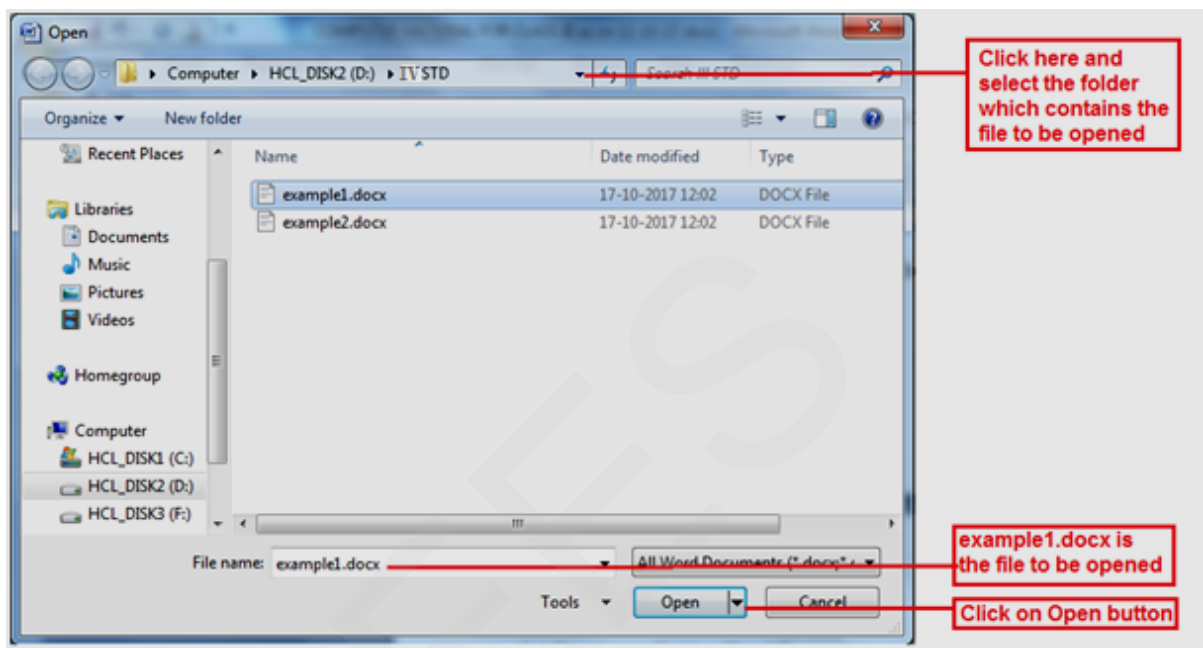 - An Open Dialog box will appear as shown below,

Figure 2.2 : **Open** dialog box

  - Select the location of the file to be opened .
  - Open the file by double clicking on it
  - Click Open button.

2.1.3 Save the current file

Whenever a new file is created, it must be saved in the specific location, so that the user can access the file for further use.

- **Steps to save the Document for the first time**
  - Click the Office button.
  - Click on **Save** option.
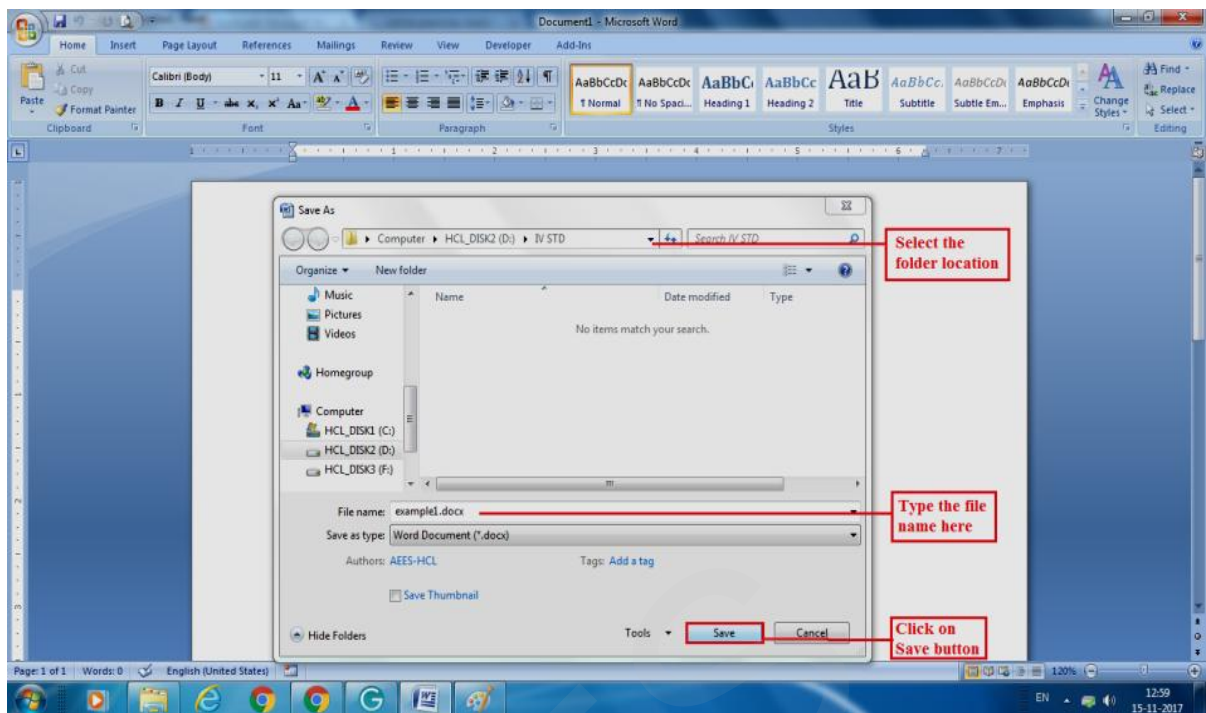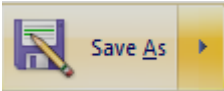 - Save as dialog box appears as shown below, type the file name.

Figure 2.3 : *Save as* dialog box

○ Click on **Save** button

The word file is saved with the **.docx** extension

Word saves the document in a default location. To save the document in a particular location, select the appropriate folder name as shown in the figure.

2.1.4 Save As- saving the file with different name (Copy file)

• "Save" and "Save As" both are used for different purpose.

• "Save" option is used when the file is to be saved for the first time.

• Save as option is used when a already saved file needs to be saved with another name (like making another copy), in this case the previously saved copy also available.

• **Steps to save the file with different name (Save As)**

  ○ Open the file, which is to be saved in another name.

  ○ Click on the Office button

  ○ Click on Save As option shown in the menu

  ○ The Save As dialog box appears as shown below,
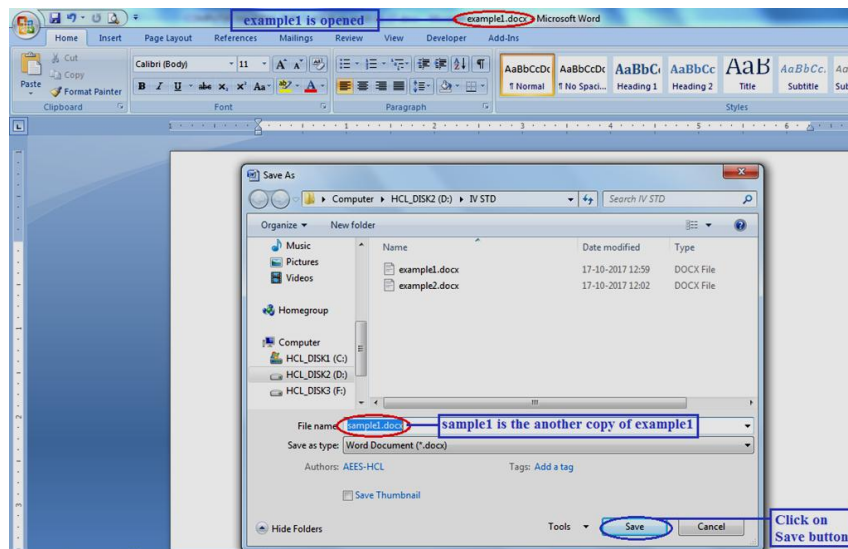
Figure 2.4 : Save as dialog box

- o Select the location of the file.
- o Type the new file name
- o Click on **save** button.

2.1.5 Close the file

Before closing the file, save the file as mentioned in 2.1.3

- **Steps to Close the file**
  - o Click on the Office button.
  - o Click on the **Close** option.

Or

  - o Click on the Close button on the windows control.

2.2 View Menu

2.2.1 Print Layout

Print layout is used to view the document as it will appear on the printed page.

- **Steps to View the file in Print Layout view**
  - o Click on **View** Menu
  - o Click on **Print Layout** icon in the Document views group.
  - o The document appears as it will appear on the printed page.

Figure 2.5 : Print layout view- A sample screen shot

2.2.2 Web Layout

Web layout is used to view the document as it would look as a webpage. This layout can be used for designing documents for the web. So the view enables you to get an idea of how the document would look as a webpage.

- **Steps to View the file in Web Layout view**
    - Click on **View** Menu
    - Click on **Web layout** icon in the Documents view group.
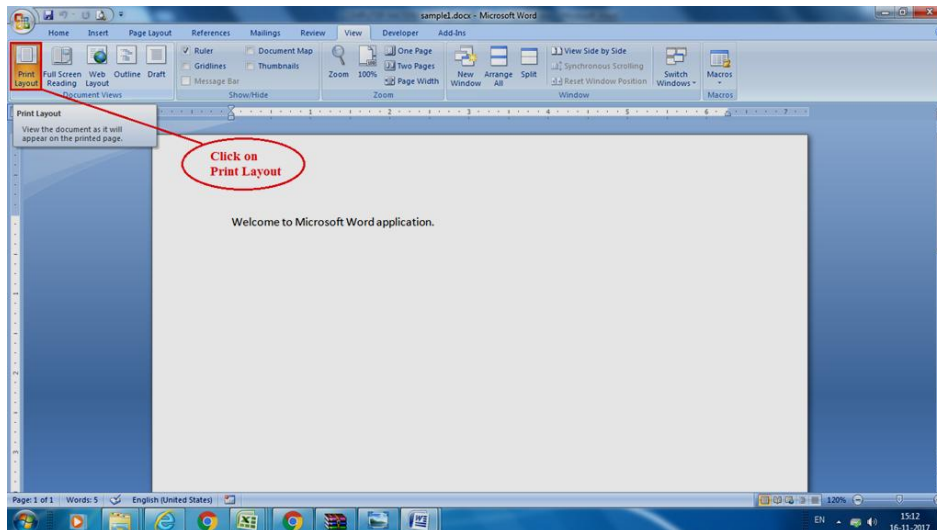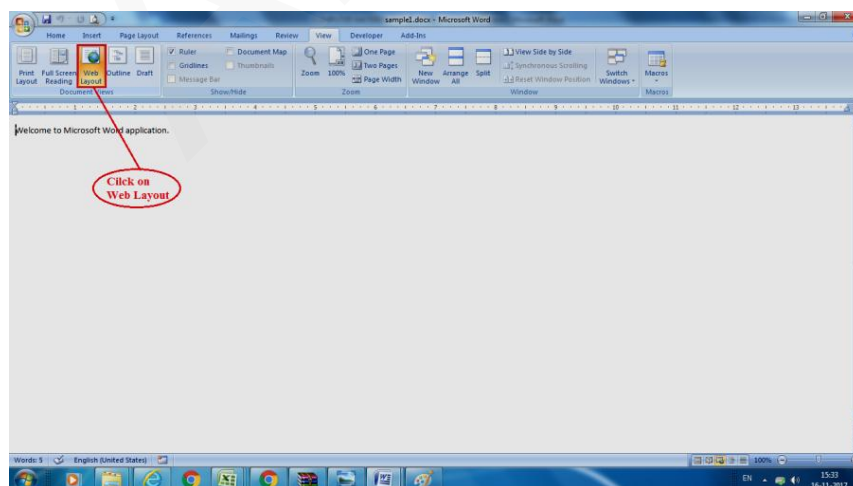   - The document appears as it will appear on the web page.

Figure 2.6 : Web layout view- A sample screen shot

2.2.3 Full Screen

Full screen layout is used to view the document in full screen reading view in order to maximize the space available for reading or commenting on the document.

- **Steps to View the file in full screen view**
  - Click on **View** Menu
  - Click on **Full Screen Reading** icon in the Documents view group.
  - The document appears in the full screen reading view as shown in the screen shot given below,
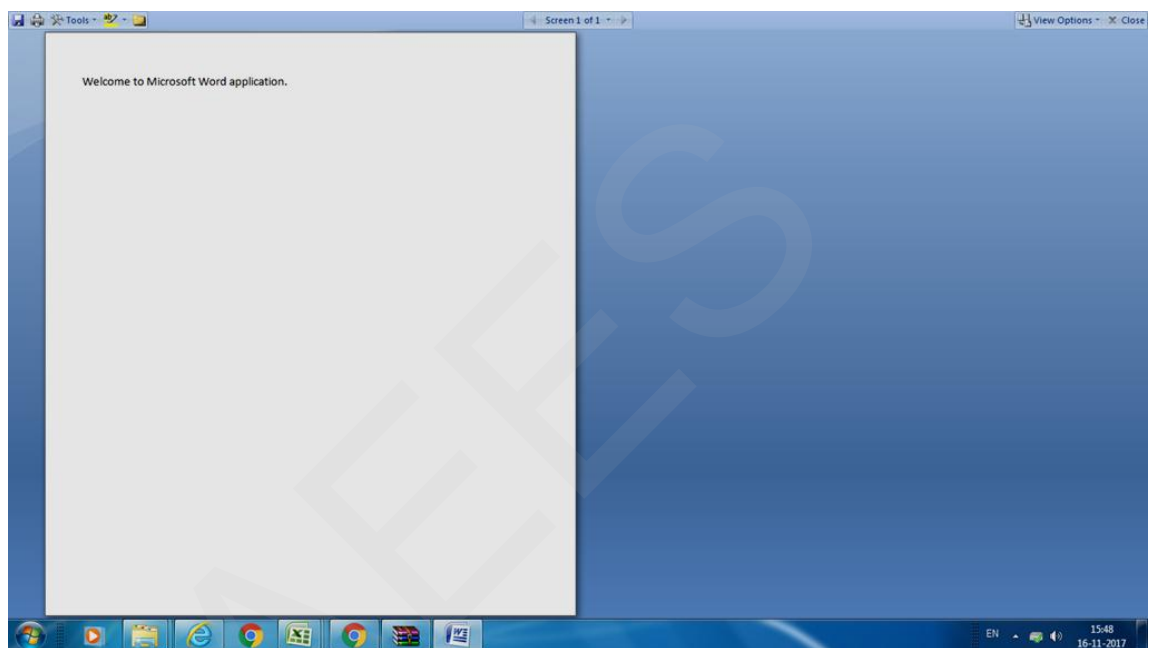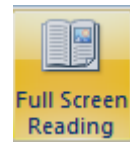
Figure 2.7 : Full Screen view- A sample screen shot

2.2.4 Zooming

Zoom is used to get a closure view of the document.

Zoom controls are also available on the status bar at the bottom of the window.

- **Steps to View the file in full screen view**
  - Click on **View** Menu
  - Click on the **Zoom icon** in the Zoom group.
  - The zoom dialog box appears as shown below,
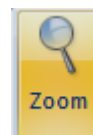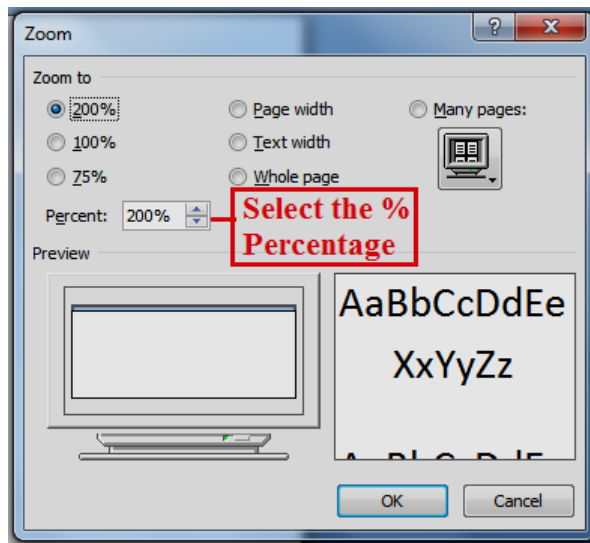
Figure 2.8 : Zoom dialog box

o Select the value of percentage to be zoomed.

o Click on Ok button.

o The document is zoomed as shown below,
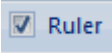
Figure 2.9 : Zooming view- A sample screen shot

2.2.5 Ruler

The ruler is used to measure and line-up objects in the document.

- **Steps to use Ruler**
  - Click on **View** Menu
  - Click on the **ruler** icon in the Show/Hide group. ☑ Ruler
  - The document appears with a ruler as shown below,
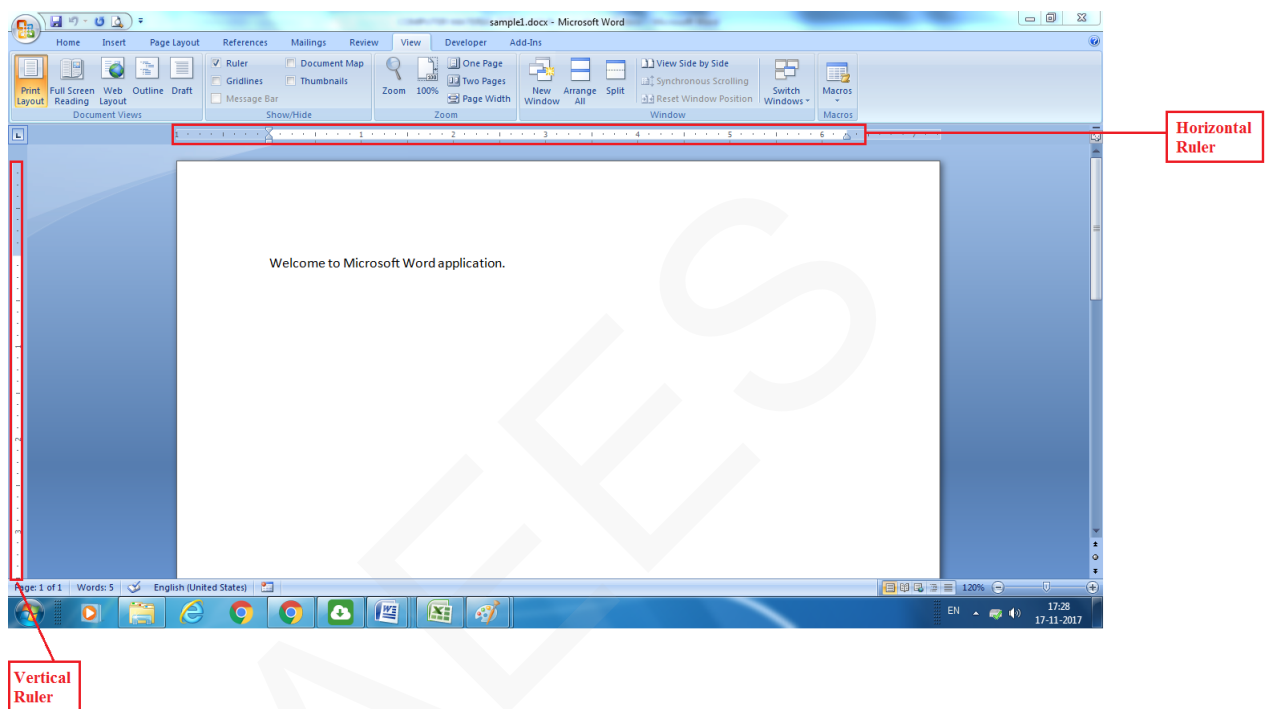
Figure 2. 10: Ruler screenshot

EXERCISES

I. State True of False.

1) For a newly created document both "Save" and "Save As" options work as same for first time.
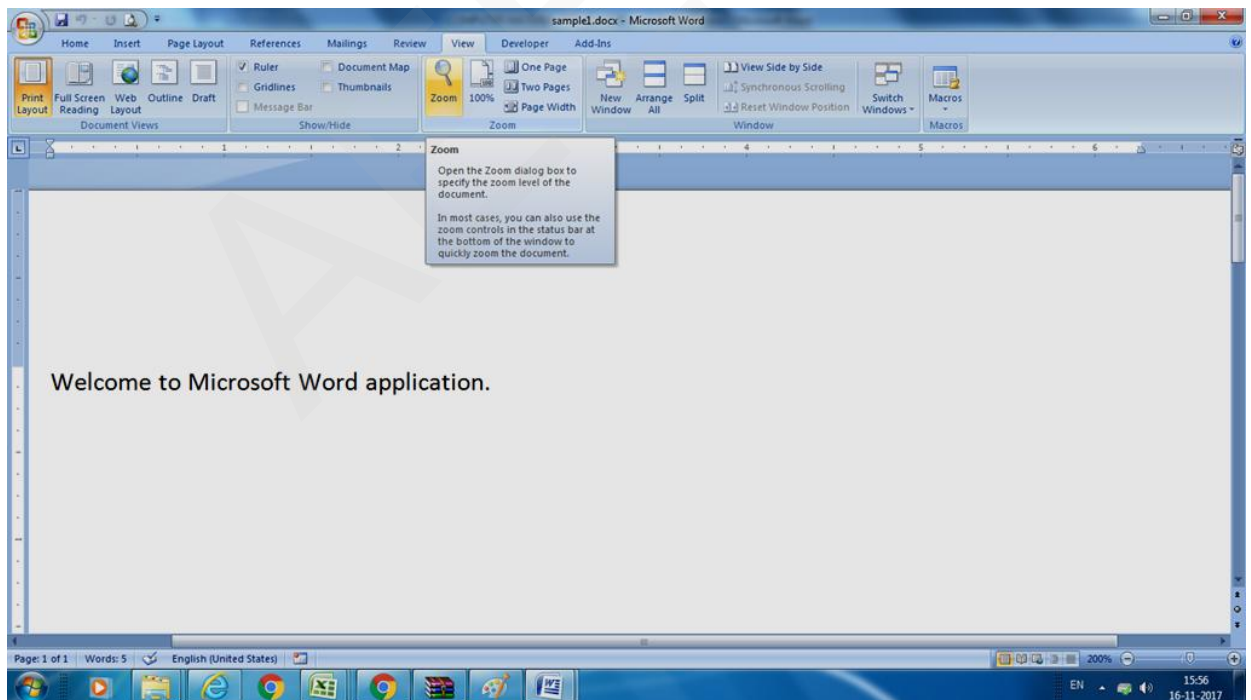
2) We can not insert tables inside a word document.

3) We can also use Escape (Esc) key present on the key-board to come from full view mode to normal view mode.

4) With the help of ruler we can re-size the margin size.

5) To quickly edit we use Draft view.

II. PRACTICAL EXERCISES

1. i. Create a word file

   ii. Type your name, class, section, roll no. and your ambition one by one.

   iii. Save the file with the name "AboutMe"

   iv. Close the file

2. i. Open the file named "AboutMe"

   ii. Write your hobbies at the last line of the file.

   iii. Save the file with the name "MyHobbies"

3. i. Open the file "AboutMe"

   ii. View the file using Print Layout view, Web layout view, Full screen and Zooming.

UNIT- III

EXPLORING WINDOWS

3.1 Staring Windows Explorer

Windows Explorer is the file management application in Windows. Whenever the user accesses a disk or opens a folder containing files, they are using the Windows Explorer utility.

When a file is selected within the Windows Explorer interface, users can perform various actions such as renaming, moving, copying, emailing, printing or deleting the file. Entire folder can also be opened, explored, shared, copied, cut, pasted, moved or deleted.

- **Steps to start windows explorer**
  - Right-click on the **Start** button
  - Click on **Open Windows Explorer** option. The explorer window appears as shown in figure 3.1

    Or

  - Press **Windows+E** on the keyboard (shortcut for opening windows explorer).

3.2 Components of Explorer Window

The windows explorer has several components as shown below,
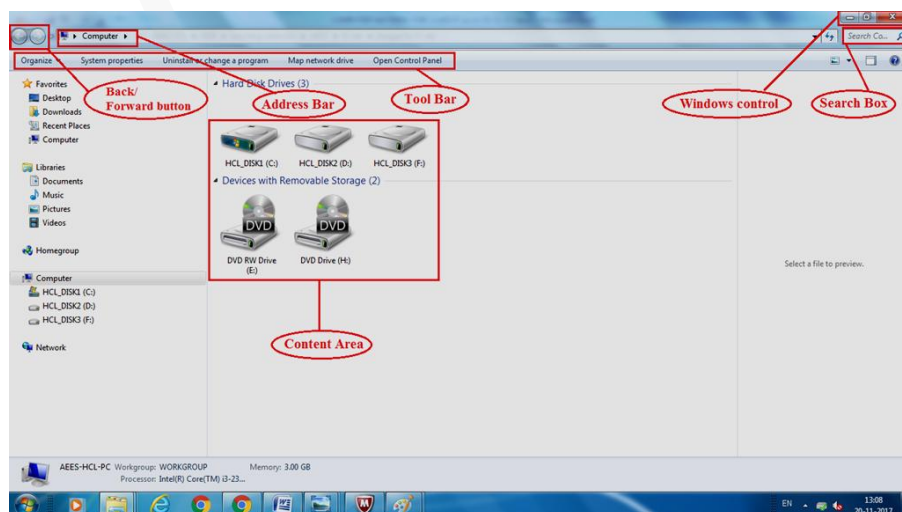
Figure 3.1: Components of Windows explorer

- **Back/Forward button:** It is used to go back to previous location and again come back to the same location respectively.

- **Address Bar:** It shows the current location of the file or folder selected. Use the Address bar to navigate to a different folder without closing the current folder window.

- **Tool Bar:** It consists of the tools for organizing the folder contents, for showing the system properties, to uninstall or change a program, to open control panel etc.,

- **Windows control:** It consists of three buttons for Minimizing, Maximizing and Closing the windows explorer.

- **Search box:** It is used to look for a file in the current folder by entering a word in the search box. As soon as a single character is entered, it starts searching the files.

- **Content Area:** It contains the folders and when the folder is open it shows the files in the folder.

3.3 Panes of Explorer Window
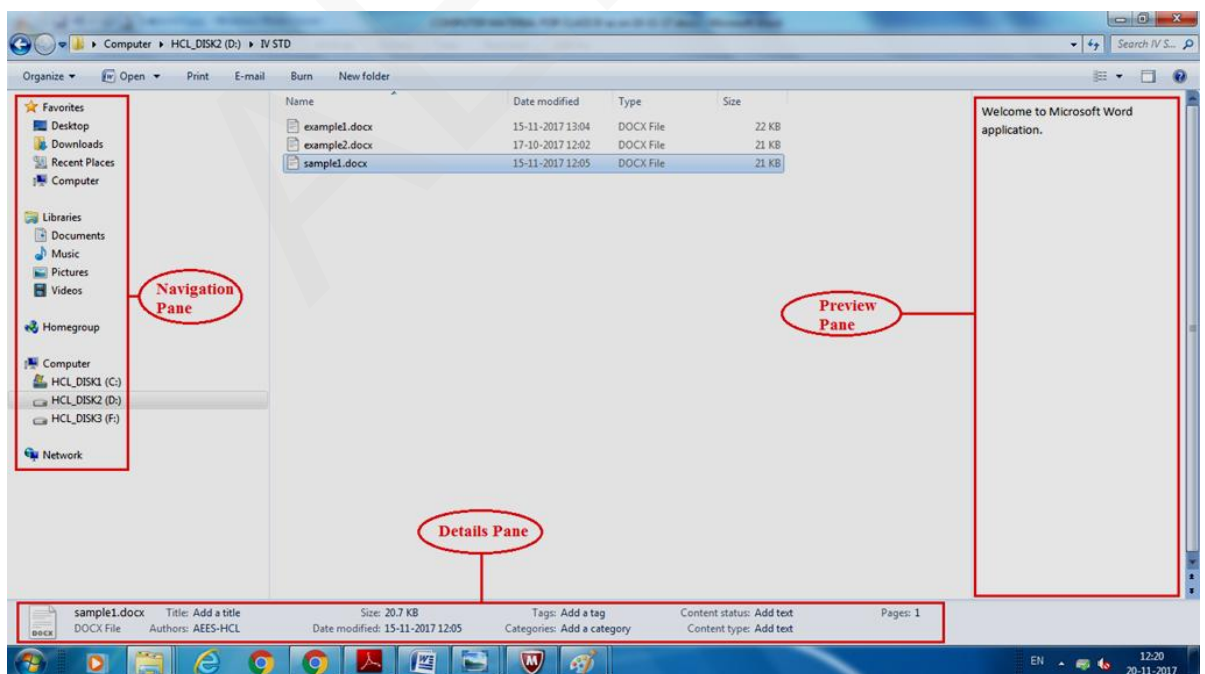
Figure 3.2: Components of Windows explorer

- **Navigation pane or left pane:** The Navigation Pane appears on the left side of the windows explorer. By default, the navigation pane displays five sections: Favorites, Libraries, Homegroup, Computer and Network.

- **Details pane:** It shows the common properties of the selected files, such as file name, authors, size, date modified, pages etc.,

- **Preview pane:** It shows the content of the file without opening it in a program.

3.4 Working with folder in left pane

- Using the Navigation pane or left pane, you can navigate directly to the folder that contains the files you are looking for.

- Navigation pane or Left pane is used to directly navigate to the required file.

Figure 3.3: Left Pane

3.5 Managing files and folders in Windows Explorer

Create a new folder

- **Steps for creating a new folder**

  o Open the Windows Explorer by pressing **Windows key+E** on the keyboard.

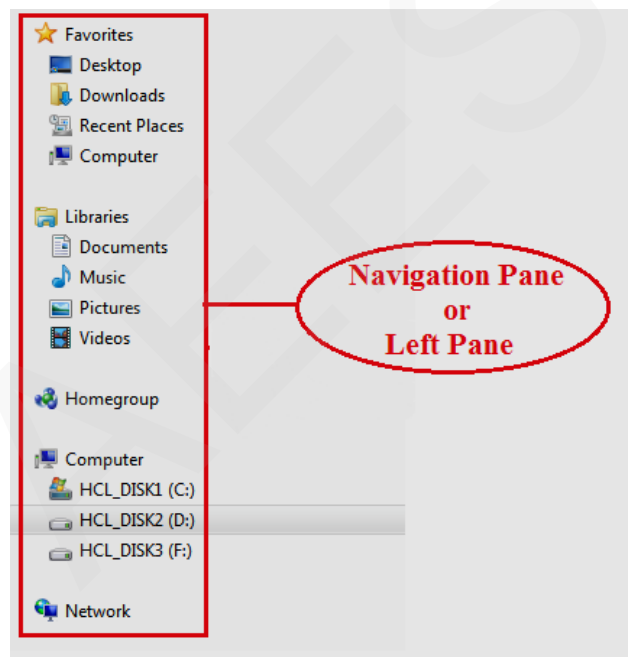o Open the drive (Say for D: or E:) in which new folder needs to be created.

o **Right click** on the content area of the Windows Explorer window.

o Click on **New** option.

o Click on **Folder** option as shown below,
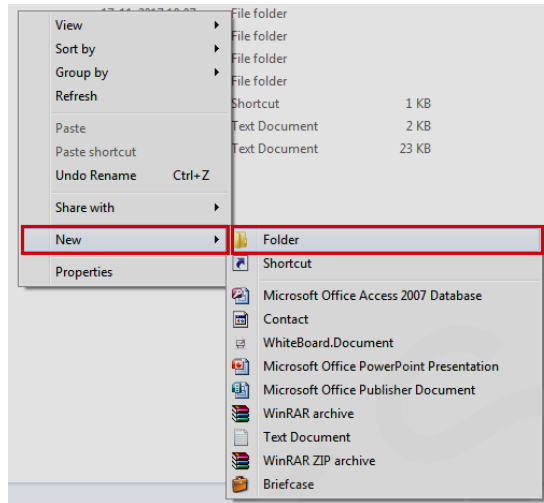
Figure 3.4 : Creating a new folder – screen shot

o A folder named New folder is created.

o When the folder is created for the first time, the name "New folder" is highlighted, if the user wish to rename the folder, type the required folder name.

Delete a folder or file

- **Steps for deleting a folder**

o Open the Windows Explorer by pressing **Windows key+E** on the keyboard.

o Open the drive in which the folder or file to be deleted is saved.(Say for D: or E:)

o Select the folder to be deleted.

o **Right click** on the folder

o Click on **Delete** option.

o A dialog box appears asking that " Are you sure you want to move this folder to the Recycle Bin?" as shown below,
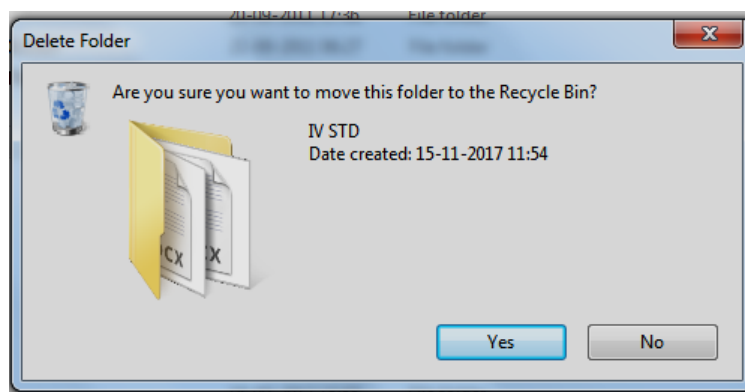
Figure 3.6: Delete folder – dialog box

- o Click on **Yes**. The folder and its contents will be moved to Recycle Bin.

3.6 Modes of View

The files and folders displayed in the content area of the windows explorer can be viewed in one of the following modes.

- • Different modes of file views are,
  - o Extra Large Icons
  - o Large Icons
  - o Medium Icons
  - o Small Icons
  - o List
  - o Details
  - o Tiles
  - o Contents.
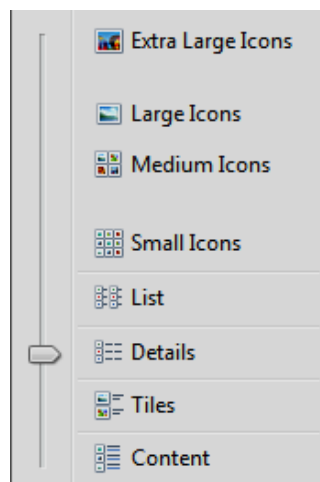
Figure 3.6 : Different Modes of Views

In the following table the screenshot of different file views is shown,

Extra large icon View	Large icon View	Medium large icon VIew
Small icon View	List View	Details View
Tiles View	Content View	
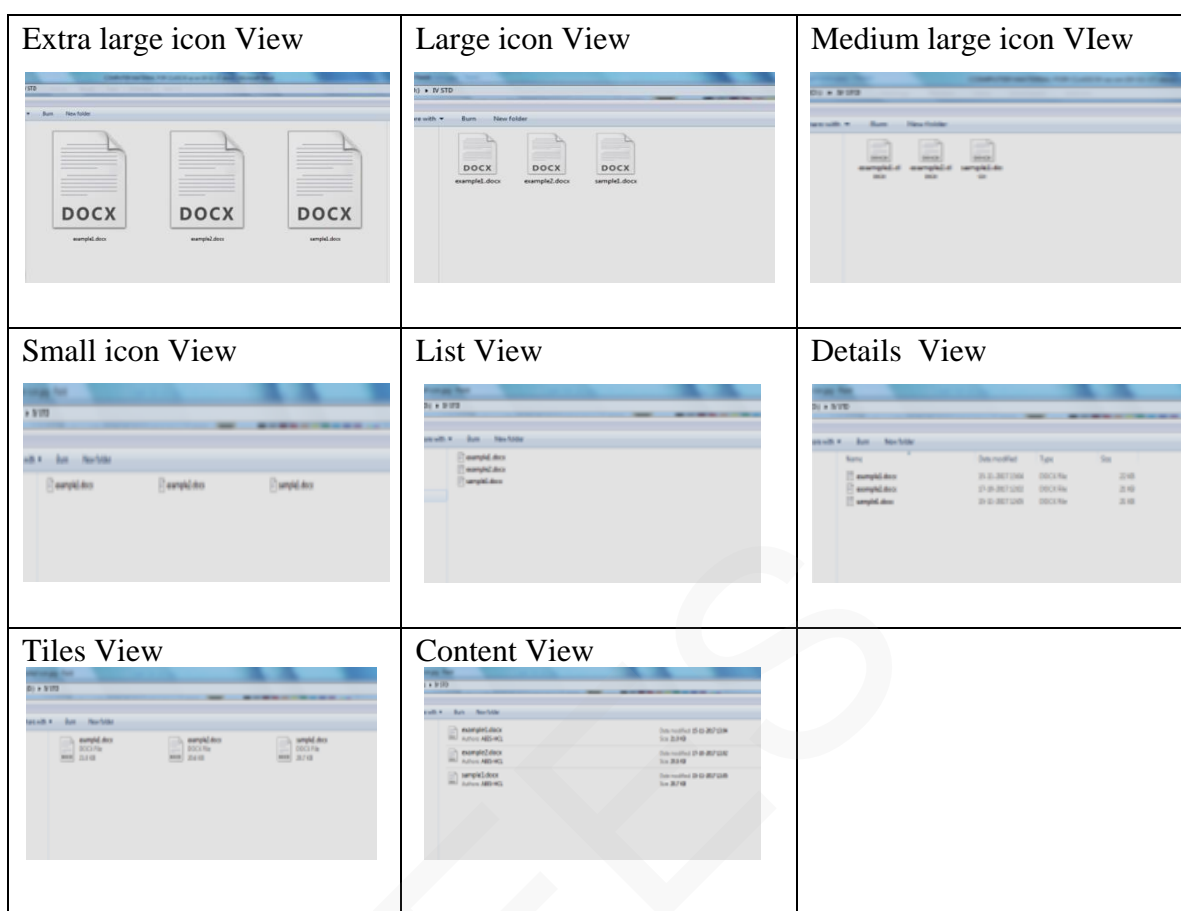
Figure 3.7:Screen shots of different modes of file views

3.7 File naming convention

- Standards for naming the file is called file naming convention.
  - Use a period (dot) to separate the base file name from the extension in the name of the file.
  - Use the underscore (_) as element delimiter.
  - Do not use spaces or other characters such as: ! # $ % & ' @ ^ ` ~ + , . ; =) (
  - Do not assume case sensitivity. For example, IV STD, IV std and IV Std are same.

3.8 Searching Files

- A file can be searched from a folder, disk or computer by entering a word in the search box shown in figure 3.1 of the windows explorer.
- If the user does not remember the file name, by using the file extension also the files can be searched.
- For example, if the user is searching for a word document typing "***.docx**" in the search box, displays all the word documents.

3.9 Creating Shortcuts

- A shortcut is useful for accessing a file or software program easily without looking through the Start Menu.
- For example, a file is saved in D: drive, IV std folder, with file name sample1.docx and the shortcut for the file (sample1.docx – Shortcut) is created and placed on the desktop, whenever want to open sample1.docx file click on the "sample1.docx – Shortcut" on the desktop.

- **Steps to create shortcut**

  - **Open the location of the file** or software program for which shortcut needs to be created.

  - **Select the file** or software program and **right click on it**
  - Click on **Create shortcut** option.
  - A shortcut file is created in the same location with a small arrow in the bottom left corner of the icon.
  - Once the shortcut is created, it can be copied or cut and passed on the desktop for easy access.

> In Windows shortcut file extension is **.lnk**.
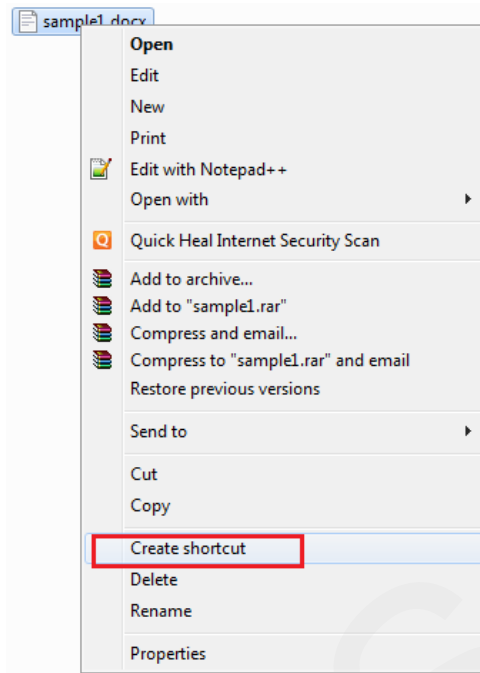
Figure 3.8: Creating shortcut

EXERCISES

I. Write True or False.

1) List view shows the size of file.

2) When we delete a file or folder, it is moved to MyDocuments.

3) Confirmation Dialog box appears before deleting a file or folder.

4) We can use @ symbol in the file name even though it is not a file name convention.

5) we can give the file name with any length.

PRACTICAL EXERCISES

1. i. Open windows Explorer using shortcut.

   ii. Create a folder in D drive with your name.

   iii. Move the files "AboutMe" and "MyHobbies" to this folder.

   iv. View the files in this folder in different file views(Extra Lagre Icons, Large Icons, Medium Icons, etc.,)

   v. Create shourtcuts for both the files. And place it on the desktop.

2. Search the "MyHobbies" file using the search box. Open the file.

UNIT- IV

POWERPOINT PRESENTATION

4.1 Starting Powerpoint

Powerpoint is an application software used to create presentations.

4.1.1 Create a new file

- **Steps to create a new file**
    - Click on **Start button**
    - Click on **All Programs**
    - Click on **Microsoft Office**
    - Click on **Microsoft Office PowerPoint 2007**
    - The New Presentation dialog box will appear as shown below,
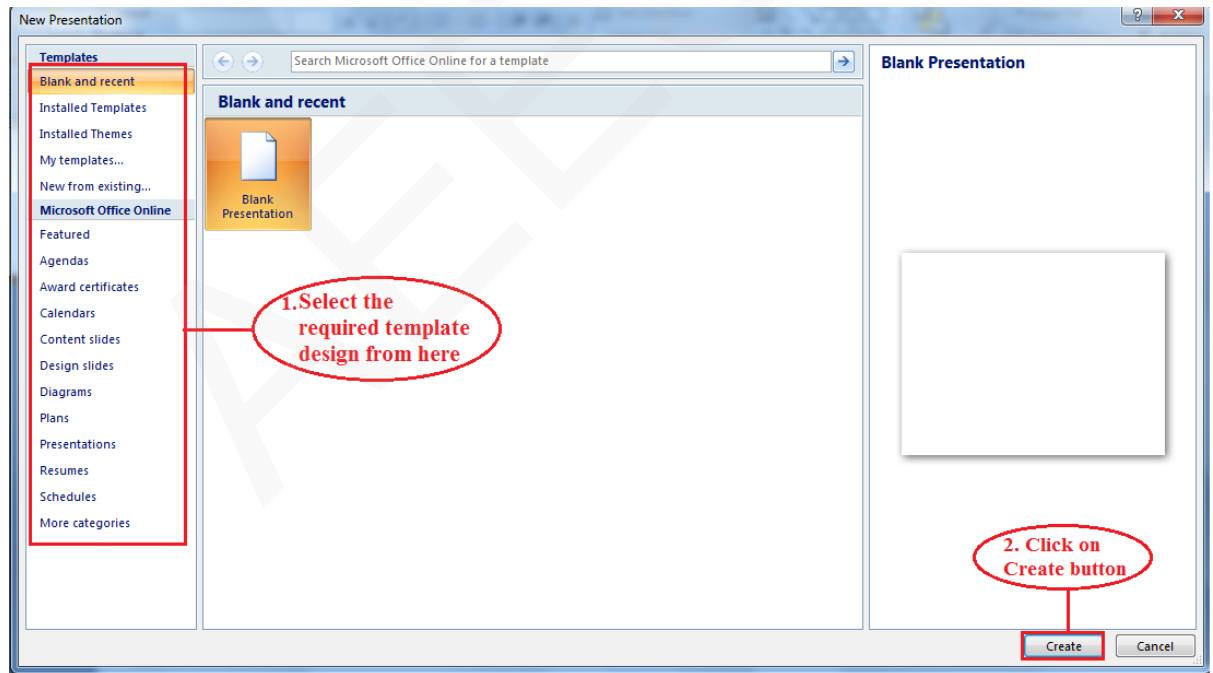
Figure 4.1: New Presentation dialog box

    - Blank and recent Template was selected by default.
    - Click on Blank presentation will be created.
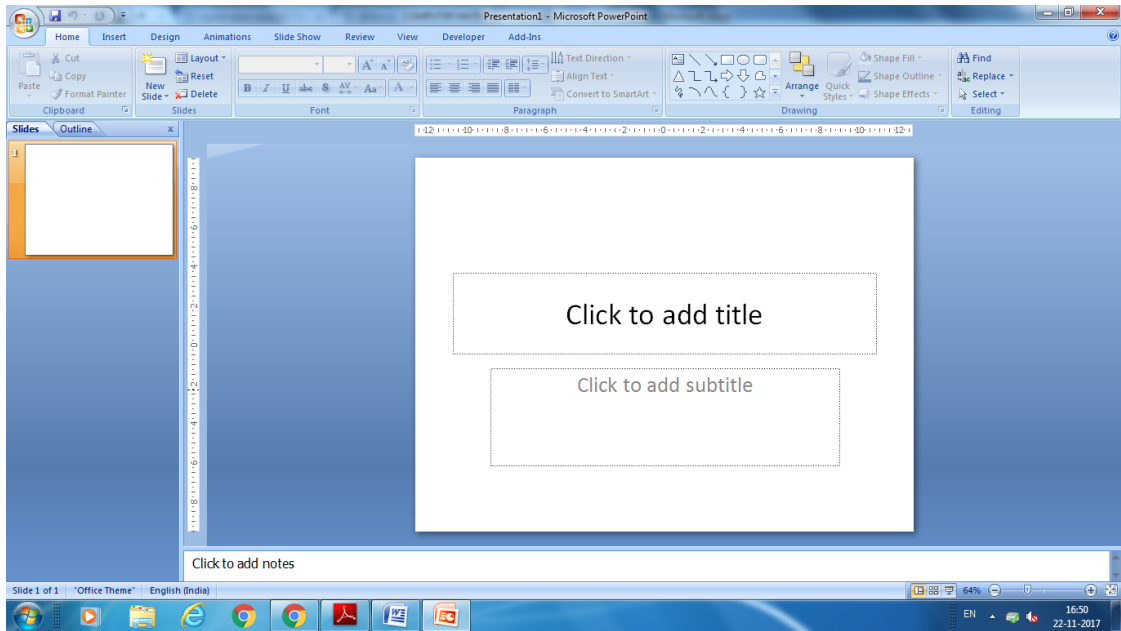
Figure 4.2: A Blank Presentation

4.1.2 Opening an Existing file

- **Steps for Opening an Exiting file**
  - Click on **Office button**
  - Select **Open.**
  - An Open Dialog box will appear as shown below,

Figure 4.3: Open dialog box

- Select the file location and click on it.
- Click on Open button. The selected file opens.

4.1.3 Save the current file

- **Steps to save the current file for the first time**

  o Click the save option as shown here, on the Quick Access Toolbar.

  o Save as dialog box appears as shown below, type the file name.
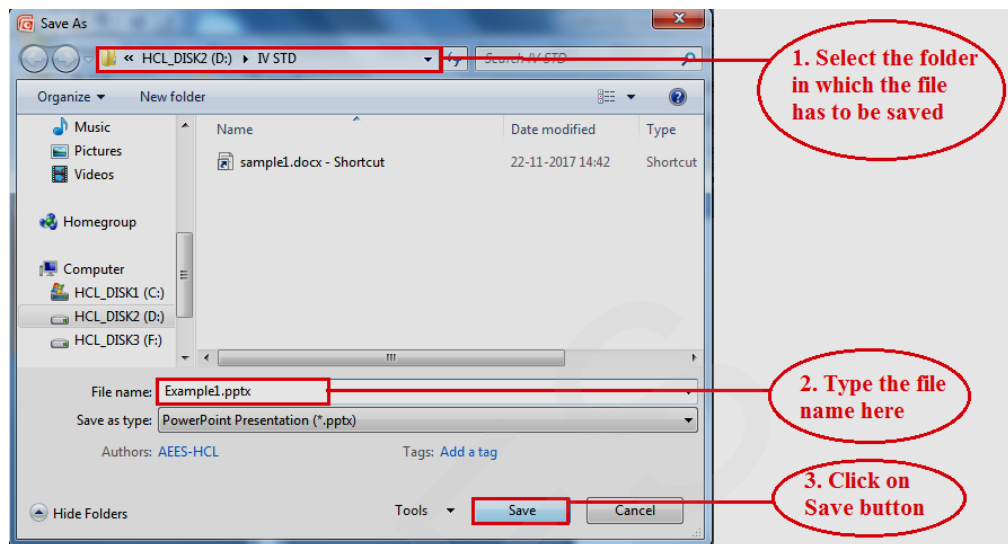
Figure 4.4 : *Save as* dialog box
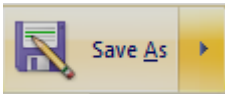
  o Click on Save button
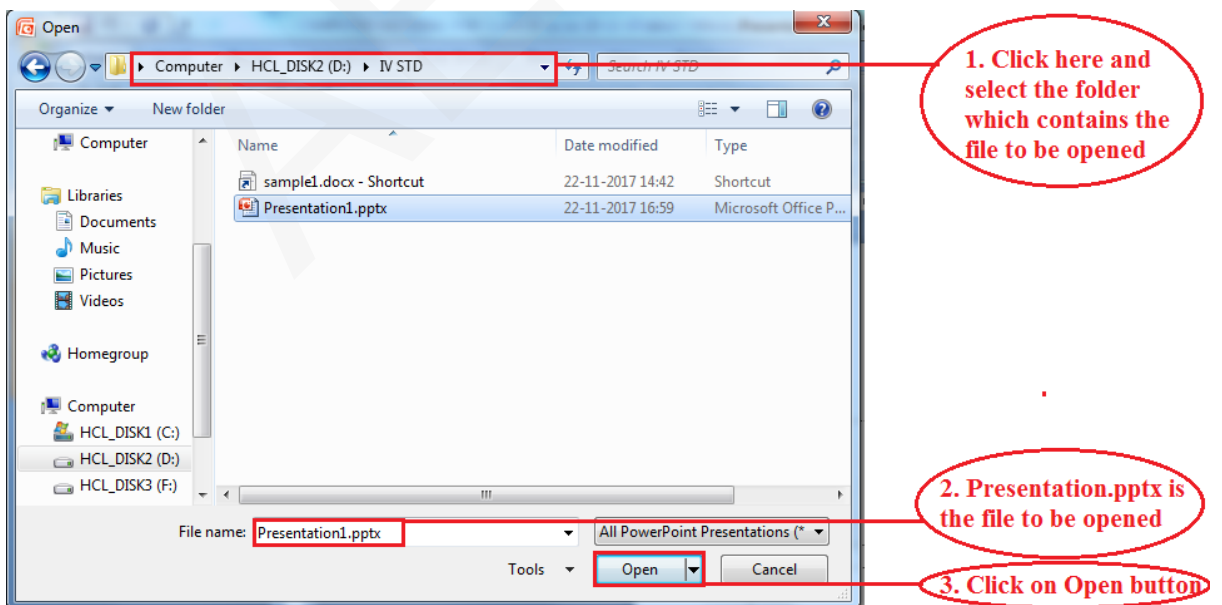
The power point presentation is saved with the **.pptx** extension

4.1.4 Save As- saving the file with different name (Copy file)

- "Save" and "Save As" both are used for different purpose.

- "Save" option is used when the file is to be saved for the first time.

- "Save as" option is used when a already saved file needs to be saved with another name (like making another copy), in this case the previously saved copy also available.

- **Steps to save the file with different name (Save As)**

  o Open the file, which is to be saved in another name.

  o Click on the Office button

  o Click on Save As option shown in the menu

  o The Save As dialog box appears as shown below,
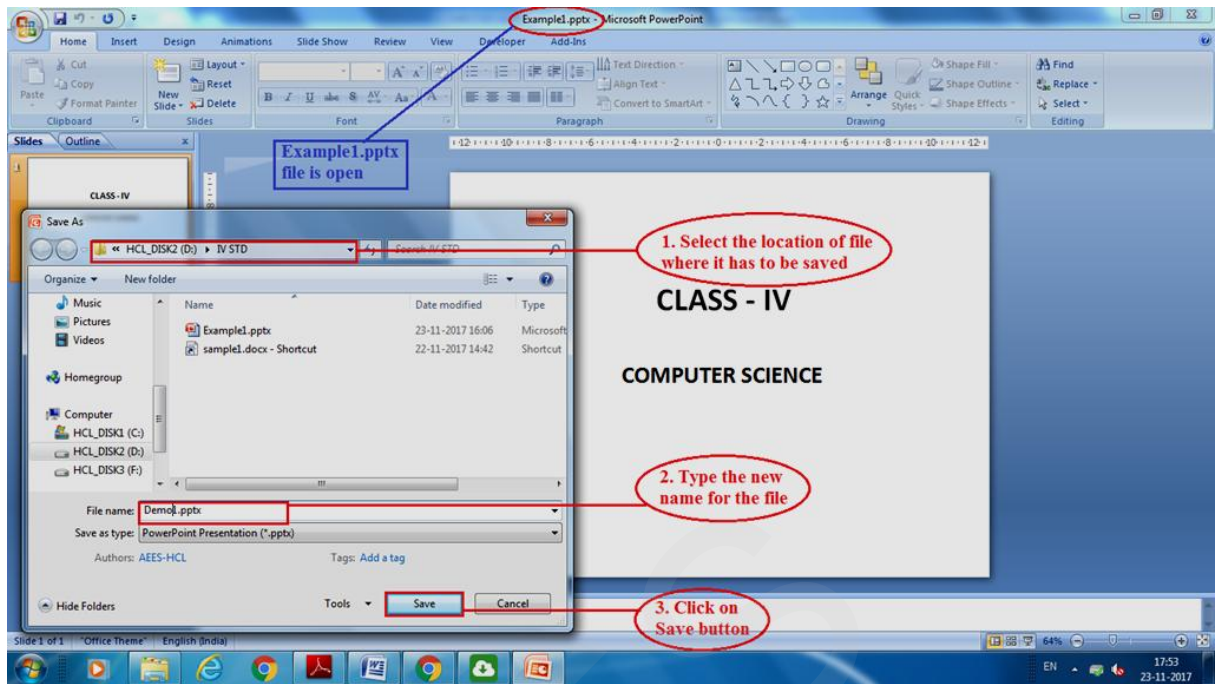
Figure 4.5 : Save as dialog box

- o Select the new location of the file.
- o Type the new file name.
- o Click on save button.

4.1.5 Close the file

Before closing the file, save the file as mentioned in 4.1.3

- **Steps to Close the file**
  - o Click on the Office button.
  - o Click on the **Close** option.

<div align="center">**or**</div>

  - o Click on the Close button on the windows control.

4.2 Formatting a Presentation

Formatting means organizing the text and images in the presentation. Formatting includes changing the font size, style, color, line spacing and text alignment etc.

4.2.1 Changing the font

- **Steps to change the font**
  - o Select the text for which the font style has to be changed.
  - o Right click and click on **font** option
  - o The font dialog box appears as shown in the figure
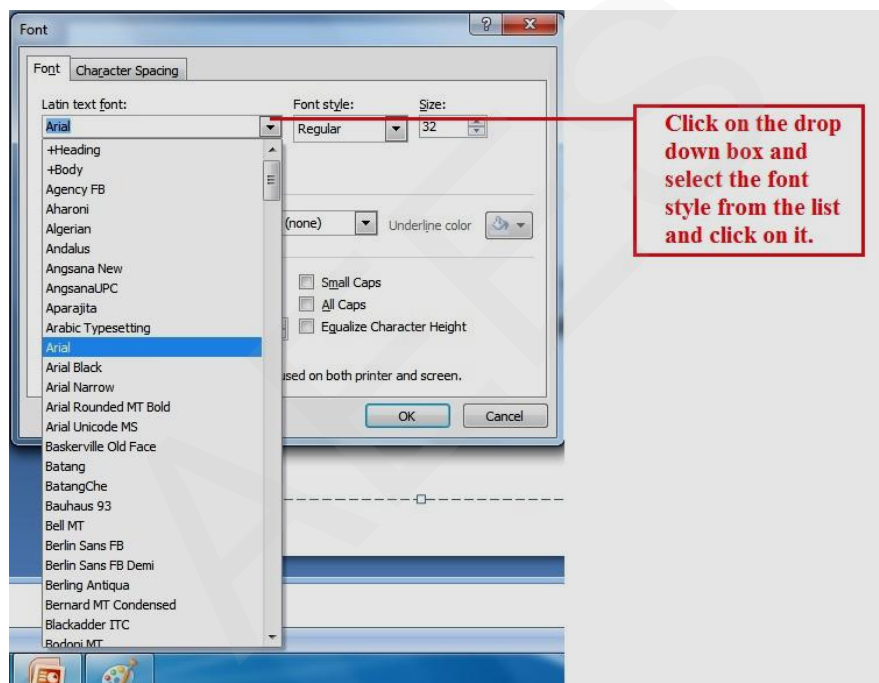
Figure 4.6 : Font dialog box

4.2.2 Changing the Font size, Style, Color

- **Steps to change the font size, style, color**
  - o Select the text for which the font size, style and color has to be changed.
  - o Right click and click on font option.
  - o The font dialog box appears as shown in the figure.
  - o Select the font style, size and color.
  - o Click on OK button.
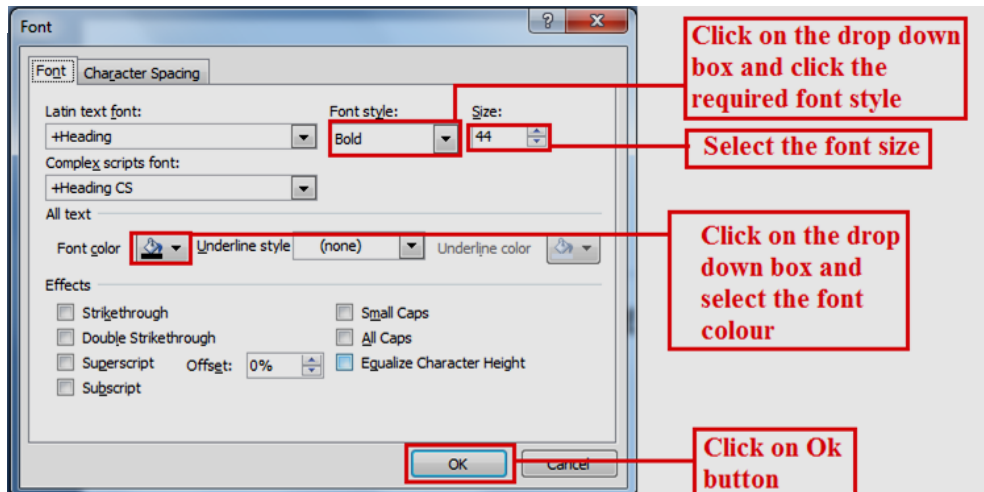
Figure 4.7: Changing font Size, Style, Color

4.2.3 Formatting Paragraphs

Steps to format Paragraphs

- Select the text to be aligned
- In the Paragraph group of the Home tab, click on any one of the option from left, center, right or justify.
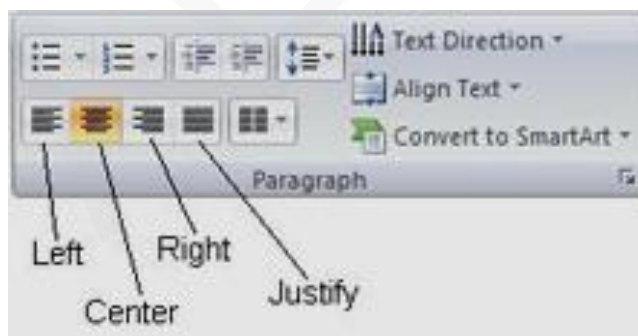
Figure 4.8: Paragraph group on Home tab

2.2.4 Change Text Alignment

Text can also be vertically aligned within a text using the *Align text* button.

Steps to Change text alignment

- Select the text to be aligned.
- In the Paragraph group of the Home tab, click on the **Align Text** button.
- Click on any one of the options from left, Top, Middle or Bottom.
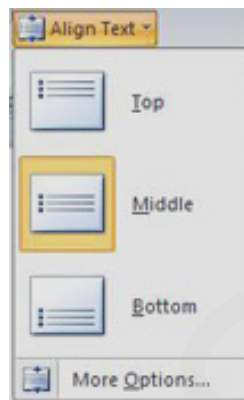
Figure 4.9 : Options in Align text button

4.2.5 Modifying Line spacing

Steps to change the line spacing

- Select the text for which line spacing needs to be changed.
- Click the **Line Spacing** button in the Paragraph group of the Home tab. The following options will appear,
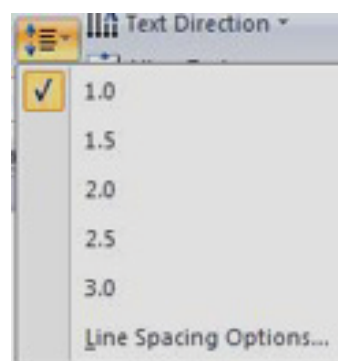
Figure 4.10: Line spacing options list

- Click the required line spacing from the list shown in figure 4.10

2.6 Creating Bulleted and Numbered List
Steps to create bulleted list

- If the list is already available, Select the list of items for which the bullets needs to be inserted.
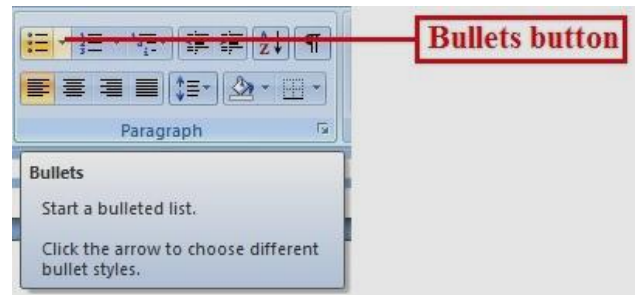
Figure 4.11 : Bullets Button

- Click on the Bullets button in the Paragraph group on the Home Tab.

- The options available under the Bullets button appear as shown below,
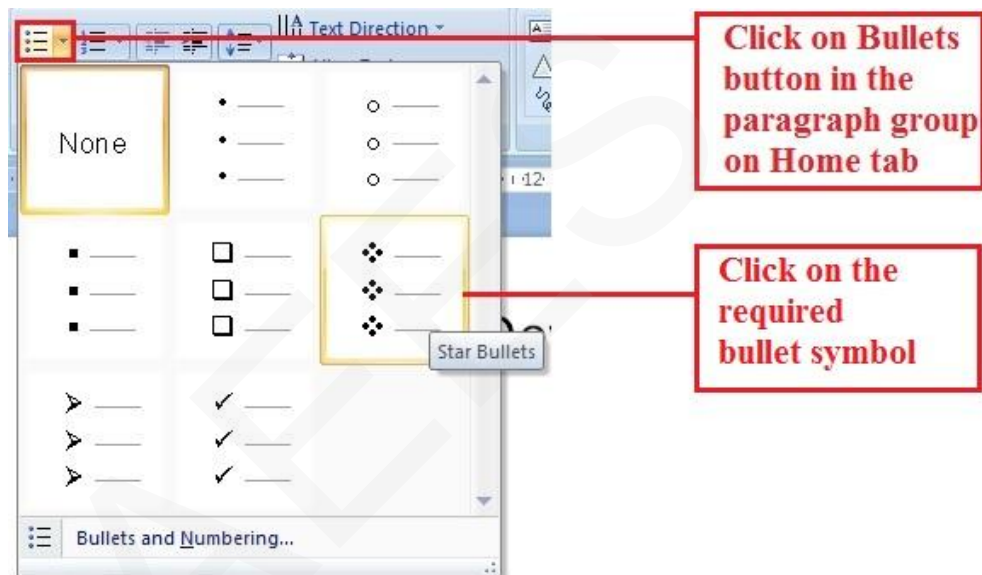
Figure 4.12 : Different types of bullets available.

- Click on the Symbol, the symbol will be applied to all the items in the list.
- For adding more items in the list, keep the cursor at the end of the last item and press **Enter** button.

4.2.7 Copying Formatting

As we copy and paste the text (content) , it is also possible to copy the format of a text such as font size, style and color of the text and apply it to another text.

Steps to copy formatting

- Select the text from where the format has to be copied.
- Click on the **Format Painter** Button in the Clipboard group on the Home Tab.
- Along with the cursor a brush symbol will be inserted.
- Place the cursor on the text for which the copied format needs to be applied.
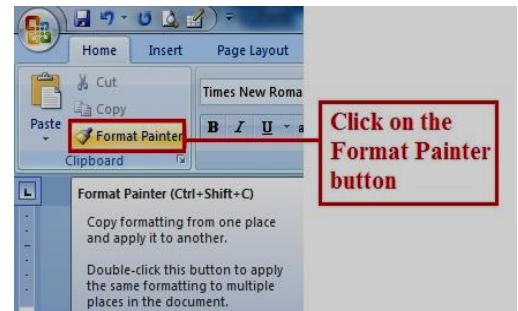
Figure 4.13: Format Painter

4.3. Insert Menu/ Inserting

We can insert images, tables, ClipArt, Screen Shot, Shapes and SmartArt, Chart, Text box, Date & Time, Slide Number and Symbols etc. in the presentation.

4.3.1. Images

Steps to insert an Image

- Click on the **Insert** menu
- Click on the **Picture button** on the Illustration group.
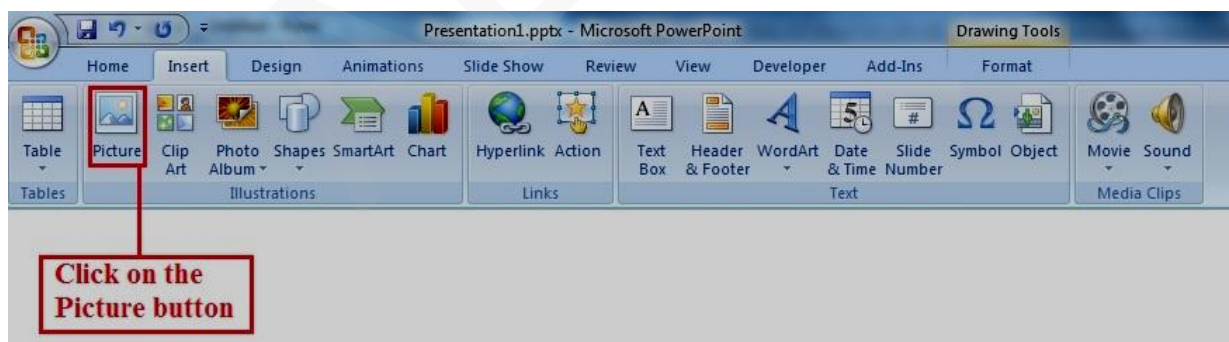
Figure 4.14: Picture button

- The following Insert Picture dialog box appears,
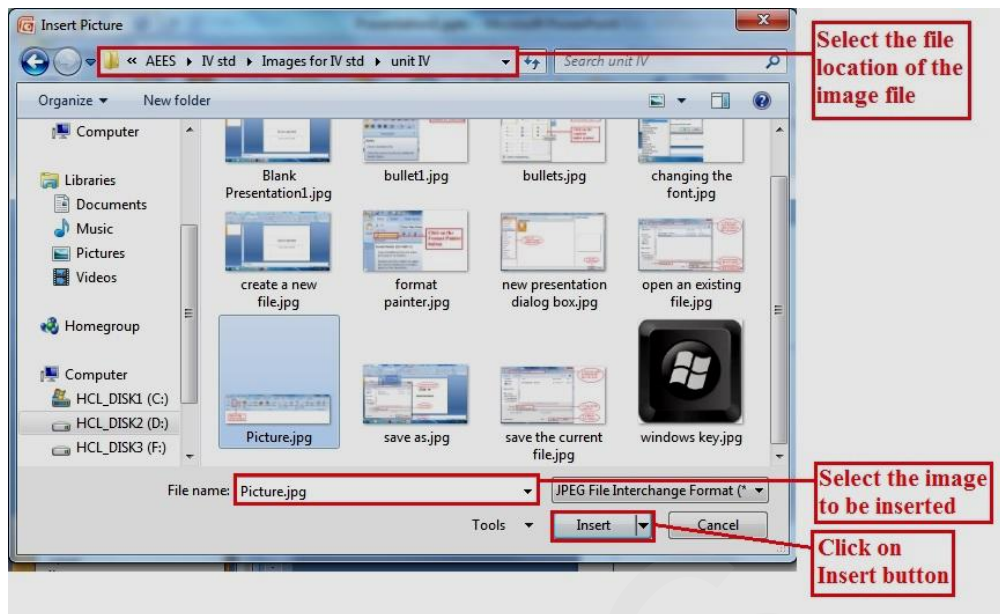
Figure 4.15: Insert picture dialog box

- Select the location of the picture to be inserted.
- Select the image to be inserted.
- Click on Insert button.

4.3.2. Table

 # Steps to insert an Image

- Click on the **Insert** menu
- Click on the **Table** button on the Tables group.
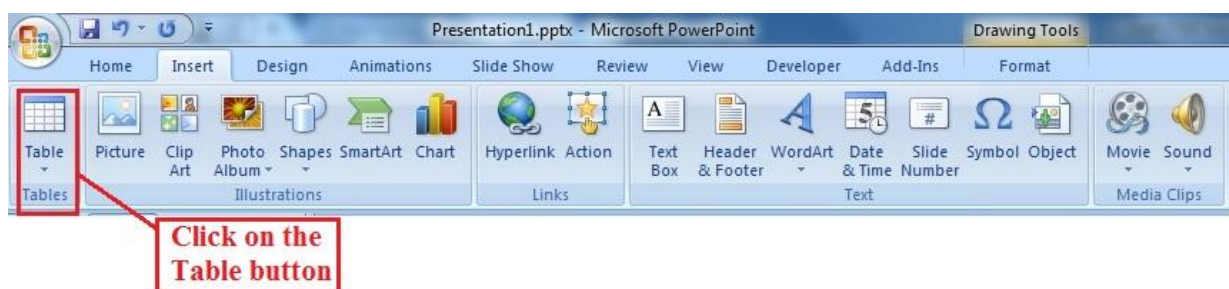
Figure 4.16: Tables button

- The following Insert Table options appears,
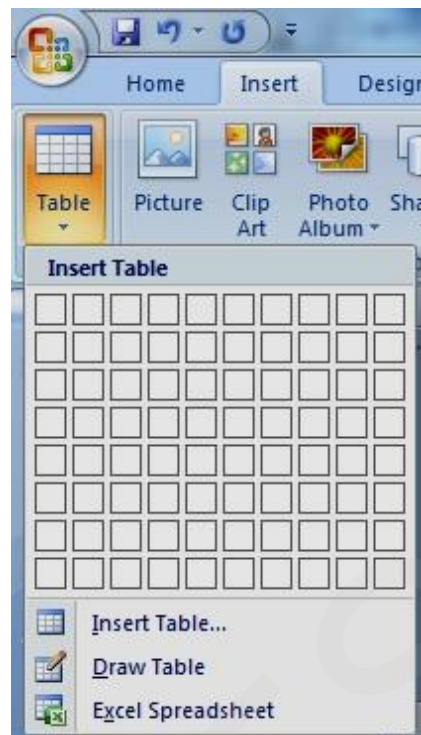
Figure 4.17: Insert Table

- Select the number of rows and columns to be inserted in the Table
- Press **Enter**. The table is inserted on the presentation.

4.3.3. Clip Art

Steps to insert ClipArt

- Click on the **Insert** menu
- Click on the **ClipArt** button on the Illustration group.

Figure 4.18: ClipArt button

- The following ClipArt dialog box appears,
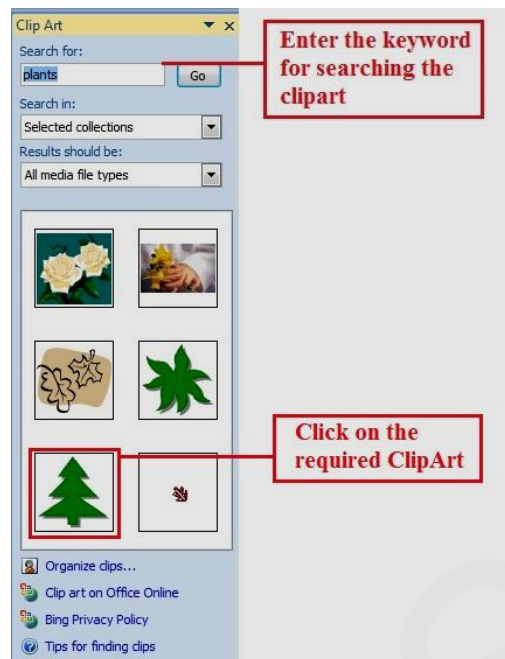
Figure 4.19: ClipArt dialog box

- Click on the ClipArt which needs to be inserted.

4.3.4 Screen Shot

A screen shot, records what's on the computer screen at that moment in time.

The snapshot can be copied to the clipboard and use it as an image in most Windows programs, including Microsoft PowerPoint 2007.

Steps to Take a Full-Screen Snapshot and use it on the Powerpoint

- To take a snapshot of the entire screen press on the "**Print Screen**," "**PrtScn**" or "**PrtSc**" button on the keyboard.

- Everything visible on the screen, including the Windows 7 task bar, is captured.

- Open or create a presentation.

- Select the slide in which the snapshot needs to be imported.

- Press "Ctrl-V" to paste the snapshot from the clipboard into the PowerPoint slide.

- Click and drag the small circles and squares that delimit the snapshot to resize it. Click and drag the entire snapshot to reposition it on the slide.

4.3.5 Shapes and SmartArt

Steps to insert Shapes

- Click on the Insert menu
- Click on the Shapes button in the Illustration group
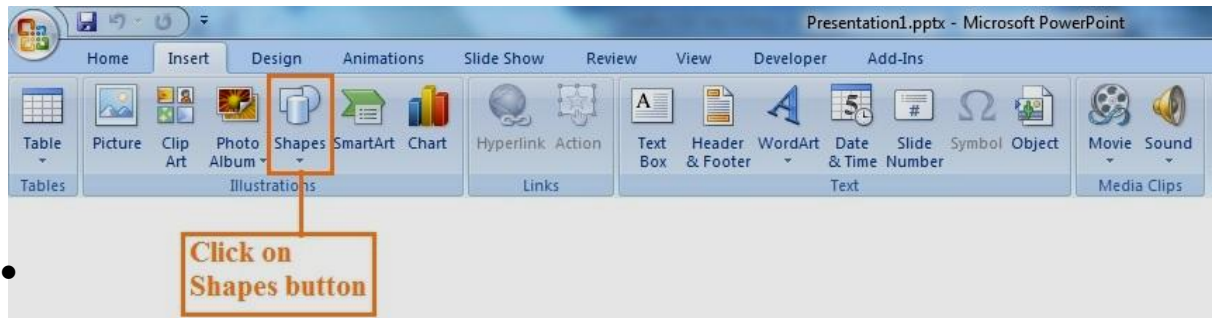
Figure 4.20: Shape button

- The Recently Used Shapes appear as shown below,
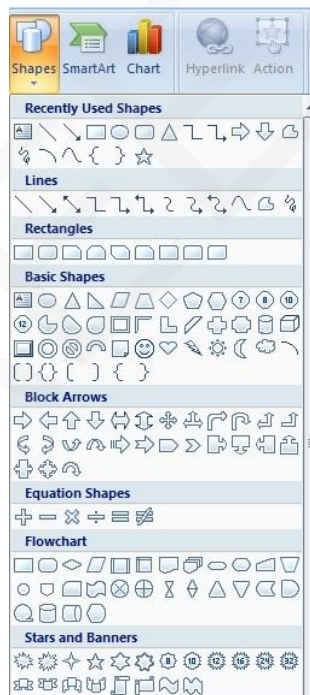
Figure 4.21: Recently Used Shapes

- Click on the required shape
- Keep the cursor on the slide where the shape needs to be inserted.
- Click the mouse and drag it. The shape will be drawn.

Steps to insert SmartArt

- Click on the **Insert** menu
- Click on the **SmartArt** button in the Illustration group
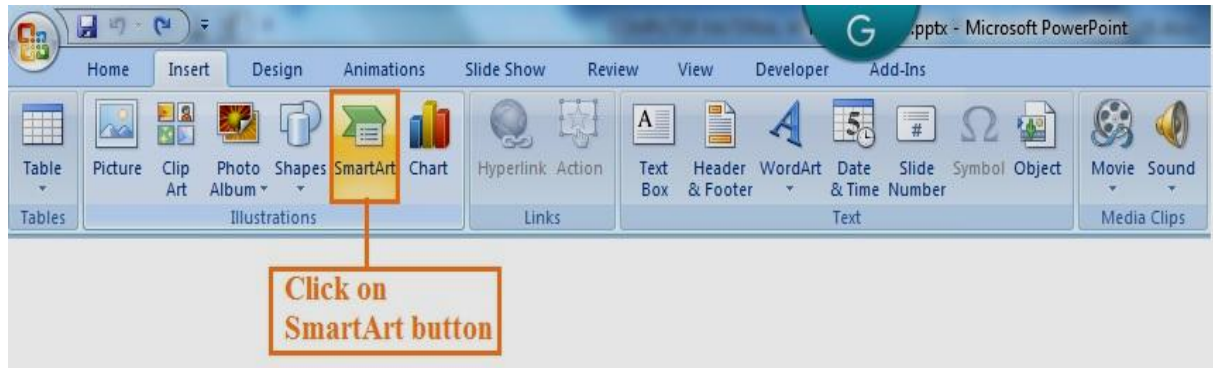
Figure: 4.22: SmartArt

- Choose a SmartArt Graphics appear as shown below,
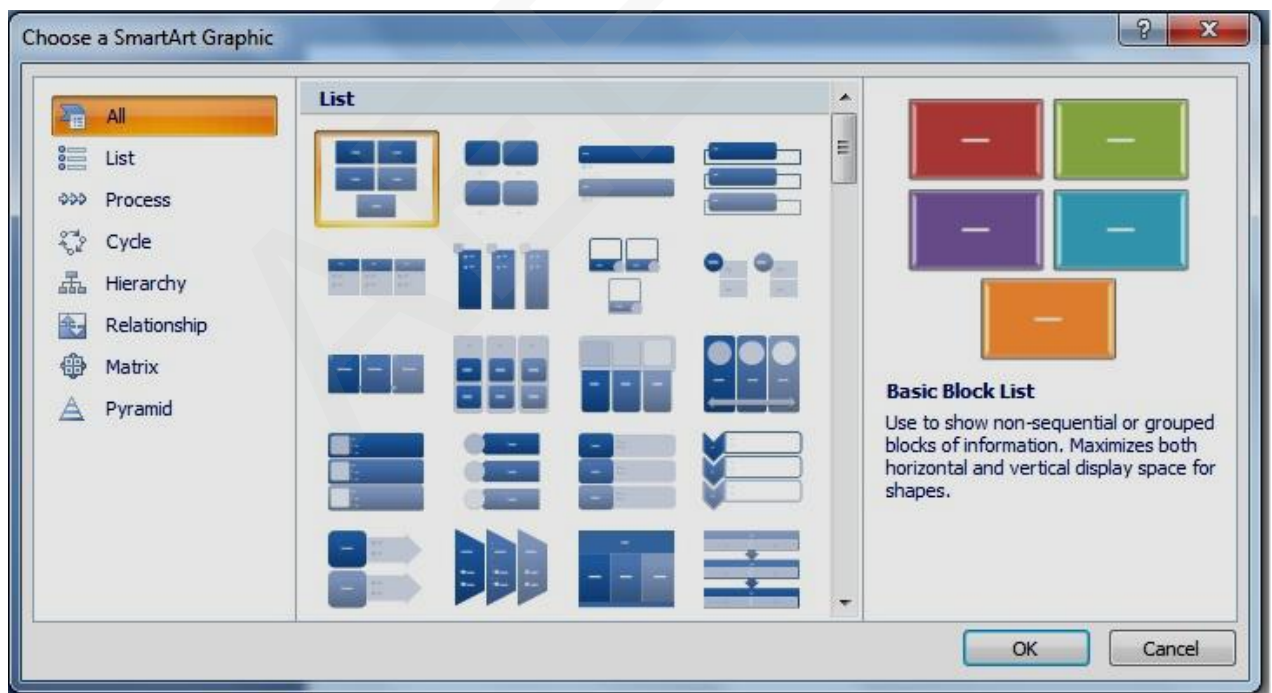
Figure 4.23: Choose a SmartArt Graphics

- Double Click on the required SmartArt
- The chosen SmartArt will be inserted in the Powerpoint presentation.
- Add the text in the SmartArt.

4.3.6 Charts

Steps to insert Chart

- Click on the **Insert** menu

- Click on the **Chart** button in the Illustration group
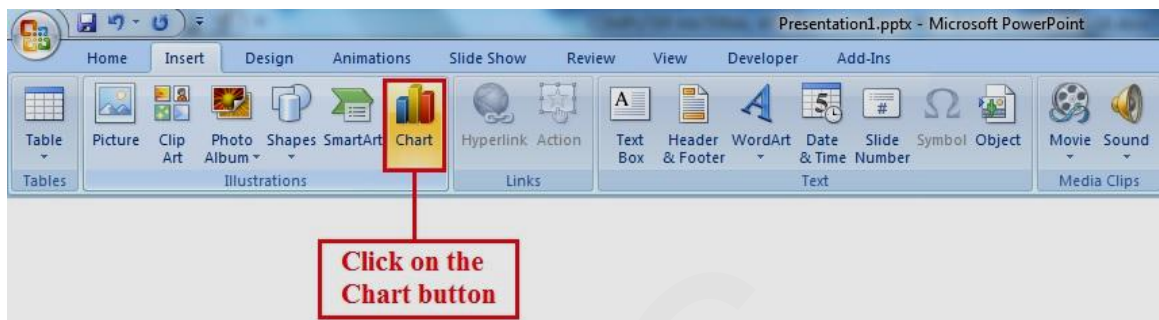
Figure 4.24: Chart button

- Choose a Chart window appears as shown below,
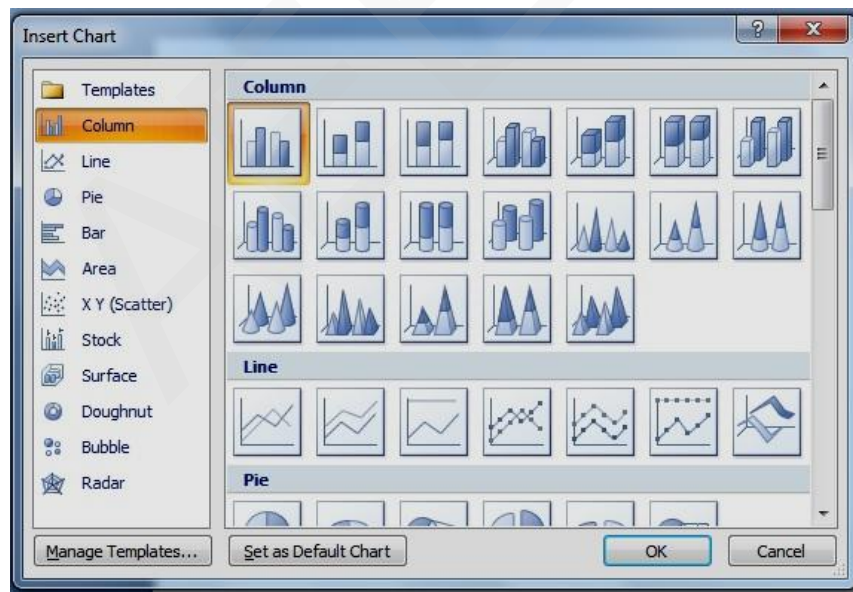
Figure 4.25: Insert Chart Window

- Double Click on the required Chart type

- The chosen Chart will be inserted into the powerpoint presentation.

4.3.7 Text Box, WordArt, Date & Time, Slide Number, Symbols.

Steps to insert WordArt

- Click on the **Insert** menu

- Click on the **TextBox** button in the Text group

Figure 4.26: Text box button

- Keep the cursor on the slide, a textbox will appear where text can be entered.

Steps to insert WordArt

- Click on the **Insert** menu

- Click on the **WordArt** button in the Text group

Figure 4.27: WordArt button

- Different patterns of WordArt appear as shown below,

Figure 4.28: Different patterns of WordArt

- Double Click on the required pattern
- The chosen WordArt will be inserted

Steps to insert Date & Time, Slide number

- Click on the **Insert** menu
- Click on the **Date and Time** button in the Text group
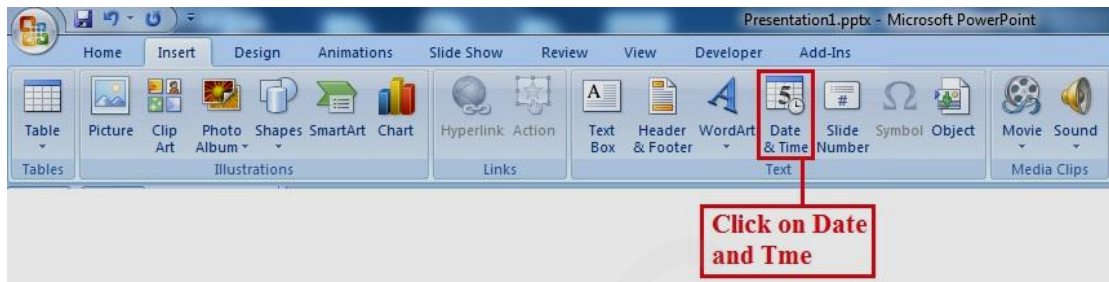
Figure 4.29 : Date and Time button

- Header and Footer appear as shown below,
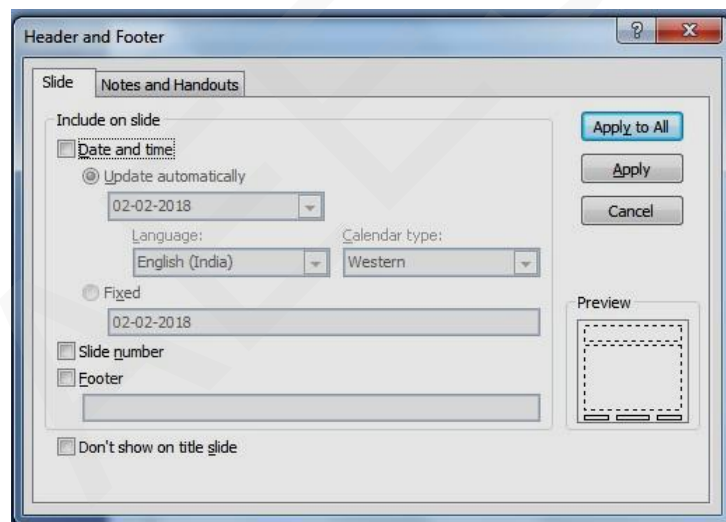
Figure 4.30: Header and Footer Window

- Click on the **Date and Time** check box for including the date and time on the slide.
- Click on the Slide number check box for inserting the slide number on the slides.

Steps to insert Symbols

- Click on the **Insert** menu
- Click on the **Symbols** button in the Text group
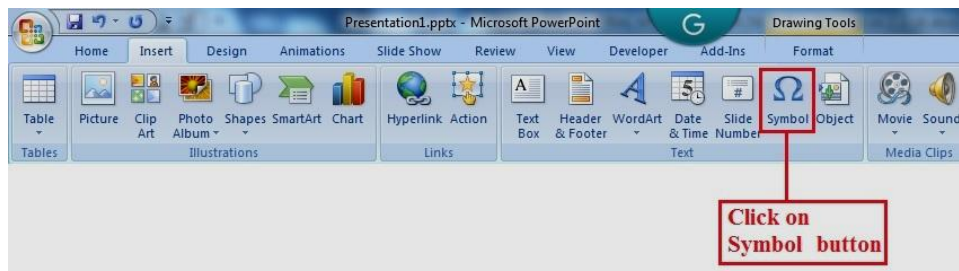
Figure 4.31: Symbols button

- The Symbols dialog box appears as shown below,

Figure 4.32: *Symbols* dialog box

- Click on the required Symbol
- Click on the **Insert** button.
- Click on **Close** button.

4.3.8 Moving & Resizing an Image

Steps for Moving an Image

- Select the image.
- The arrow move icon appears on the image
- Click the mouse, drag and drop the image.

Steps for Resizing an Image

- In the Size group of Picture Tools tab, mention the required Height and Width.

Figure 4.33: Height and Width

Or

Click and drag a corner handle of the image

- Select the image to resize smaller or larger.

4.4. Slide Show.Menu

4.4.1 from Beginning

Steps to view the slide show from the beginning

- Open the power point presentation which needs to be viewed in the Slide Show.
- Click on the **View** menu.
- Click on **Slide Show** button in the Presentation Views Group.
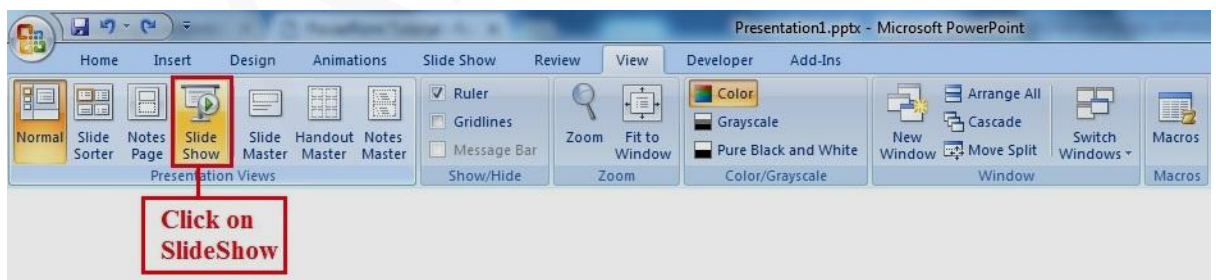
Figure 4.34 : Slide Show button

- The Slide show will be displayed from the first Slide onwards.

4.4.2 from current slide

Steps to view the slide show from the current slide

- Open the power point presentation which needs to be viewed in the Slide Show.

- Click on the slide from where the presentation has to begin.
- Press Shift + F5.
- The Slide show will begin from the slide which was selected.

4.4.3 Custom Slide show

- Use a basic custom show to give separate presentations to different groups.
- For example, if your presentation contains a total of five slides, you can create a custom show named "Site 1" that includes just slides 1, 3, and 5.

Steps to view Custom slide show

- Click on **Slide Show** Menu
- Click on **Custom Slide Show** in the Start Slide Show
- Click on Custom Shows option.
- *Custom Shows* dialog box appears as shown below,
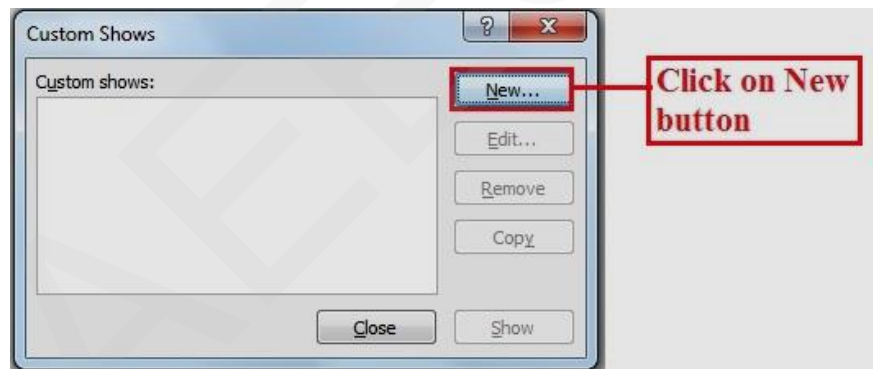
Figure : 4. 35: Custom Shows Window

- Click on **New** button
- *Define Custom Show* dialog box appears as shown below,
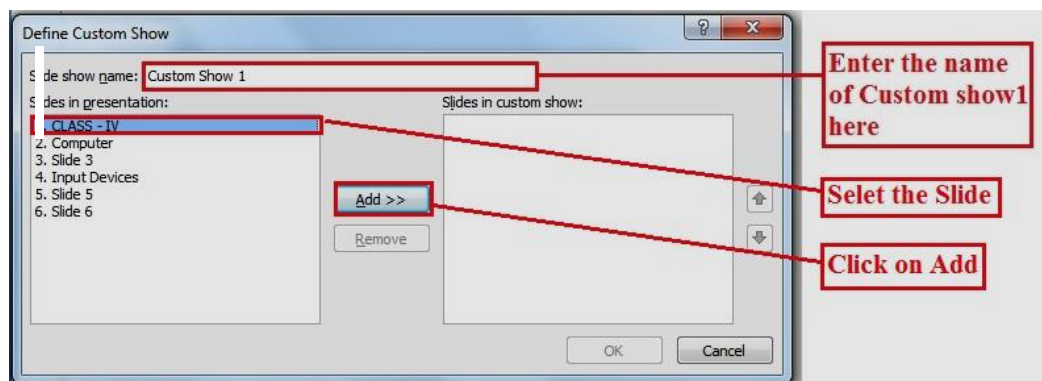
Figure 4.36: Define Custom Show Window

- Under Slides in presentation, click the slides that you want to include in the custom show

- Click Add.

Note: To select multiple sequential slides, click the first slide, and then hold down SHIFT while you click the last slide that you want to select. To select multiple non sequential slides, hold down CTRL while you click each slide that you want to select.

- To change the order in which slides appear, under Slides in custom show, click a slide, and then click one of the arrows to move the slide up or down in the list.

- Type a name in the Slide show name box, and then click OK. To create additional custom shows with any slides in your presentation, repeat steps 1 through 5.

4.4.4 Setup slide show

 # Steps to Setup slide show

To set up a PowerPoint presentation to run automatically, do the following:

- On the Slide Show tab, click Set Up Slide Show.
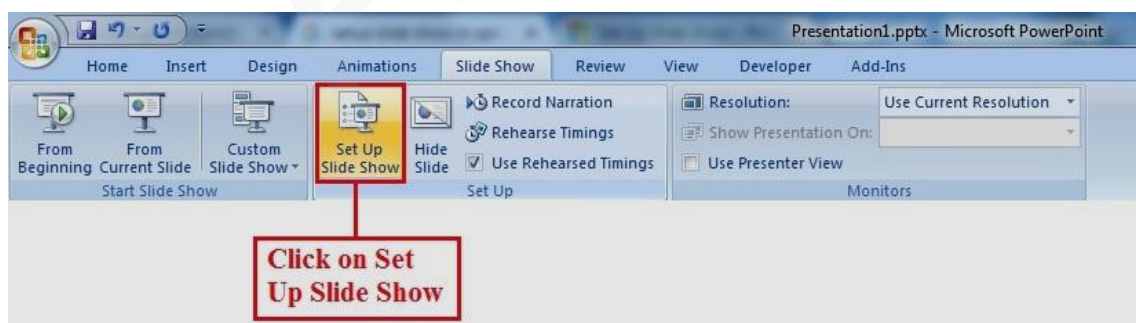
Figure 4.37: Set up Slide Show button

- Click on Presentation by a speaker, under Show type.

Figure 4. 38: *Set up Show* dialog box

EXERCISES

I. State True of False

1. In Power point we can add animations (Motion to the pictures).

2. There is a limit to the number of slides present in the Power point.

3. We use bullet list instead of Numbered list when there is no priority among the list items.

4. We can use Escape (Esc) button on the key-board to stop the slide show presentation.

5. We can not insert a table in a slide.

PRACTICAL EXERCISES

1. i. Create a power point presentation on the topic "Flowers" with minimum 5 slides.

   (Hint: Write about flowers. Insert some images of the flowers.)

   ii. List out the names of some flowers using bullets.

   iii. Save the file with the name "Flowers".

2. Create a power point presentation on the topic "Computer" using ClipArts .

3. Create a power point presentation on the topic "Shapes" with minimum 5 slides, include one shape per slide and name the shape using SmartArt.

4. i. Open the presentation named "Flowers", insert date, time and slide number.

   ii. Save it with the name "Flowers for print".

   iii. View the presentation in the Slide show.

UNIT- V

EXCEL SPREADSHEET

5.1 Working in Excel

Excel is an application software to create tables and perform calculations.

5.2 Introduction- Workbook & Worksheet

Workbook

- The Workbook is a collection of worksheets.

- When a new excel file is created, a new workbook opens.

- By default the workbook consists of three worksheets.

- More Worksheets can be added to the workbook.

- A worksheet can also be deleted from the workbook.

- A worksheet is used to organize various kinds of related information.
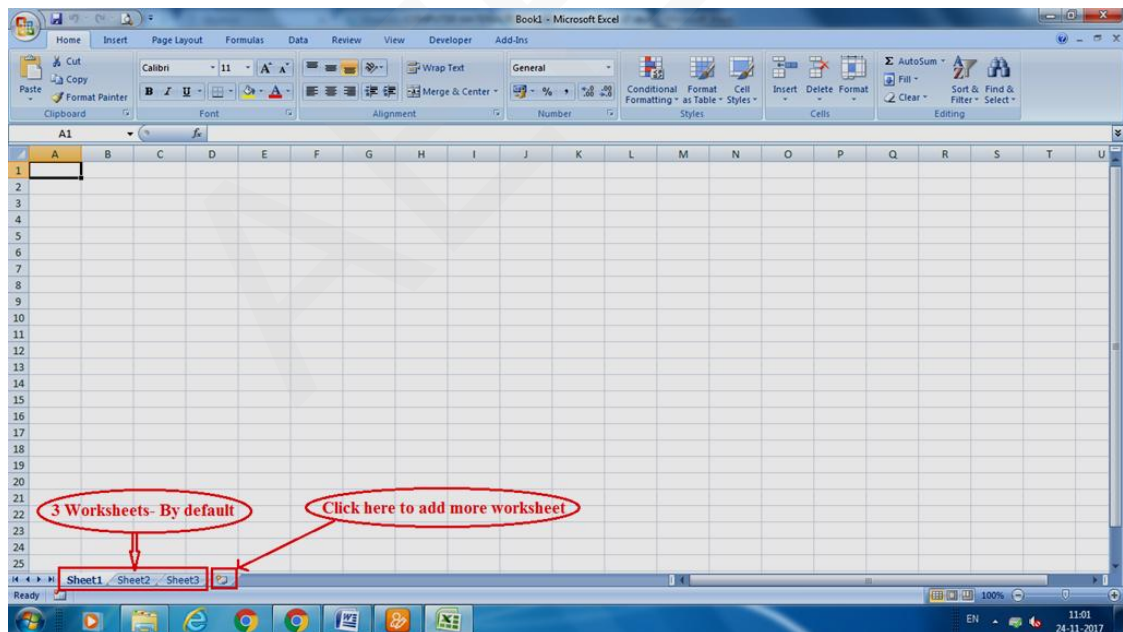
Figure 5.1: A workbook

Worksheet

- A worksheet is a collection of cells, where data is entered and can be manipulated.

- A cell is an intersection of a row and a column.

- Rows are named with Arabic numbers.

- Columns are named with Alphabets.
- A cell is named as a combination of intersecting column name and row name respectively. Example: A1
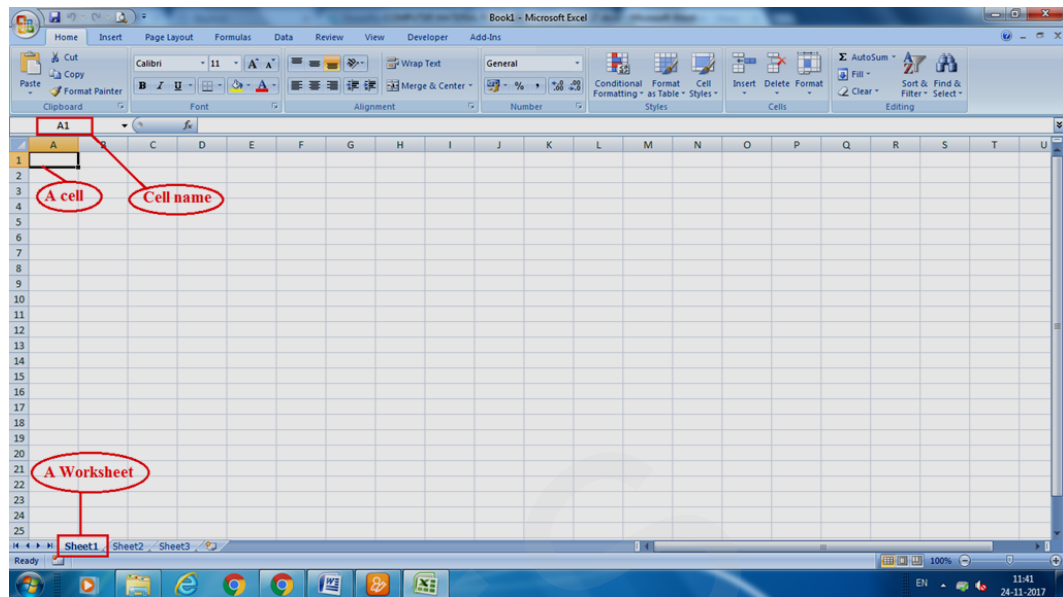
Figure 5.2: A worksheet

- An active cell is a cell which is currently selected. It will be highlighted by a rectangular box and its name will be shown in the name box. In the figure 5.2 A1 is the active cell.

5.3 Use in day to day life.

Excel is used to perform

- ➢ Calculations
- ➢ Analysis
- ➢ Visualization by creating charts and graphs of data and information.

5.4 Steps to start Excel

 # Steps to start Excel are

- ➢ Click on Start button
- ➢ Click on All Programs
- ➢ Click on Microsoft Office
- ➢ Click on Microsoft Office Excel 2007
- ➢ An Excel workbook will be displayed as shown in the figure 5.1

5.5 Components of Excel Screen
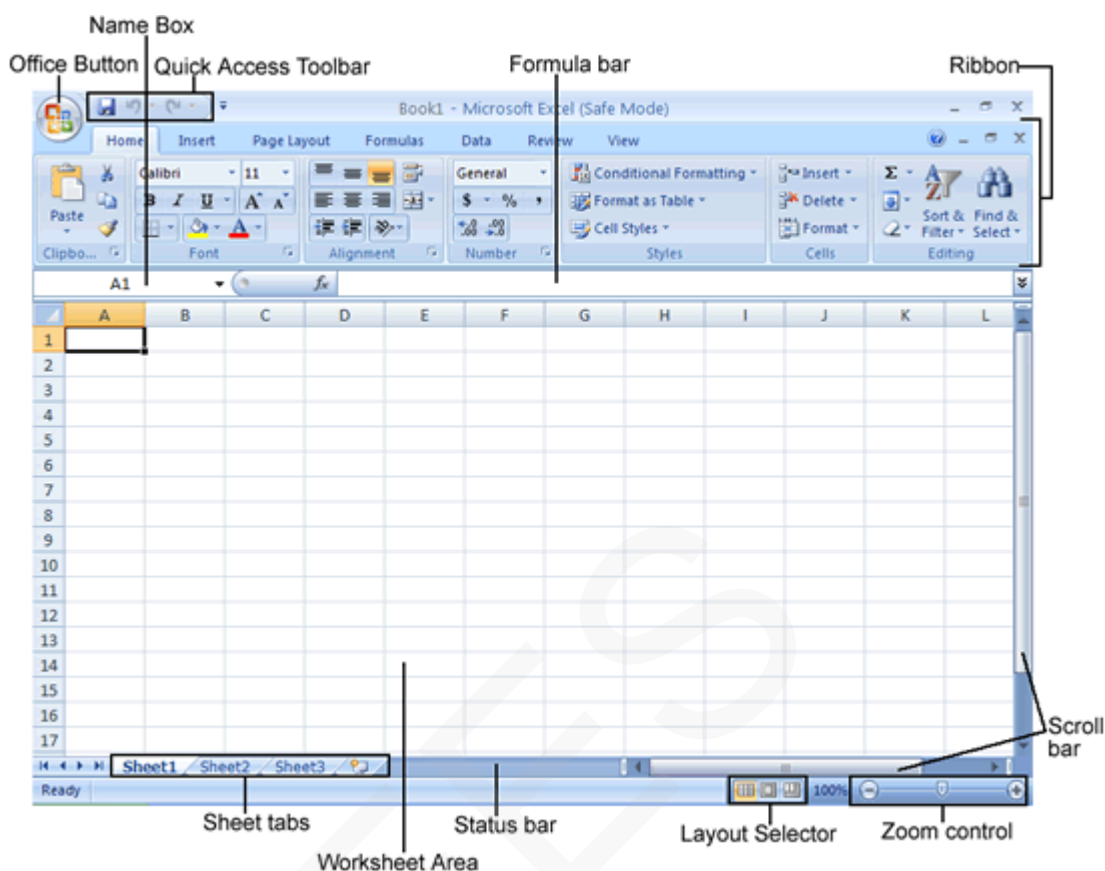
Figure 5.3: Components of Excel Screen

- **Office Button:** It provides the option to open a new worksheet, existing worksheet, saving the worksheet, save the worksheet in a different name, print and etc.,

- **Name box:** It displays the name of the active cell. A cell is named as a combination of intersecting column name and row name respectively. Example: A1

- **Quick Access Toolbar:** A toolbar to quickly access the options which you frequently use. You can add your favorite options by adding new options to the quick access toolbar.

- **Formula Bar:** Formula bar is an input bar, below the ribbon. It shows the content of the active cell and you can also use it enter a formula in a cell.

- **Row:** A row is a horizontal set of cells. A single worksheet contains 1048576 total rows. Every row has its own number for identity, starting from 1 to 1048576. You can select a row clicking on the row number marked on the left side of the window.

- **Title Bar:** The title bar will show the name of your workbook, followed by the application name ("Microsoft Excel").

- **File Menu:** The file menu is a simple menu as like all other applications. It contains options like (Save, Save As, Open, New, Print, Excel Options, Share, etc.).
- **Ribbon Tab:** Ribbon tabs are the bunch of specific option group which further contains option.
- **Sheet Tab:** This tab shows all the worksheets which are present in the workbook. By default, three worksheets are there in a new workbook with a name of Sheet1, Sheet2, Sheet3 respectively.
- **Status Bar:** It is a thin bar at the bottom of the Excel window. It will give you an instant help once you start your working in Excel.

5.6 Various data types

Microsoft Excel is able to identify the type of data you key into the worksheet. You can enter various kinds of data in a cell.

- **Text:** Text is an alphabetical representation that could includes descriptions, sentence, and headings.
- **Number:** This type of data consists of numbers, which could be used to represent integers, prices, percentage and other numeric information. Most tables are consist of numbers, and chart could only be plotted by numbers. Some of the numbers could includes comma, decimal points and maybe represented by currency symbol.
- **Dates and Times:** This datatype is to be used while entering the date and time.

5.7 Entering Data in Spreadsheet

- Select the cell and type the new data.
- Click the formula bar, make the edits and Press enter.
- Double click the cell to place the insertion point in it, make the desired edits and press enter.

5.8 About the cell and cell address

- **A Cell:** A cell is an intersection of a row and a column. Rows are named with Arabic numbers. Columns are named with Alphabets.
- **Cell Address:** A cell is named as a combination of intersecting column name and row name respectively. Example: A1

5.9 Auto Sum

AutoSum is a function used to enter the appropriate formula automatically. For example, if you wanted to add the values of cells A1 through A5, highlight cells A1 through A5 and click the AutoSum button, as shown in the picture to the right. Clicking this button after highlighting the cells creates the formula =SUM(A1:A5) in cell A6 (first cell after last highlighted cell) and gives you the total of all those cells.

 # Steps to calculate AutoSum

- Select the cells, which contain the values to be added.
- Click on the AutoSum icon available in the Editing Groups.
- Click on the Sum option.
- Automatically the formula for adding the selected range of cells will be inserted in the next cell and the total will be displayed.

Figure 5.4: AutoSum icon

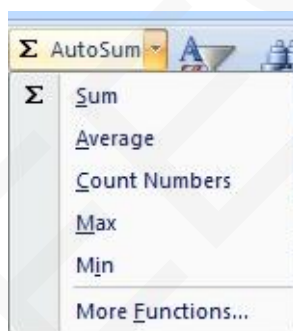## 5.10 Formatting the Data in the table

- Select the cells which contains the data to be formatted .
- Right click on the selected cells.
- Click on format cells.
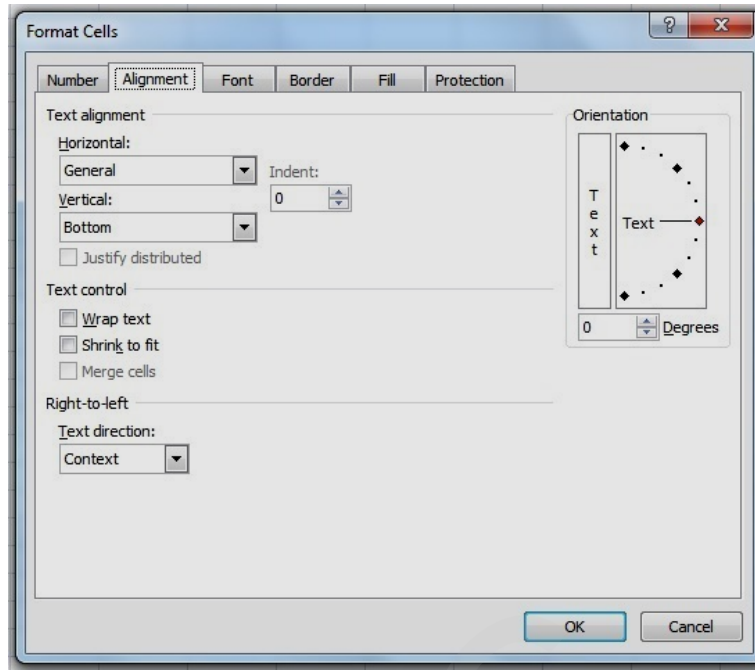- Format Cells dialog box appears as shown below,

Figure 5.5: Format cells dialog box

Text alignment of the data can be formatted using alignment tab, font style, size of the data can be formatted using of the Font tab in the dialog box.

EXERCISES

I. Fill in the blanks with the correct answer by using the words given below in the box.

<div style="border:1px solid">

Title bar, Workbook, 3 Workbooks, Cell, Datatypes

</div>

1. The _____ is a collection of worksheets.

2. The workbook consists of _____ by default.

3. _____ show the name of the worksheet.

4. Text, Number, Dates and Times are some_____of Excel.

5. A _____ is an intersection of a row and a column.

II. State True or False.

1. In Excel-2007 we can put different colours in the same cell .

2. By using MS-Excel we can draw paintings.

3. Basic file operations (Creating, Deleting, Renaming, Editing) are mostly same for both MS-Word and MS-Excel.

4. With the help of View-> Gridlines option we can make the sheet as blank paper.

5. When we open a new Excel sheet cell A1 is in actived (selected) state.

III. Answer the following.

1. Write the components of Excel screen.

2. Write the use of excel in day to day life.

3. Define - Cell Address

4. Write the purpose of AutoSum function.

5. Define - Active Cell.

UNIT- VI

WINDOWS ACCESSORIES

Accessories are a set of standard applications in Windows.

Windows accessories are Calculator, Paint, Notepad, Word Pad etc.

> The Calculator can be opened also by typing calculator or calc in the search box

6.1 Calculator

The calculator looks like a pocket calculator. It has number keys, memory keys and standard math operations. The Calculator can be operated with the help of keyboard or mouse.

Figure 6.1: Calculator

There are three menus in the calculator

1. View menu

2. Edit Menu

3. Help menu

- **View menu**
  - o It allows you to use different programming capabilities like scientific, programmer and statistical calculator.
  - o The view menu provides other useful features such as Date calculation, Unit conversion.
  - o The Date calculation option is used to calculate the difference between two dates in terms of years, months, weeks and even days.
  - o The Unit conversion option is used to convert values from one unit of measurement to the other.
- **Edit menu:** It allows the user to copy values from the calculator and paste it in another location and vice versa.
- **Help menu:** Help menu guides the user about how to use the calculator.

6.2 On-screen Keyboard

- On-screen Keyboard can be used instead of the physical keyboard to type and enter data.
- On-Screen Keyboard displays a visual keyboard with all the standard keys.
- Keys can be selected using the mouse or another pointing device.

Steps to include Onscreen Keyboard

- Click on the **Start** button.
- Click on **All Programs.**
- Click on **Accessories.**
- Click on **Ease of Access.**
- Clicking **On-Screen Keyboard**.

Figure 6.2: Onscreen keyboard

Steps to use a Numeric Keypad in the On-screen Key

- Click Options
- Select the Turn on the numeric key pad check box
- Click OK.

6.3 Magnifier

- Magnifier can be used to magnify all or part of the screen and has three different modes of operation:
    - Full-screen mode—In full-screen mode, the entire screen is magnified.
    - Lens mode—In lens mode, a separate window around the mouse pointer is created that acts like a magnifying glass. When you move the mouse pointer, this window moves along with it.
    - Docked mode— In docked mode, the magnified area is docked to the top of the screen. This is the only mode available if Aero is disabled.

6.4. Games

Steps to include Games

- Click on the Start Button
- Click All Programs.
- Click the Games folder.
- Click the game you want to run.

Some of the games are,

- Minesweeper
- Spider Solitaire
- Purple Place
- Mahjong Titans

Windows 7 also includes Chess Titans, Hearts, Internet Backgammon, Internet Checkers, Internet Spades, Mahjong Titans, Purple Place and Spider Solitaire.
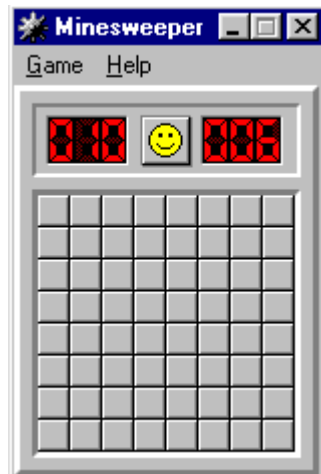
Minesweeper

Figure 6.n: Minesweeper

Windows **Minesweeper** is a software game that has been included with all versions of Microsoft Windows up through Windows 7.

6.5 Virus & Anti-Virus

 # Virus: A computer virus is a type of malicious software program that, when executed, replicates itself modifying other computer programs and inserting its own code.

 # Anti-Virus: It is an application program which is designed to detect and remove Viruses from the Computer System.

The Windows 7 operating system from Microsoft simplifies computer security, making it easier for you to reduce the risk of damage caused by viruses, spyware and other malware.

- **Defend the computer against viruses, spyware, and other malware**

  o *Microsoft Security Essentials* is a free download for Windows 7 that helps protect your computer from viruses, spyware, worms, Trojans, and other malware.
  o Windows 7 also includes *Windows Defender,* software that helps protect your computer from pop-up ads, slow performance, and security threats caused by spyware and other unwanted software.

EXERCISES

I. Fill in the blanks with the correct answer by using the words given below in the box.

> Anti Virus, Help menu, On-screen, Virus, Accessories

1. Windows _____ are Calculator, Paint, Notepad, Word Pad etc.,

2. _____ is a type of malicious program.

3. _____ is an application program designed to detect and remove Virus form the computer.

4. Instead of physical keyboard _____ keyboard can be used to type the data.

5. _____ allows the user about how to use the calculator.

II. State True or False.

1. Indian rupee symbol is present on the present day key-boards.

2. We can use the same key-board to type different languages by changing the settings.

3. Generally functional-keys present on the top row of key-board.

4. Key-board and Mouse are the basic output devices.

5. We can remove the virus by Restarting the computer.

III. Answer the following.

1. Name the menus available in the calculator.

2. Write the three different modes of operations available in the magnifier.

3. What is Minesweeper?

4. Write the use of Edit menu in the calculator.

5. Write about Windows Defender.

UNIT-VII

CONTROL PANEL

7.1 Display Properties

Setting Monitor Display Properties

- Windows allow the user to change the look and feel of the desktop by changing the display settings of the monitor.

- Changing these properties lets the user to set the background of the desktop, screen savers, sound schemes and more.

Steps to do change the display properties

- Right-click anywhere on your desktop (except on an icon or shortcut).

- Select "Personalize" from the menu that appears.

- A window that allows you to change the display properties of the monitor will appears as shown below,
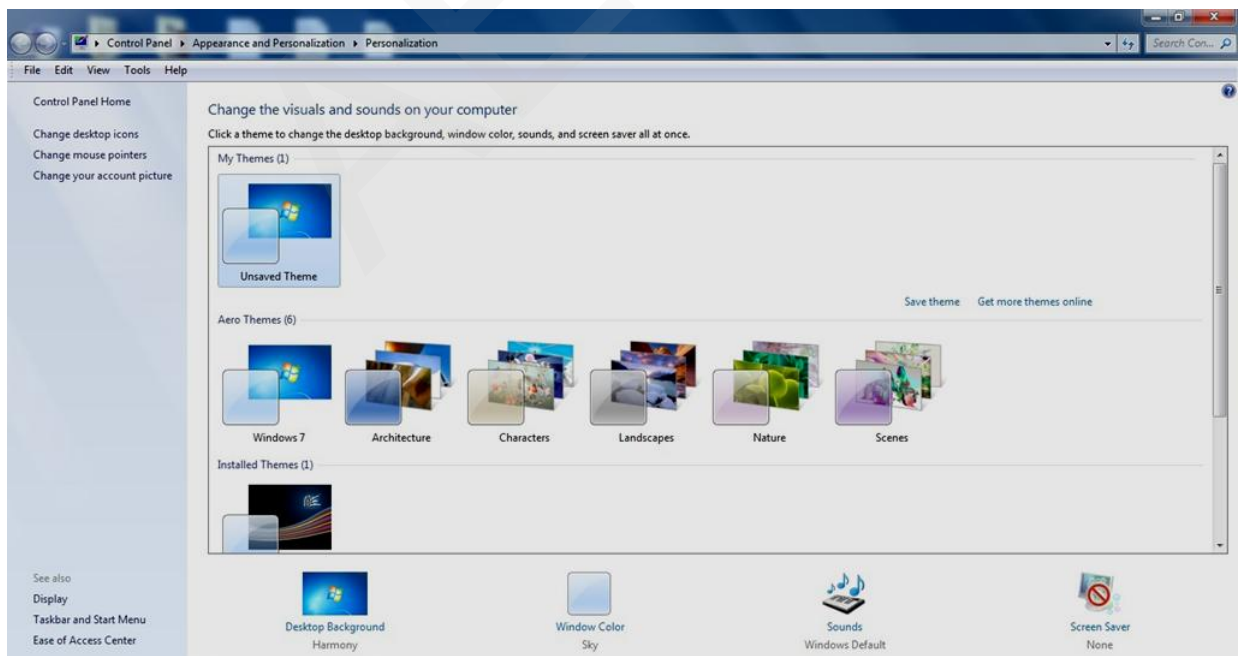

Figure 7.1: Windows Personalize window

Steps to change the screen saver in Windows 7

- Click on Start button

- Click on Control Panel

- Click on *Appearance and Personalization*

- Click on *Change Screen Saver* in the *Personalization* group

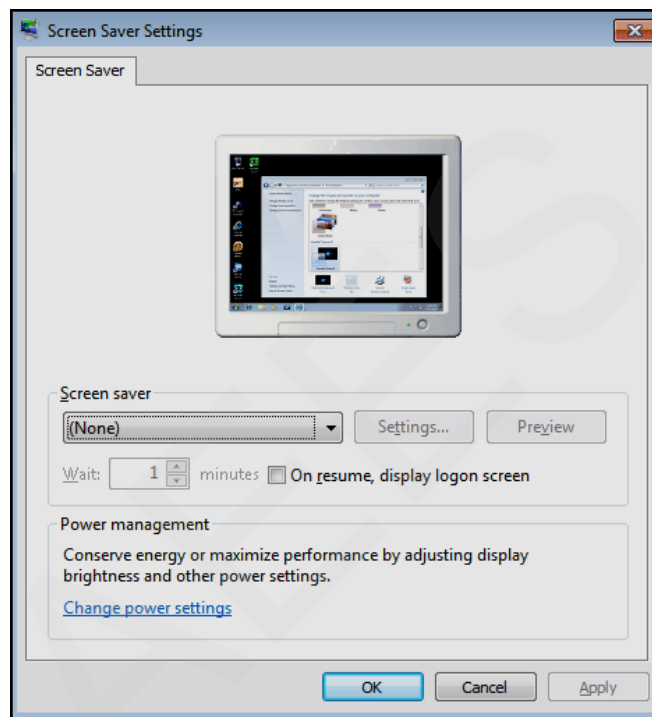- *Screen saver settings dialog box* appear as shown below,

Figure 7.2: Screen Saver Settings

- Click **Settings** to open a settings window for the selected screen saver (if settings are available).

- Click **Preview** to see how the screen saver displays on the computer screen. Move the mouse when finished previewing the screen saver.

- Select the number of minutes in the **Wait** field. This is the number of minutes of inactivity before the screen saver opens.

NOTE:

Make sure the Wait time for the screen saver is lower than the number of minutes before the computer enters a sleep state.

- If you want the computer to require login credentials when the session is resumed, select **On resume, display logon screen**.
- Click **OK** to save the settings and close the Display Properties window.

7.2 Setting of Mouse

Mouse pointer

- The mouse pointer is the graphic image of the cursor displayed on-screen when the mouse is active.
- As the pointer moves over objects, the image changes to reflect the associated function.
- For example, the standard pointing image of an ⃰ arrow is **Normal Select**. However, when the computer is processing a command, ⃰ the **Busy** circle displays on the screen.

Steps to change the mouse pointer (cursor) image

(Changing the look of your mouse pointer)

- Click **Start** ⃰.
- Click on **Control Panel** .
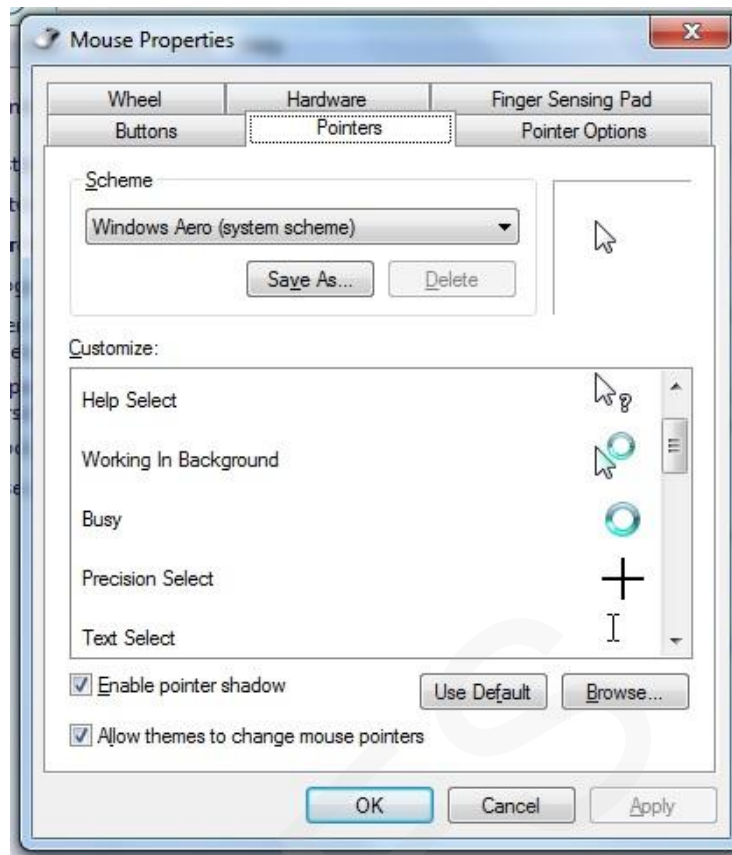- The *Mouse Properties* dialog box appears as shown below,

Figure 7.3 : Mouse Properties Window-Pointers Tab

- Click on **Pointers** tab.
- Click the pointer function, in the **Customize** box or click on **Browse** button to choose a new pointer image.

  (Note: To change the entire scheme of pointers, for example, to change the size of all the pointers, click the down arrow in the **Scheme** field and select a new pointer scheme from the list.)

- Click on **Apply button** to save your changes.
- Click on **OK** button**.**

Changing mouse pointer speed

Use these steps to change the mouse pointer speed:

- Click on **Start** button.
- Click on **Control Panel**.
- The *Mouse Properties* dialog box appears as shown below

- Click the **Pointer Options** tab.

Figure 7.4 : Mouse Properties Window- Pointer Options tab

1. In the **Motion** field, click and hold the slide bar while moving the mouse to the right or left, to adjust the mouse speed.

2. Click **Apply**, and then click **OK** to save your changes.

7.3 Taskbar and Start Menu

Taskbar

- A taskbar shows the currently running programs list.
- The default settings for the taskbar in Microsoft Windows are at the bottom of the screen.
- This includes the Start button, taskbar icons, notification area, Date and Time from left to right as shown below,

Figure 7.5: Taskbar

7.4 Date and Time Settings

Steps to change Date and Time

- Click on Start button, Click on Control Panel, Click on Clock, Language and Region option and Select Date and Time

Or

Click on the clock in the icon tray at the bottom right of the computer screen.

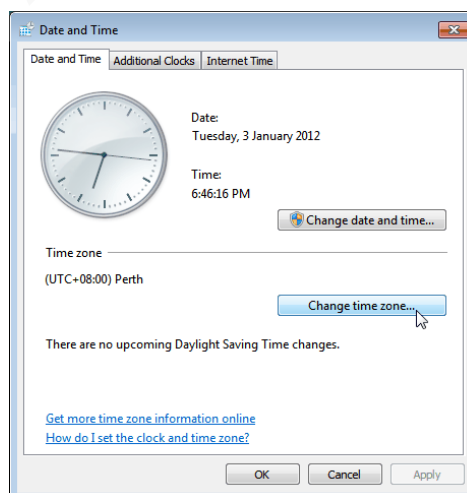- A *Date and Time* dialog box appears as shown below,

Figure 7.6: Date and Time dialog box

- Click on Change date and time button.
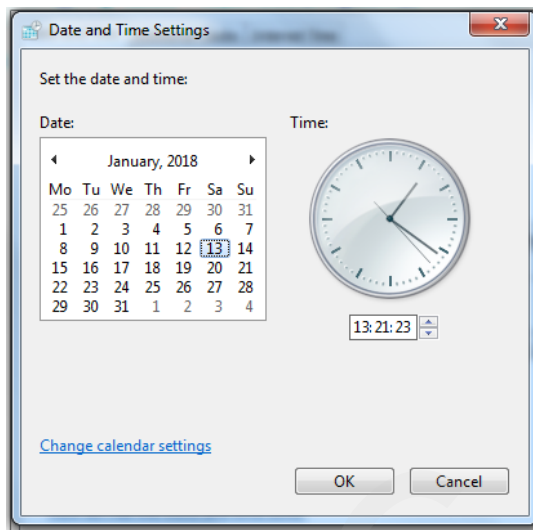- A *Date and Time Settings* window appears as shown below,

Figure 7.7: *Date and Time settings* dialog box

- Select the Date, Time.
- Click on OK button.

EXERCISES

I. Fill in the blanks with the correct answer by using the words given below in the box.

> Look and Feel, Task bar, graphic image,

1. _____ shows the currently running programs list.

2. The mouse pointer is the _____ of the cursor displayed on the screen.

3. Windows allows the user to change the _____ of the desktop.

II. State True or False

1. Even though computer is switched off it will maintain current date and time.

2. To rotate the screen we use Ctrl+Alt+ Arrow buttons.

3. By using Date and Time settings in the control panel we can add more clocks.

4. Auto-hide the task bar option is used to hide the task bar.

5. Windows Notification Area is present on the left bottom cornor.

PRACTICAL EXERCISES

1. Change the screen saver of the computer.

2. Change the mouse pointer of the computer.

3. Set the Date and Time of the computer.