••• CONTENTS •••

●●● CONTENTS ●●●

EVOLUTION OF COMPUTERS

Every aspect of our lives in this present era has been influenced by the most advanced machine, known as computer. Initially, computers were used only by scientists and engineers, for complex calculations and were very expensive, but nowadays, computers are cheaper and even small organisations and individuals can afford them. Computers have now become a basic need because of their increased level of utility in almost every workplace. Computers are used extensively in banks, hospitals, media and entertainment, industries, schools, homes, space technology and research, railways, airports, etc.

The term 'Computer' has been derived from the word 'compute', which means to calculate, but a computer is not limited to performing only calculations; a computer is a versatile device that can handle different applications at the same time.

Do you know how a computer came into existence? The present day computer is entirely different from the earlier devices that were invented for doing calculations. Let us glance through the major milestones in the journey of the computer leading to the evolution of the present-day computer.

HISTORY OF COMPUTERS

The need to keep a track of numbers, led to the invention of different calculating devices. Starting from Abacus the first counting device, many devices were invented, leading to the development of computers.

VARIOUS CALCULATING DEVICES

3000-BC ABACUS

> Abacus was the first mechanical device used for calculations. It was developed in **China**.

> It was made up of a wooden frame with rods, each having beads.

> The frame was divided into two parts – Heaven and Earth.

> Each rod in Heaven has 2 beads and each rod in Earth had 5 beads.

> Abacus was used for addition, subtraction, multiplication, and division.
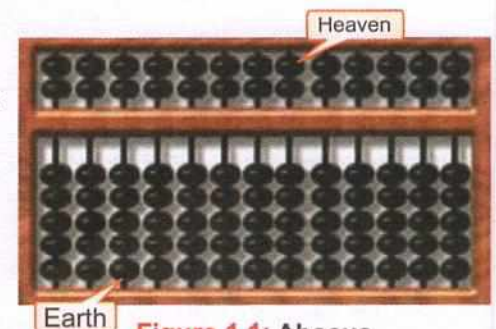
Figure 1.1: Abacus

PASCAL'S ADDING MACHINE

- Blaise Pascal, a **French** mathematician, invented an adding machine called **Pascal's Calculator**, at the age of 19, in the year 1642.

- It used gears, wheels, and dials.

- On this machine, numbers were displayed by rotating the wheels. It was capable of performing addition and subtraction.

Figure 1.2: Pascaline

- The gear principle was further employed in many mechanical calculators. Taxi metre is a perfect example of a mechanical calculator.

LEIBNIZ CALCULATOR

- Leibniz, the famous **German** mathematician improved on the Pascal's machine in 1671 to make the Leibniz calculator. It was a mechanical device.

- Apart from performing addition and subtraction, the Leibniz calculator could even do multiplication, division, and find square roots.

Figure 1.3: Leibniz Calculator

⟫ EARLY IT INVENTORS

CHARLES BABBAGE

- Charles Babbage, a **British** mathematician, is considered as the Father of Computers.

- He invented a working model of the mechanical computer called the **Difference engine** in 1822 and the **Analytical engine** in 1833.

Charles Babbage

- The Analytical Engine had five units – Input, Output, Store, Mill, and Control.

- These units worked like the modern computer. All the computers that are used nowadays, are based on it.

- **Store** was used for storing the data and **Mill** was used as a Calculating Unit.

- The **Control** unit was used for supervising all the units.

AUGUSTA ADA LOVELACE

Lady Augusta Ada Lovelace, was an **English** mathematician and writer. She is chiefly known for her work on Charles Babbage's Analytical engine. She is considered as the First

Lady Ada Lovelace

Programmer who suggested Binary Data storage (0 and 1) instead of decimal number system.

GEORGE BOOLE

George Boole was an **English** mathematician. He realised that complex mathematical problems could be solved by reducing them to a series of questions, having either positive or negative answers. He linked them with the binary number system and represented the positive results by 1 and the negative ones by 0. This theory of **Boolean Logic** became the fundamental principle for the design of computer circuitry.

DR HERMAN HOLLERITH

➤ Herman Hollerith, an **American** statistician, invented the **Tabulating machine**.

➤ This machine was capable of reading data, processing it, and giving the desired output.

➤ The input in this machine was given through punched cards.

Figure 1.4: Tabulating Machine

➤ These punched cards were used to record and store data or information.

JOHN VON NEUMANN

A modern type of computer came into existence with John von Neumann's development of software, written in binary code. It was John von Neumann who started the practice of storing data and instructions in binary code, in the memory. **Neumann** joined hands with **Presper Eckert** (American electrical engineer) and **John Mauchly** (American physicist) in a consulting role and built **EDVAC** using binary code in 1950.

EDVAC's concept of storing different programs on punched cards led to the advancement of computers that we know today.

HOWARD AIKEN

Howard Aiken was a primary engineer in IBM. He developed the first automatic sequence-controlled calculator, **Mark I** in 1944. This machine was capable of executing long computations automatically.

⬗ ENIAC

Electronic Numerical Integrator and Computer (ENIAC), the first general

GEORGE BOOLE

JOHN VON NEUMANN

Figure 1.5: Mark I

purpose electronic digital computer was invented by **John Mauchly** and **J. Presper Eckert** in 1946.

It consisted of 18,000 vaccum tubes and was 1000 times faster than Mark I. It could add two large numbers in 200 microseconds.

Figure 1.6: ENIAC

UNIVAC I

Universal Automatic Computer I (UNIVAC I) was the world's first commercially available computer, designed by **J. Presper Eckert** and **John Mauchly** in 1951.

It was the first computer to handle both numeric and text data. It was also the first computer that was equipped with magnetic tape unit. It used buffer memory.

Figure 1.7: UNIVAC I

GENERATIONS OF COMPUTERS

The evolution of the present day computer can be classified into generations of computers.

Generation/ Period	Circuitry	Data Input	Data Output	External Storage	Language	Examples
1st 1940-1956	Vacuum Tubes	Punched Cards and Paper Tapes	Printouts	Magnetic Tapes	Machine	UNIVAC, ENIAC, EDVAC
2nd 1956-1963	Transistors	Punched Cards and Paper Tapes	Printouts	Magnetic Tapes	Assembly, Fortran, Cobol, Basic, PL/1	IBM1400 and 700 series IBM 350
3rd 1964-1971	Integrated Circuits (IC)	Keyboard	Monitor	Magnetic Disks	Sophisticated OS were used, Pascal, Fortran, Cobol, RPG	IBM System-360 Apple 1, Altair
4th 1972–Present	Micro Processors (VLSC)	Keyboard, Mouse, Scanner etc.	Monitor, Printers, Speakers	Magnetic Disks with higher capacity	Use of special software for maintaining large database RDBMS, C++ in 1985	CRAY 1/2 Apple II VAX 9000

| 5th Present and Beyond | With artificial intelligence (SLSI) | Optical fibre technology to handle artificial intelligence; Capacity to think and reason | | | Understand human speech, recognise patterns, like faces and other complex images | |

Each new generation resulted in the following changes in computers:

INCREASE in SPEED, STORAGE CAPACITY and RELIABILITY

DECREASE in COST and SIZE
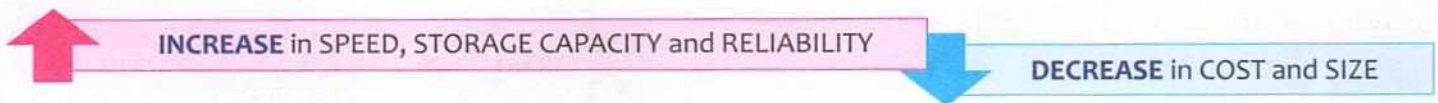
TYPES OF COMPUTERS

Computers can be classified into the following types with respect to their size, speed, storage capacity, and cost:

MICRO COMPUTERS

> These computers are small in size and cheap.

> They are usually designed for personal use, therefore, are also called **Personal Computers**.

> They are mainly used in homes, schools, offices, shops, banks, etc. These computers are given different names according to their usage.

Examples: Commodore 64, IBM PC.

Desktop Computers: These computers are designed to fit comfortably on top of desks. They typically come with several units, such as monitor, CPU, keyboard, and mouse, which are connected to each other and work like a single unit.

Laptops: These computers are small in size and can be placed on the lap. These are battery operated and portable. We can perform all the tasks that we do on a desktop on laptops too. But laptops are more expensive than desktop computers. These computers are mainly used by business travellers. Laptops usually come with 13–15 inches screen.

Tablets: These computers are smaller and lighter than laptop computers but bigger than smart phones. Instead of a keyboard and mouse, tablets use touch-sensitive screen for typing and navigation. Tablets generally have a screen size between 7-10 inches. Popular uses of tablets include reading e-books, watching movies, viewing photos, navigation, browsing net, etc.

MINI COMPUTERS

➤ These computers are bigger in size than the micro computers.

➤ They have higher processing speed and are costlier than micro computers.

➤ These computers are capable of supporting 4 to about 200 users simultaneously.

➤ They are used in banks, universities, and in any other big organisations.

Example: PDP-8.

MAINFRAME COMPUTERS

➤ These computers are very powerful.

➤ They are big in size and have a large memory and high speed.

➤ They are designed to tackle huge amount of data.

➤ More than hundred users can use a mainframe computer simultaneously. These computers are used in networked environment.

➤ Mainframe computers are very expensive and used in large business organisations, universities, banks, scientific laboratories, airline and railway ticket reservation, stock exchange markets, etc.

Examples: IBM Z series, PDP-10, and System Z10.

SUPER COMPUTERS

➤ They are the most powerful computers with a huge processing speed.

➤ These computers are used for weather forecasting, space research, satellite control, etc.

Examples: CRAY-1, CRAY-2, PARAM, Tianhe-2, Sunway TaihuLight, etc.

RECAP

> Charles Babbage is considered as the Father of Computers. He invented Difference engine in 1822 and Analytical engine in 1833.

> Lady Augusta Ada Lovelace was the first programmer.

> ENIAC was the first general purpose electronic digital computer, invented in 1946.

> UNIVAC–I was the first computer to handle both numeric and text data.

> Computers are categorised into four types with respect to their speed, storage capacity, size, and cost.

> The four types of computers are Micro computers, Mini computers, Mainframe computers, and Super computers.

BRAIN DEVELOPER

SECTION - A

A. Fill in the blanks.

1. The first mechanical calculating device was ....

2. .... invented the first automatic sequence controlled calculator-Mark I.

3. .... is the world's fastest Super Computer.

4. The first general purpose electronic computer was ....

5. The Analytical engine was invented by ....

HINTS   • ENIAC   • Howard Aiken   • Abacus   • Charles Babbage   • Summit

B. State True or False.

1. UNIVAC–I was the first computer to handle both numeric and text data.

2. Charles Babbage invented the Difference engine in 1822.

3. The first generation computers used transistors.

4. The Tabulating machine was invented by J. Presper Eckert.

5. George Boole developed the Boolean logic.

C. Match the following.

A	B
Lady Augusta Lovelace	Pascaline
Second Generation Computers	The first programmer
Blaise Pascal	Transistors
Third Generation Computers	1973
MICRAL	Integrated circuits

D. Application-based questions.

1. Raman works in the National Weather Forecasting agency. Which type of a computer does he use to forecast the weather conditions?

   ....

2. Which type of computers do Indian Railways use to interact with the customers for the booking and cancellation of tickets?

   ....

SECTION - B

A. Multiple-choice questions.

1. The era of first generation computers was ....

   a. 1920–1936   b. 1940–1956   c. 1950–1958

2. .... is an example of Super Computer.

   a. Tianhe-2   b. IBM PC   c. ENIAC

3. .... are used in homes, schools, shops, offices, banks, etc.

   a. Micro computers   b. Mini computers   c. Super computers

4. Punched cards were designed by ....

   a. John Mauchly   b. Herman Hollerith   c. John von Neumann

5. The .... language was used in first generation of computers.

   a. Cobol   b. Machine   c. RDBMS

B. Answer the following questions.

1. Name the first mechanical calculator, produced commercially.

2. Who is considered as the Father of Computers?

3. Which was the first general purpose electronic digital computer and who invented it?

4. Write any three features of fourth generation computers.

5. Name the various types of Micro computers. Explain any two.

6. Write a short note on the Abacus.

7. What is the difference between a Laptop and Tablet.

ACTIVITY SECTION

Open a blank document in Word 2016 and follow the given instructions:

> Add a rectangle with rounded corners and fill colour in it by selecting the **Gradient** option from the **Shape Fill** option.

> Choose a desired **WordArt** style and insert the text "Inventors and their Inventions."

> Insert a **Text Box** and apply a desired style and shape effect by using the **Format** tab.

> Type the text as shown in the figure and insert relevant pictures by using the **Online Pictures** option. Add the cloud shape and apply **Glow** effect to it. Right-click on the shape and select the **Edit Text** option to insert the year of invention in it.

> Click on the cloud shape and choose **Bring Forward** option to place it over the text box.

> Likewise, insert another text box and type the text as shown. To copy the same formatting effects to the new text box and its text, use **Format Painter** option.

> Add the information and pictures of the devices Napier's Bones, Thomas Arithmometer, Analytical Engine, UNIVAC–I, and make a beautiful chart.

Inventors and their Inventions

In the Year 1642 — Blaise Pascal — Invented Pascaline

In the Year 1671 — Leibniz — Invented Leibniz Calculator

Divide the class into four groups and conduct a group discussion on the topic: **Generations of Computers**.

Make a collage on **Different Types of Micro Computers** by collecting pictures from newspapers and magazines.

To know more about computer history, visit the website:
http://www.computersciencelab.com/ComputerHistory/History.htm

UNDERSTANDING WINDOWS 10

Windows is an operating system that acts as an interface between the user and hardware. It also manages the resources of a computer system and provides common services for the other software. It keeps track of information regarding creation, deletion, copy, and storage of files.

The first GUI edition of Windows, featuring a new user interface was introduced in 1985 and was called Windows 1.0. The increased usage of technology and continuous research has led to the development of advanced editions of Windows, named as Windows 98, Windows

Figure 2.1: Various Versions of Windows

2000, Windows Me, Windows NT, Windows 2003, Windows XP, Windows Vista, Windows 7, Windows 8, and Windows 10. Windows 10–the latest version of windows was released on July 29, 2015.

WINDOWS 10 AND ITS FEATURES

Windows 10 is becoming popular day by day because of its new features and improved user-friendly environment. Some of its most striking features are as follows:

➤ It is easy to use, more interactive, and the most secured version of Windows.

➤ It is much more personal and provides you with the ability to redecorate your desktop with new backgrounds, themes, colours, and icons.

➤ The enhanced search tool, **Cortana**, enables you to search anything on your system or the web, directly. It lets you play music, videos, write notes, set alarms and reminders, perform calculations, send e-mails, change wallpapers, and a lot more through voice commands.

➤ The application **Windows Store** provides a bundle of updated apps including videos, music, movies, photos, maps, messaging, mail, calendar, etc.

➤ Windows 10 enables you to manage your desktop and windows in a better way.

  ➤ You can create multiple desktops for different set of applications by using the **Task View** button ⊡.

  ➤ **Snap assist** is a useful feature that helps you to rearrange your windows to make the best use of

your screenspace. When you snap one of the opened windows to the left or the right edge of the screen, Snap assist displays the thumbnails of the other opened apps that can be snapped in the unused space. You can use both the windows at the same time simultaneously.

➤ The **Windows Hello** feature allows you to access your computer by showing your face, finger prints, or iris. It provides an extra security to your system.

DESKTOP

The word 'Desktop' has been derived from the real world desktop (the top of our study or working table) where you may find pen stand, notepad, calculator, files, etc. The desktop of Windows serves the same purpose. Here you can find various **icons** (small pictures) representing files, folders and applications etc.
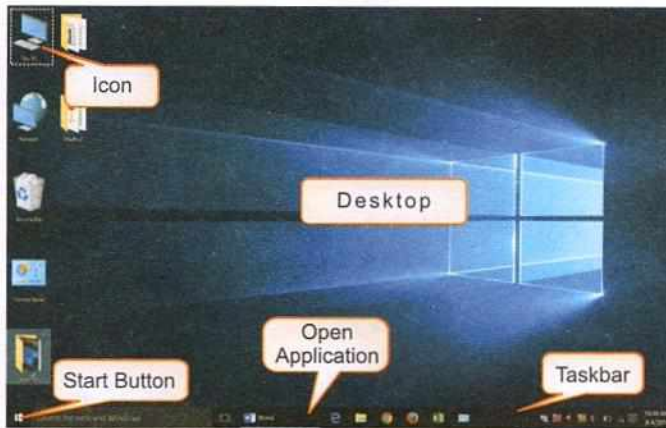
Figure 2.2: Windows 10 Desktop

TASKBAR

You will find the **Taskbar** at the bottom of the screen. It displays the **Start** button on the extreme left side. Next to the **Start** button is the **Search box** that facilitates browsing through both your computer and the web. To the right of the Search box is the **Task View** button. It allows you to create multiple desktops at the same time. The middle area of the taskbar contains the opened and frequently used apps. You can pin the desired apps to the taskbar by dragging the apps' shortcuts from the desktop or Start menu. If an application is opened, you will see a bar below its icon. The Taskbar holds the **Notification Area** on the right side, which includes a clock and a group of other icons. These icons display the status and notifications about the programs running on a computer, e.g., network connectivity, battery status, volume, OneDrive etc. You can tap the **Notifications** button 🗩 to display the vertical bar of **Action Center** on the right side of the desktop.

Figure 2.3: Windows 10 Taskbar

ICONS

Icons are small pictures that represent files, folders, and apps. They play a very important role in graphical user interface (GUI). Let us learn about some of the commonly used icons:

This PC	**This PC**	It gives you a view of the available drives and their content stored on the computer system. Double-clicking on any drive's icon will display the files and folders in that drive.
Word 2016	**Application Icons**	These are the graphical images that give a quick access to the related application.
PowerPoint 2016	**Shortcut Icons**	A shortcut is an icon containing a direct route to a specific application, document, or a folder. It has a small jump arrow on its lower-left corner.
	Document Icons	The active document window of an application can be minimised to a document icon, which gets placed on the taskbar. You can restore the document window by clicking on the Document icon again.
Network	**Network**	It allows you to access the shared files or devices on different computers in a network.
Recycle Bin	**Recycle Bin**	The Recycle Bin is a folder that holds the deleted files/folders. These deleted files/folders can either be restored to the original location or permanently deleted from the system.

START MENU

The Start Menu in Windows 10 is a blend of the old menu, found in Windows 7 and Start Screen in Windows 8. When you click on the **Start** button at the bottom left of the screen, you get two panels, side by side. The left column displays the pinned, recently added, and most used apps. The right column displays a section of live tiles that you can customise, resize and reorganise.

LIVE TILES

Windows 10 displays the most popular universal apps in the form of resizable live tiles in the right pane of the Start Menu. These tiles display latest updates and information such as News, Weather report, incoming mails, etc. without opening the app. You can rearrange, resize, and move these tiles according to your requirement.

PINNING TILES TO START

➤ Click on the **Start** button.

➤ Right-click on the app that you want to add to the Start Menu.

➤ Select the option **Pin to Start**.

➤ The selected app will be displayed in the right pane in the form of a tile.

> You can also drag the app and drop it in the Tiles area to display it in the right pane of the Start Menu.

Figure 2.4: Live Tiles

RESIZING TILES

You can also resize the tiles according to your choice. Tiles are generally available in four different sizes: Small, medium, wide, and large. To resize a tile, follow the given steps:

➤ Right-click on the tile and select the option **Resize**.

➤ Select the size of your choice.

MOVING AND GROUPING

You can move a tile to any place in the Start Menu just by dragging it to the desired position. Tiles can also be combined to form a group. Follow the given steps to create a group of tiles:

➤ Drag a tile to the bottom of the right pane in the Start Menu. A transparent horizontal bar appears with the heading **Name group** on the left side and two small horizontal lines on the right.

➤ Click on the **Name group** and add a name. Now, you can add the relevant tiles in this group.

➤ To move a whole group of tiles, drag the two small lines to the desired position.
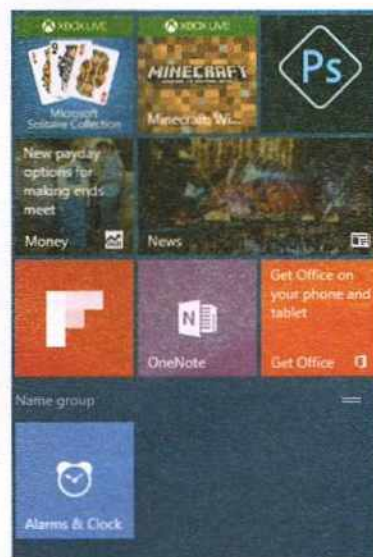
Figure 2.5: Creating a Group of Tiles

TURN OFF LIVE TILES

Windows 10 allows you to disable a Live tile, so that it stops giving live updates and changes into a static icon. To do so, follow the given steps:

➤ Click on the **Start** button.

➤ Right click on a tile.

➤ Select the **More** option and choose **Turn live tile off** option from the sub-menu.

⟫ UNIVERSAL APPS OF WINDOWS 10

Universal apps is an integral part of the Windows 10 store. As the name suggests, these are apps that work on all device sizes from phones to high-powered desktop PCs. Windows 10 provides us with a bundle of built-in apps like Photos, Maps, Mail, Alarms and Clock, and Calendar, etc. You can find and use these apps from the option in the Start Menu. Some of the most useful apps are:

PHOTOS	WEATHER	MAIL
The Photos app collects and organises all your photos and videos from your PC and the other devices at one place.	This app provides you with reliable forecasts, weather conditions, real-time rain alerts, and the minimum /maximum temperature of your favourite locations at a glance.	This app allows you to manage all your mail accounts at one place. It notifies you about the incoming mails, allows you to read a mail and respond back to a sender. To use this app you need to sign in with your account.

⟫ CUSTOMISING THE DESKTOP

Windows is quite flexible and provides options to change the settings of the desktop according to your choice. Follow the given steps to change the colour scheme of the computer screen:

➤ Right-click on the blank area of the desktop and select the **Personalise** option. The **PERSONALISATION** window appears.

- Click on the **Colors** option from the left pane. Select any colour from the 'Choose your accent color' section to change the colour scheme of the Start Menu and the other windows.

- A preview of the selected colour scheme will appear in the 'Preview' section.

- If you want the accent colour to match your desktop wallpaper, turn on the **Automatically pick an accent color from my background** option.

Figure 2.6: Changing Desktop Appearance
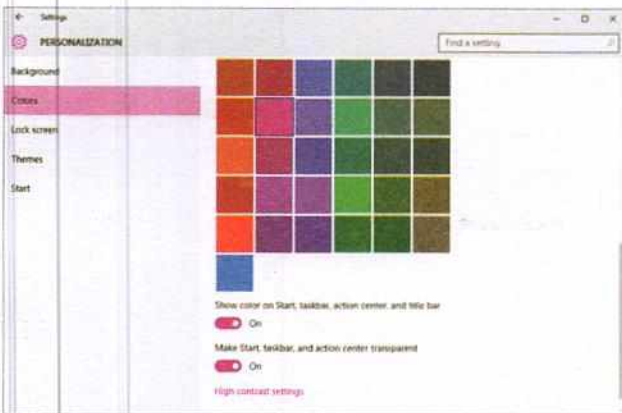
Figure 2.7: Applying Colours to all Components of Desktop

- Turn on the **Show color on Start, taskbar, action center, and title bar** option to apply the same colours to these components of the desktop.

- To apply transparent effect, turn on the **Make Start, taskbar, and action center transparent** option.

- The colour scheme will be applied to your desktop.

⤳ DISPLAYING MULTIPLE WINDOWS AT A TIME

In Windows 10, we can display multiple application windows side by side. Let us see how it works:

- First open **Word 2016** and **PowerPoint 2016**.

- Now, right-click anywhere on the blank portion of the taskbar.

- Click on the **Show windows side by side** option from the Shortcut menu. Both the application windows will be displayed, side by side.
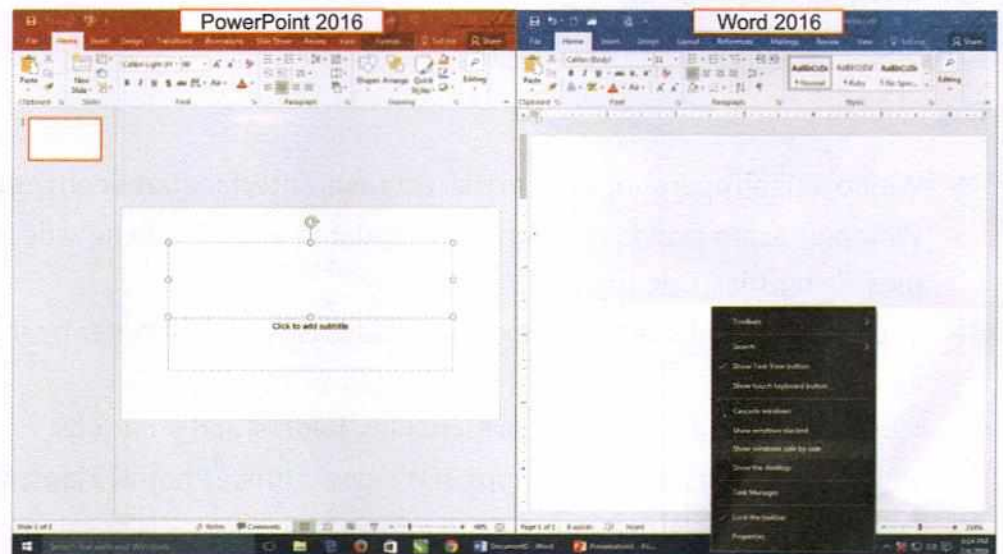
Figure 2.8: Displaying Two Windows Side by Side

EXPLORING PICTURES

In **Pictures** folder, we can store digital photos, images, and graphic files.

➤ To open this folder, click on the **Start** button and then click on the arrow next to the **File Explorer** option.

➤ Select the **Pictures** option from the right pane. The **Pictures** folder will open.

➤ By default, the pictures are displayed as thumbnails along with the 'Camera Roll' and 'Saved Pictures' folder.

➤ Here you can also view the picture icons in various sizes. Select the **View** tab and click on the desired option from the **Layout** group to define the thumbnail size of the picture.

➤ Select any picture, and double-click on it. The picture gets opened in the **Photos** app.

Figure 2.9: Pictures Folder

➤ You will find various buttons at the top-right corner of the Window that helps in editing and managing the pictures.

RECAP

> ➤ Windows is an operating system that acts as an interface between the user and the computer.
> ➤ Windows Store provides a bundle of updated apps including videos, music, movies, photos, maps, messaging, mail, calendar, etc.
> ➤ The Windows Hello feature allows you to access your computer by showing your face, finger prints, or iris.
> ➤ Icons are small pictures that represent files, folders, and programs.
> ➤ Universal apps are the built-in apps of Windows 10 like Photos, Maps, Mails, Alarms and Calendar.
> ➤ Live Tiles display latest updates and information such as News and Weather report. without opening the app.

SECTION - A

A. Fill in the blanks.

1. Microsoft Windows is an ....

2. To customise the desktop, right-click on the blank area and select the .... option.

3. In the .... folder, you can store digital photos, images, and graphic files.

4. .... are the graphical images that give a quick access to the related applications.

5. The .... feature minimises all the open windows except the one that you want to focus on.

HINTS • Aero Shake • Operating System • Application Icons • Personalize • Pictures

B. State True or False.

1. The first GUI edition of Windows operating system was introduced in 1998.

2. Windows 10 is the latest version of Windows.

3. Bill Gates is the founder of Microsoft.

4. Windows 10 allows the users to create more than one desktop at the same time.

5. You cannot resize a Live tile.

6. The Peek button is located at the right end of the taskbar.

C. Application-based questions.

1. Riya wants to check the weather conditions of her hometown. Suggest the app that she can use to do this task.

   ....

2. Kritika has made her computer project. She saved it on her computer with the name 'My Project', but forgot the location of the file. Suggest the best way for her to search the project.

   ....

A. Multiple-choice questions.

1. Name the feature that allows you to access your computer by showing your face, finger prints, or iris.

   a. Cortana   b. Windows Hello   c. Task View

2. Which feature of Windows 10 takes you directly to the desktop?

   a. Peek   b. Jump List   c. Search Box

3. Which of the following applications of Windows 10 provides a bundle of updated apps?

   a. Windows Store   b. Cortana   c. Search box

4. Which icon allows you to access the shared files or drives on different computers in a Network environment?

   a. Application Icon   b. Shortcut Icon   c. Network Icon

5. Name the feature that allows you to drag and drop a window to a corner of the screen to make space for the other applications.

   a. Task View   b. Snap   c. Peek

B. Answer the following questions.

1. Mention any three features of Windows 10 that have made it popular.

   ....

   ....

2. Describe the different parts of the Taskbar.

   ....

   ....

3. What are Universal apps?

   ....

   ....

4 Write a short note on the Start Menu.

   ....

   ....

ACTIVITY SECTION

Follow the instructions to add a new group of tiles to the Start Menu:

➤ Click on the **3D Viewer** button.

➤ Locate the **3D Viewer** app and right click on its icon.

➤ Select the **Pin to Start** option from the sub menu. The **3D Viewer** tile appears at the bottom of the right pane in the Start Menu.

➤ Click on the **Name group** on the transparent horizontal bar and specify the name 'View'.

➤ Right-click on the **3D Viewer** tile and select the **Resize** option and set the size to 'Wide'.

➤ Drag the **Weather** app tile from the 'Life at a glance' group to 'View' group.

➤ Finally, move the 'Updates' group and place it before the 'Play and explore' group.

GROUP DISCUSSION

For Concept Clarity

Discuss the topic **New features of Windows 10** with the students.

PROJECT WORK

Using Creativity

Make a presentation on the topic, **Universal Apps of Windows 10**. Collect and insert the pictures along with the information about the following apps:

➤ Alarms and Clock   ➤ Maps   ➤ Calendar   ➤ News   ➤ Sports

ONLINE LINKS

Looking For More

To learn more about Windows 10, visit the following websites:

➤ http://www.tutorialspoint.com/windows10/

➤ http://www.gcflearnfree.org/windows10/

WORKING WITH TABLES

Word 2016 offers a flexible feature of presenting information, in a tabular form. A table consists of a number of columns and rows. It is very useful in organising and representing the text information and numeric data in an effective manner.

CREATING A TABLE

A **table** is an organised arrangement of text in the form of rows and columns. The intersection of a column and row is called a **cell**. Word provides a variety of ways to create a table. To insert a new table, place the cursor where you want the table to appear.

USING TABLE GRID

> Click on the **Table** button on the **Insert** tab in the **Tables** group.

> This will open a drop-down menu that contains a grid.

> Drag the mouse pointer over the grid to select the number of rows and columns that you want in the table.

> The table will be inserted on the working area.

Figure 3.1: **Creating a Table Using Table Grid**

USING INSERT TABLE DIALOG BOX

> Navigate to the **Insert** tab and then click on the **Table** button. Select the **Insert Table** option from the drop-down menu.

> The **Insert Table** dialog box appears.

> Specify the number of columns and rows and click **OK**.

When you insert a table, you will get the **Design** and **Layout** tabs on the Ribbon, under the **Table Tools**.

ENTERING DATA IN A TABLE

> Place the insertion point in a table cell where you want to type data.

Figure 3.2: **Insert Table Dialog Box**

- To move to the next adjoining cell, either press the **Tab** key or **Right arrow** key.

- To move to the previous cell, either press the **Shift + Tab** key or **Left arrow** key. Enter the data as given in the table.

- The **Up** and **Down** arrow keys will shift the cursor to the cells above or below the current cell.

Name	English	Hindi	Total
AMIT	65	74	139
SHUBHAM	89	92	181
MANAV	97	88	185
KANIKA	74	81	155
NEHA	83	93	176

Figure 3.3: **Entering Data**

To Select	Action	Do Like This
A cell	Triple-click in the cell.	
A row	Move the mouse to the left of the row margin and click on the left mouse button.	
A column	Place the mouse pointer over the top of the column and click on the left mouse button.	
The entire table	Double-click on the Table move handle.	

Figure 3.4: **Selecting Different Parts of a Table**

You can also select the different parts of a table by using the **Select** button in the **Table Tools** on the **Layout** tab.

MODIFYING A TABLE

After entering data in a table, you can make changes in the data as needed. You can insert rows, columns, or cells in a table to accommodate new content. Similarly, you can delete unwanted rows, columns, or cells from a table.

RESIZING TABLES

You can increase or decrease the size of a table manually, by using 'Table Resize Handle', but Word also offers ready-made solutions to resize the table. Resizing of a table can be done by **AutoFit** option that offers flexibility to automatically resize the column width, based on different criteria. You can set the table width based on the window size
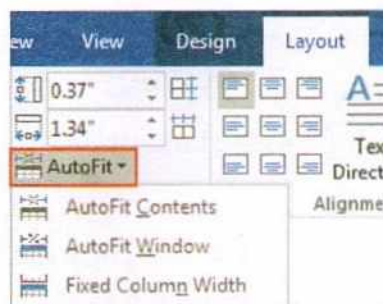
Figure 3.5: **Resizing Table Using AutoFit Option**
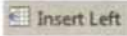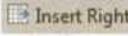
or convert it back to use fixed column width.
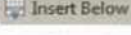
> Click on the drop-down arrow of the **AutoFit** button in the **Cell Size** group on the **Layout** tab.

> It will display the following three options:

>> **AutoFit Contents:** It adjusts the column width according to the data entered.

>> **AutoFit Window:** Selecting this option will adjust the table according to the margins set on a window.

>> **Fixed Column Width:** The column width gets fixed and the text is wrapped in the same cell.

> When you click on the table, you notice a plus sign ⊞ at the upper-left corner. This is called the **Table Move Handle**, which is used to move a table.

> A small hollow square ☐ at the bottom-right corner of the table is called the **Table Resize Handle**. This handle is used to resize a table.

INSERTING COLUMNS/ROWS IN A TABLE

While creating and making entry in a table, you might need to add columns/rows in between. Word provides the facility to add new columns to right or left of any existing column and insert rows above or below the selected row.

> To add a new column, select the column by clicking on its top border, adjacent to which you want to insert a new column. The **Table Tools** tab appears on the ribbon.

> Click on the **Layout** tab under it. Select either the **Insert Left** 🔲 Insert Left or **Insert Right** 🔲 Insert Right button in the **Rows & Columns** group. An empty column gets inserted in the table as per the chosen option.

Similarly, select a row and then click either on the **Insert Above** or **Insert Below** 🔲 Insert Below button in the **Rows & Columns** group on the **Layout** tab to insert a new row.
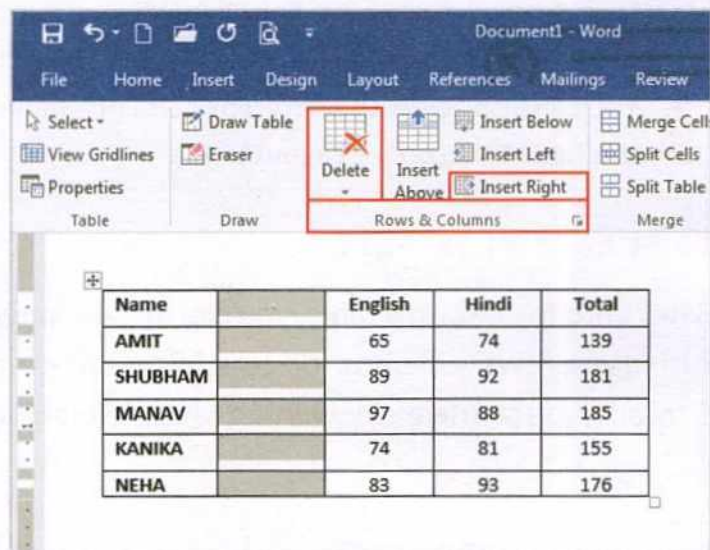
Figure 3.6: Inserting a Column in a Table

NOTE

Select as many columns or rows as you want to add in a table and then right-click on the selection. Click on the **Insert** tab and choose the desired option from the cascading menu.

DELETING ROWS AND COLUMNS

➤ Select the row or column.

➤ Click on the **Layout** tab under the **Table Tools** menu.

➤ Select the **Delete** button in the **Rows & Columns** group. A list of options appears.

➤ Choose the **Delete Rows** or **Delete Columns** option in the drop-down menu.
Or

Right-click on the selected row/column that you wish to delete and select the **Delete Rows/Delete Columns** option from the Shortcut menu.

FORMATTING A TABLE

Formatting controls the overall appearance of a table. After creating a table, you can format the entire table by using the **Table Styles** feature. Table Styles is an inbuilt facility to change the appearance, colour, and borders of a table.
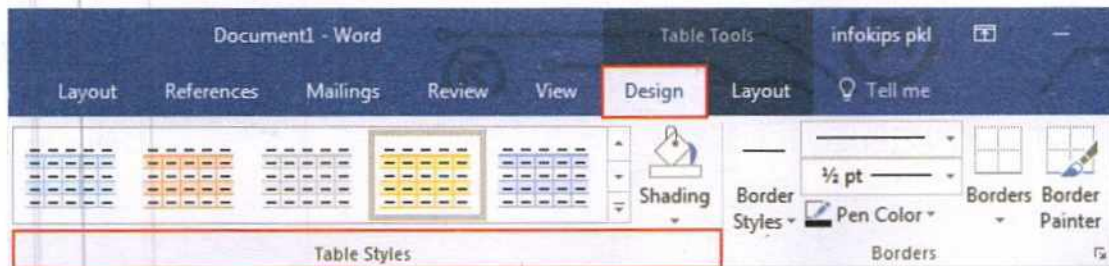
Figure 3.7: Using Table Tools

➤ Click on the table that you want to format. Under the **Table Tools**, click on the **Design** tab.

➤ Select the desired style from the Table Styles group.

NOTE
You can also get more style options for your table by clicking on the **More** drop-down arrow of the **Tables Styles** gallery.

CHANGING COLUMN WIDTH

You can resize the column width either by using the option available on the **Layout** tab or by using the mouse pointer.

➤ Select the column whose width you want to change.

➤ Click on the **Layout** tab.

➤ Select the **Properties** button in the **Table** group. The **Table Properties**

dialog box appears.

➤ Click on the **Column** tab.

➤ Select the **Preferred width** check box. Now, increase or decrease the column width either by using the spin arrows or type in the specific values to set the width. Click **OK**.

Similarly, you can change the row height by selecting the **Row** tab in the **Table Properties** dialog box.
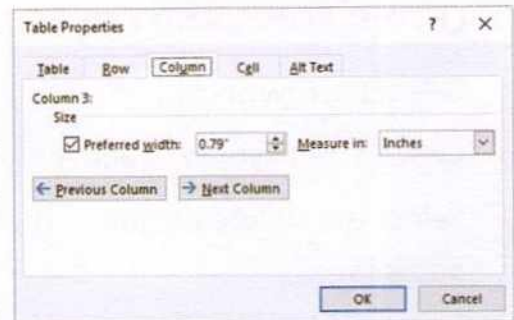
Figure 3.8: Table Properties Dialog Box

➤ SPLITTING CELLS

Splitting a cell means dividing the selected cell into separate cells. To split a cell, follow the given steps:

➤ Select the cell that you want to split.

➤ Click on the **Layout** tab.

➤ Select the **Split Cells** button in the **Merge** group.

➤ The **Split Cells** dialog box appears.

➤ Define the number of rows and columns, in the respective spin boxes, into which you wish to split the selected cell. Click **OK**.
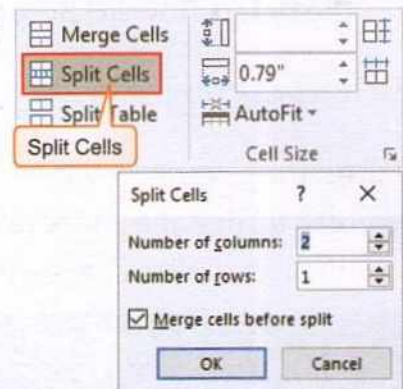
Figure 3.9: Split Cells Dialog Box

➤ MERGING CELLS

Sometimes, data is split in numerous segments of a cell and you want to combine it in a single cell, to give it a better look. Merging the cells provides a way to consolidate data in one cell.

➤ Select the cells that you want to merge. Click on the **Layout** tab.

➤ Select the **Merge Cells** button in the **Merge** group.

➤ The data gets merged into a single cell.
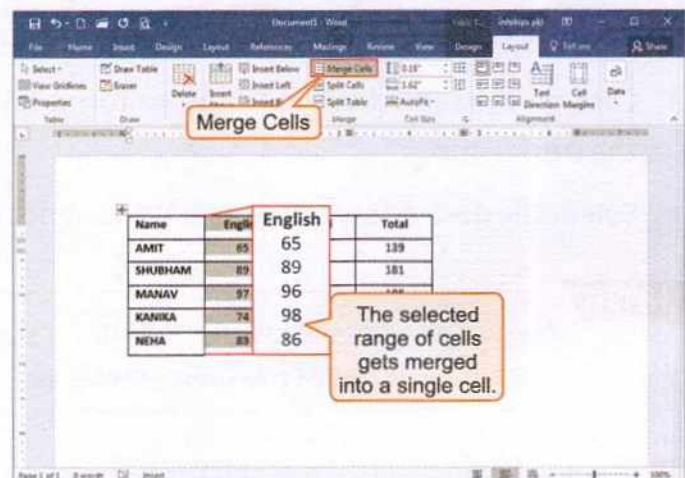
Figure 3.10: Merging Cells

➤ APPLYING BORDERS AND SHADING

You can enhance the appearance of a table by applying a variety of borders and shading styles. To add borders and shading, follow the given steps:

➤ Select the entire table by clicking on the **Table Move Handle**.

➤ Click on the **Design** tab.

- Change the **Line Style** and **Width** by clicking on the **Line Style** and **Line Weight** options, respectively from the **Borders** group.

- Click on the **Borders** dialog box launcher.

- The **Borders and Shading** dialog box appears.

- Choose the **All** option. Select the colour from the **Color** drop-down menu. Likewise, you can select the desired settings for the border.

- Click on the **Apply to:** Text box and select the **Table** option from the drop-down list.

Figure 3.11: The Borders and Shading Dialog Box

- To give colour effects to your table, click on the **Shading** tab. Click on the drop-down arrow under the **Fill** section. The colour palette gets displayed. Choose any shade. Click **OK**.

- Notice the change in the appearance of this table.

CONVERTING TEXT TO A TABLE

You can also convert existing text to a table:

- Enter the text as shown in Figure 3.12.

- Select the text.

- Click on the **Insert** tab > **Table** button and select the **Convert Text to Table** option from the drop-down menu.

- The **Convert Text to Table** dialog box appears.

- Define the columns and rows under the **Number of columns** and **Number of rows**, respectively.

- Click **OK**. The selected text will appear in a tabular form as shown in Figure 3.12.

S. No.	Items	Quantity
1	Printer	12
2	Keyboard	50
3	Mouse	20
4	Barcode Reader	30
5	Monitor	25

Figure 3.12: Text Converted into a Table

> **NOTE**
>
> The **Convert Text to Table** option gets highlighted in the **Table** drop-down menu only when the text is selected.

INSERTING PICTURE IN A TABLE

Inserting pictures in a table:

- Click on the cell where you want to insert a picture.

- Click on the **Insert** tab. In the **Illustrations** group, select the **Pictures** option.

> The **Insert Picture** dialog box appears. Browse and select the picture to be inserted.

> Click on the **Insert** button.

> The selected picture will be inserted in the table cell.

NOTE   You can insert pictures from the Internet through **Bing Image Search** gallery by selecting the **Online Pictures** option from the **Insert** tab.

S. No.	Items	Quantity	Image
1	Printer	12	
2	Keyboard	50	
3	Mouse	20	
4	Barcode Reader	30	
5	Monitor	25	

Figure 3.13: Adding an Image into a Table
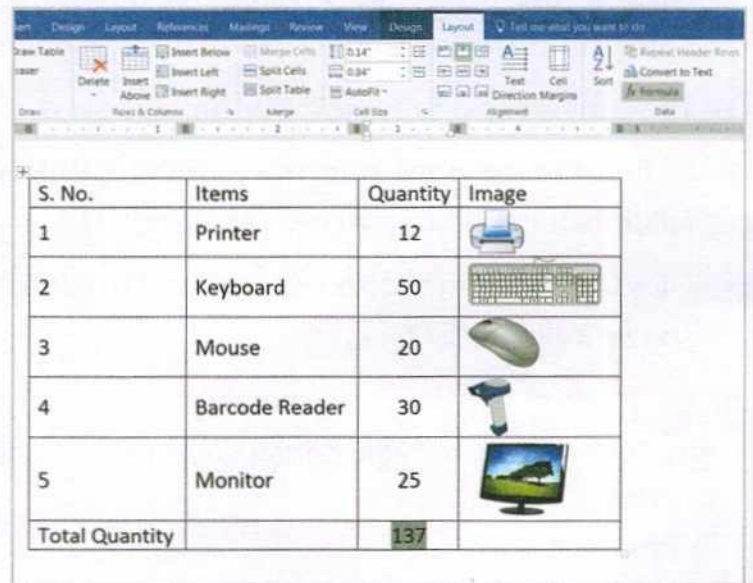
CALCULATIONS IN A TABLE

You can perform calculations on the numeric data entered in a table.

> Enter the data in a table.

> Select the **Layout** tab.

> Click in the cell where the result is to be displayed. Select the **Formula** button in the **Data** group.

> The **Formula** dialog box appears.

> Note that the **SUM** formula is already displayed. Click **OK**.

> The result appears in the selected cell.
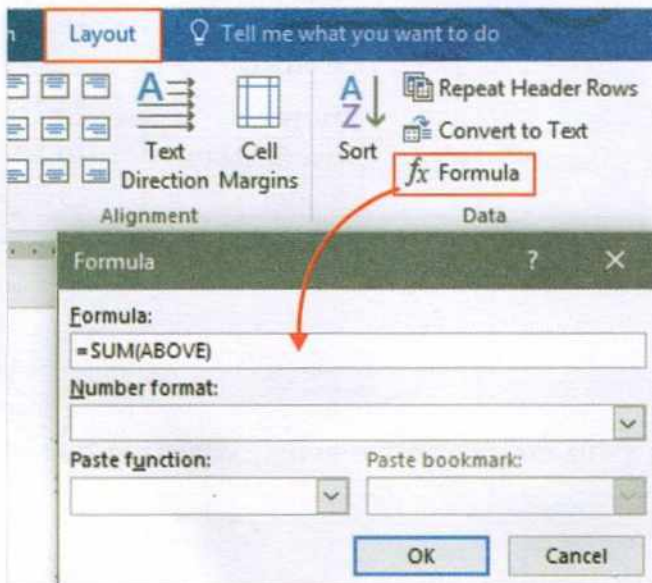
Figure 3.14: Formula Dialog Box

Figure 3.15: Calculation in a Table

S. No.	Items	Quantity	Image
1	Printer	12	
2	Keyboard	50	
3	Mouse	20	
4	Barcode Reader	30	
5	Monitor	25	
Total Quantity		137	

By default, Word 2016 calculates the sum of values in the cells lying in the column above or in the row to the left.

In Word 2013, you can insert a table in a document, enter data in it and format it, by using various options available in **Tables** group on the **INSERT** tab.

⋙ UPDATING CALCULATIONS IN A TABLE

Sometimes you may change the data or add any new data in a table. Word provides the facility to update the changes. To update the total sum in a table:

➤ Select any cell and change its data.

➤ Now, select the data of the cell where the total sum is displayed.

➤ Press **F9** key and observe that Word automatically updates the calculations.

RECAP

➤ A table is an organised arrangement of text in the form of rows and columns.

➤ The intersection of a column and row is called a cell.

➤ The AutoFit option offers flexibility to automatically resize the column width, based on different criteria.

➤ Table Styles is an inbuilt facility to change the appearance, colour, and borders of a table.

➤ The Table Move Handle and Table Resize Handle are used to move and resize the entire table, respectively.

➤ Splitting a cell means dividing the selected cell into separate cells.

➤ Combining two or more cells into a single cell is called Merging.

BRAIN DEVELOPER

SECTION - A

A. Fill in the blanks.

1. The .... key is used to move the cursor to the adjoining cell of a table.

2. The .... option is used to insert a predesigned table in a Word document.

3. A small hollow square at the bottom-right corner of the table is called .... handle.

4. The .... option adjusts the table according to the margins set on a window.

5. .... controls the overall appearance of a table.

6. .... a cell means dividing the selected cells into separate cells.

B. State True or False.

1. Press Shift + Tab key to move to the next cell.

2. Clicking on the Table Move Handle will select the entire table.

3. You can insert columns only to the left side of the selected column.

4. AutoFit Contents option adjusts the column width according to the data entered.

5. Cells cannot be merged in a table.

6. We can add a row or column in a table by clicking on the + sign.

C. Application-based questions.

1. The teacher has asked Rohan to enter his test marks in a table. She asked him to calculate his total marks. Which option should he use to find the total marks?

   ....

2. Ishita has designed her weekly study schedule in a tabular format. She wants to enlarge the size of her table. Suggest a quick way to resize the table.

   ....

SECTION - B

A. Multiple-choice questions.

1. The intersection of a column and row is called a ....

   a. Border   b. Table   c. Cell

2. The Tables group is present in the .... tab.

   a. Layout   b. Insert   c. Home

3. Which key combination deletes the selected rows and columns from a table?

   a. Ctrl + Delete   b. Shift + Delete   c. Alt + Delete

4. Which function key is used to update the total in a cell?

   a. F7   b. F8   c. F9

5. Which among the following shortcut keys is used on the numeric keypad to select the entire table?

   a. Alt + 6   b. Alt + 5   c. Alt + 4

B. Answer the following questions.

1. How is a table useful?

2. State the difference between:

   ➤ Table Move Handle and Table Resize Handle

   ➤ Split cells and Merge cells

3. What do you understand by the term "Formatting"?

4. Briefly explain the quick way in which you can change the column width in a table.

➤ Draw a table using the **Insert** tab > **Table** > **Insert Table** option and define seven columns and nine rows in it.

➤ Select the first row and merge all the cells. Type the heading 'PROGRESS REPORT'. Align it to the centre of the table and press the **Enter** key.

➤ Select the first cell of the second row and type 'Roll No'. Press the **Tab** key and type 'Name'. Likewise, press the **Tab** key, to enter other field names and rest of the data, as shown in the given table.

PROGRESS REPORT						
Roll No.	Name	Computer	Maths	Hindi	English	Total
101	Manas Nanda	85	98	87	97	
102	Shruti Sharma	52	64	65	50	
103	Kabir Nanda	69	83	54	60	
104	Amit Mangal	58	54	61	59	
105	Dinesh Bhangar	73	21	40	46	
106	Anika Sharma	92	99	93	94	
107	Navneet Sharma	89	69	79	59	

➤ Place the pointer in the first cell of the **Total** column.

➤ Click on the **Formula** button in the **Data** group on the **Layout** tab. You will notice that the marks get calculated in the **Total** column.

➤ Similarly, calculate the total marks of the other students.

➤ Select the table. Click on the drop-down arrow of **Borders** tool in the **Borders** group on the **Design** tab. Select the **Borders and Shading** option. Change the Line **Style, Colour** and **Width**. Click **OK**.

➤ Notice the change in the appearance of the table.

➤ Similarly, click on the **Shading** tool to give background colour to the table.

➤ Adjust the column width by selecting the **Width** in **Layout** tab to make the table presentable.

➤ Insert a new column between the **Maths** and **Hindi** columns. Observe that the merged cells in the first row are split into two columns. Merge it again.

➤ Click in the first cell of the newly-inserted column and write 'Science'.

➤ Enter the marks of **Science** for each student in the table and once again update the total of all the students.

➤ Now, save the document.

➤ Open **Word** document.

➤ Insert a table using the **Insert** tab > **Table** > **Insert Table** option.

➤ Define four columns and five rows for your table.

TABLE OF VITAMINS			
Vitamins	**Sources**	**Functions**	**Image**
Vitamin A	Fruits, Green leafy vegetables, carrots	It helps proper growth, improves eye-sight and maintains healthy skin.	
Vitamin B	Nuts, pulses, whole grain cereals	It helps in the proper functioning of heart, digestive System, nerves, and muscles.	
Vitamin D	Milk, egg yolk, butter Sunlight is also the source of Vitamin D.	It is essential for bones and teeth.	

➤ Select the first row and merge the cells, and type the heading 'TABLE OF VITAMINS'.

➤ Align the heading to the centre of the table.

➤ Click in the first cell of the second row, and type 'Vitamins'.

➤ Press the **Tab** key and type 'Sources'. Likewise, enter the rest of the data in your table.

➤ Centre align the entire text in the table.

➤ Insert a new row above the last row and enter the given text.

Vitamin C	Tomato, green vegetables, citrus fruits: Lemon and orange	Keeps joints, teeth, gums healthy. Helps in fighting diseases.	

➤ Add the Images related to the text in all the cells of **Image** column.

➤ Apply the desired **Table Styles** to the entire table.

➤ Save the document and assign the name 'Table of Vitamins'. Close the Word document.

PROJECT WORK   Using Creativity

Design a timetable of your class by defining the name of day, in columns and period numbers, in rows. Apply all the formatting features that you have learnt so far to make it attractive. Format the text by applying appropriate font size, colour, and background colour. Apply **Table Styles** to it.

ONLINE LINKS   Looking For More

To know more about tables in Microsoft Word, visit these websites:

➤ http://www.gcflearnfree.org/word2016/tables/1/

➤ http://www.howtogeek.com/school/microsoft-word-document-formatting-essentails/lesson3/all/

USING MAIL MERGE

In business as well as official matters, we often need to send letters with similar information to different people. The letters require the name and address of each recipient to be printed on the top. So, changing the address each time becomes a very long process and a wastage of time and effort.

Mail Merge feature of Word 2016 is used to combine a data source, which contains all the addresses with the main document. It saves our time and energy to send letters at multiple addresses.

DATA SOURCE

Data source consists of a mailing list. For example, name, address, city, PIN, telephone number, etc. The data is organised in tabular form along with the field names. The data source is associated with the main document, so that its field names can be used in the main document, and it becomes easy to merge addresses with the main document.

NAME	ADDRESS	CITY	PIN	TEL. NO.
Kabir	#605, Sector 2	Panchkula	134109	2576675
Ridhima	#105, Sector 20	Panchkula	134109	2586498
Anika	#24, Sector 35	Chandigarh	160035	4618090
Manas	#645, Phase 11	Mohali	120145	2264080

MAIN DOCUMENT

It contains the text that we wish to send to all the recipients.

MERGE FIELD

It is a data item, such as NAME, ADDRESS, CITY, PIN, etc., which instructs Word 2016 about where to insert the data source (names, addresses) information in the main document.

Mail Merge involves three basic steps:

> Creating a main document

> Specifying a data source

> Merging the data source with the main document

Figure 4.1: Selecting the Mailings Tab

CREATING A MAIL MERGE DOCUMENT

To create a main document, follow the given steps:

➤ Create a new document and type a letter, or open an existing letter in Microsoft Word that you want to send to different people at their addresses.

➤ Click on the **Mailings** tab. In the **Start Mail Merge** group, click on the **Start Mail Merge** drop-down arrow and select the **Step-by-Step Mail Merge Wizard** option.

➤ The **Mail Merge** task pane appears on the right side of the application window.

➤ Now select the **Letters** radio button under 'Select document type' section.

➤ Click on the **Next: Starting document** (wizard step) under 'Step 1 of 6' section at the bottom of the task pane.

➤ Choose the type of set up for your letters.

➤ Click on **Use the current document** radio button under the **Select starting document** section.

➤ Click on the **Next: Select recipients** under 'Step 2 of 6' section.

Mail Merge ▾   ✕

Select document type

What type of document are you working on?

● Letters
○ E-mail messages
○ Envelopes
○ Labels
○ Directory

Letters

Send letters to a group of people. You can personalize the letter that each person receives.

Click Next to continue.

Step 1 of 6

→ Next: Starting document

Figure 4.2: Selecting Document Type

Mail Merge ▾   ✕

Select starting document

How do you want to set up your letters?

● Use the current document
○ Start from a template
○ Start from existing document

Use the current document

Start from the document shown here and use the Mail Merge wizard to add recipient information.

Step 2 of 6

→ Next: Select recipients
← Previous: Select document type

Figure 4.3: Selecting Starting Document

CREATING RECIPIENT LIST

➤ To create a new mailing list, select the **Type a new list** radio button under **Select recipients** section in the Mail Merge task pane. Click on the **Create** option.

➤ The **New Address List** dialog box appears on the screen as shown in Figure 4.5. Click on the **Customize Columns** button to add or remove fields.

Mail Merge ▾   ✕

Select recipients

○ Use an existing list
○ Select from Outlook contacts
● Type a new list

Type a new list

Type the names and addresses of recipients.

📇 Create...

Step 3 of 6

→ Next: Write your letter
← Previous: Starting document

Figure 4.4: Selecting Type a New List

New Address List					? ✕

Type recipient information in the table. To add more entries, click New Entry.

Title ▾	First Name ▾	Address ▾	City ▾	Pin ▾	▾
▷					

New Entry	Find...			
Delete Entry	Customize Columns...		OK	Cancel

Figure 4.5: New Address List Dialog Box
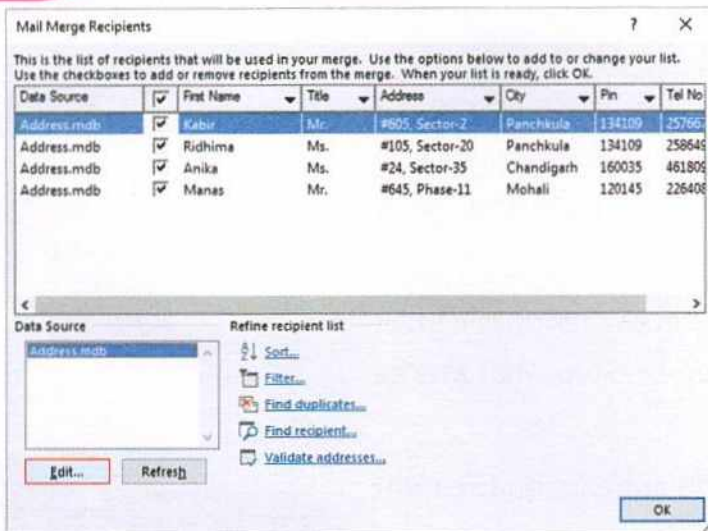
Figure 4.6: Mail Merge Recipients Dialog Box

> Enter data in the respective fields, and click on the **New Entry** button located at the bottom left of the dialog box.

> Enter three records of your friends and relatives. Click **OK**.

> You will get the **Save Address List** dialog box.

> Specify a name in the **File name:** Text box and click on the **Save** button.

> The **Mail Merge Recipients** dialog box will appear as shown in Figure 4.6. This dialog box displays the details of all the records added by you.

> To change any detail, you can select the data source and click on the **Edit** button located under the Data Source box. When you are through, click on **OK**.

> Note that by default tick marks are placed on the check boxes next to the **Data Source** field. It gives an indication that the records are selected.

> If you do not want to send the letter to a particular address, just click on that specific check box to deselect it. Click **OK**.

> Now, click on the **Next: Write your letter** (wizard step) under 'Step 3 of 6' section in the Mail Merge task pane.

Figure 4.7: Selecting Next: Write your Letter

⇒ INSERTING MERGE FIELDS

> Place the cursor at the position where you want to insert the record fields.

> On the **Mailings** tab, click on the **Insert Merge Field** button in the **Write & Insert Fields** group.

> The **Insert Merge Field** dialog box appears with a list of field names you have created.

> Click on the field name that you intend to add and then click on the **Insert** button. Similarly, insert other fields into the document. Click on the **Close** button.

Figure 4.8: Insert Merge Field Dialog Box

> You will notice that the selected field names will appear in your document one after another, horizontally. Separate the field names by pressing the **Enter** key.

```
<<First_Name>> <<Last Name>>
<<Address_Line_1>>
<<City>>


Dear <<Title>><<Last_Name>>
In collaboration with the National Sports Association (NSA), the
Sacred Heart Convent School has invited schools nationwide to
celebrate its 49th Annual Sports Meet on November 14.
We invite you to attend the function and encourage your
children.
```

Figure 4.9: Inserting Merge Fields

≫ VIEWING THE MERGED DATA

You can check whether Microsoft Word has picked up the data source according to the merged fields or not, by viewing it on the screen.

> Click on the **Preview Results** button in the **Preview Results** group on the **Mailings** tab, or click the **Next: Preview your letters** (wizard step) under 'Step 4 of 6' section.

Preview Results

	K ◀ 1 ▶ M
«ABC»	🔍 Find Recipient
Preview Results	✓ Check for Errors
	Preview Results
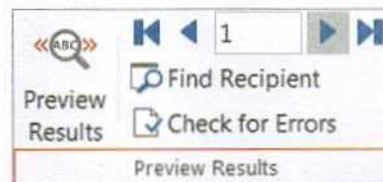
> The first record will be displayed. Click on the **Next Record** button ▶ in the **Preview Results** group to view the next record of the data source.

Mail Merge ▾ ✕

Write your letter

If you have not already done so, write your letter now.

To add recipient information to your letter, click a location in the document, and then click one of the items below.

📄 Address block...

📄 Greeting line...

📩 Electronic postage...

📑 More items...

When you have finished writing your letter, click Next. Then you can preview and personalize each recipient's letter.

Step 4 of 6

➜ Next: Preview your letters

← Previous: Select recipients

```
Mona Thakur
#12, Sector-5
Chandigarh


Dear Mrs Thakur
In collaboration with the National Sports Association (NSA), the
Sacred Heart Convent School has invited schools nationwide to
celebrate its 49th Annual Sports Meet on November 14, 2016.
We invite you to attend the function and encourage your
children.
```

Figure 4.10: Previewing Result
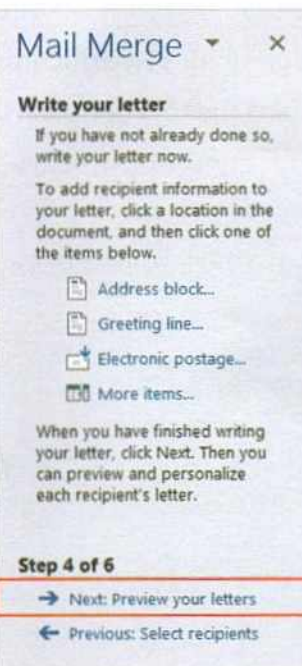
Figure 4.11: Selecting Preview Your Letters

⧁ PRINTING THE LETTERS

You can take the printouts of your letter with the merged data of your data source. In order to print the letters, follow the given steps:

➤ Click on the **Finish & Merge** button 🔲 in the **Finish** group on the **Mailings** tab. Select the **Print Documents** option from the drop-down menu. Or
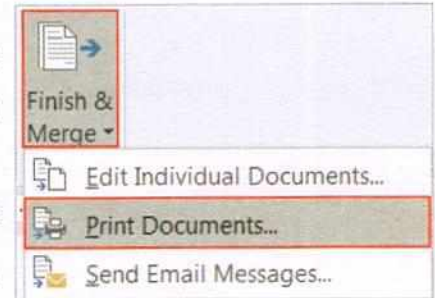
Click on the **Next: Complete the merge** (wizard step) under 'Step 5 of 6' section in the task pane and then click on the **Print** option 🔲 under **Merge** section.

Figure 4.12: **Selecting Print Documents Option**

➤ The **Merge to Printer** dialog box will appear. Define the desired print settings and click **OK**.

➤ The selected records will be printed separately along with the letter.

Word 2013

Word 2013 provides similar options to create a Mail Merge document by selecting the **Start Mail Merge** option from the **MAILINGS** tab.

📖 RECAP

➤ The Mail Merge feature is used to send letters with similar information to a number of people at different addresses.

➤ A Mail Merge feature combines two documents—one Main Document and the other Data Source.

➤ Main document contains the text you wish to send to all the recipients.

➤ Merge Field is a data item which instructs Word 2016 about where to insert the data source information in the main document.

➤ Data Source consists of a mailing list. For example, name, address, city, PIN, telephone number, etc.

SECTION - A

A. Fill in the blanks.

1. The .... contains the text that we send to all the recipients.

2. The .... key helps us to move between fields while typing the data.

3. The data is organised in a tabular form along with the .... names.

4. A .... mark gives an indication that a record is selected.

5. The data is organised in a tabular form along with field names in ....

HINTS • Main document • Field • Data Source • Tick • Tab

B. State True or False.

1. The Main document consists of a mailing list.

2. Field is a column in a data source that contains one type of information.

3. Merge field is the feature that is used to combine a recipient list with a main document.

4. Preview Results option on Mailings tab displays the first record from the data source.

5. The two main components required during a Mail Merge process are the Main document and the Merge field.

C. Application-based questions.

1. Radhika has purchased a brand new luxury car. She wants to celebrate her happiness with her friends and relatives. She wants to extend personal invitation to each one of them without typing their names and addresses again and again. Which method can she use to fulfill the requirement?

....

2. Suchitra is an office assistant and handles all the correspondence work of the company. This month her company made five new clients. Where will she add the contact details of the new clients while using the Mail Merge feature?

....

A. Multiple-choice questions.

1. .... is a row on a datasheet, which consists of a number of fields.

   a. Field   b. Record   c. Database

2. .... is the data item, which instructs Microsoft Word where to insert the data source information in the main document.

   a. Data Source   b. Merge Field   c. Main Document

3. To create a new Recipients list, select the .... radio button under the Select recipients section.

   a. Use an existing list   b. Select from contact   c. Type a new list

4. Which of the following documents does not require the use of Mail Merge feature?

   a. Envelopes   b. Pamphlets   c. Letters

5. 'Use an Existing list' option allows you to pick data source from ....

   a. A Spreadsheet   b. A Presentation   c. An Image

B. Answer in one word or one sentence.

1. In Mail Merge, where do we organise data in tabular form along with the field names?

   ....

2. Which tab do you select to execute the Mail Merge option?

   ....

3. Which option is used to print a Mail Merge document?

   ....

4. Which part of the datasheet displays one type of information?

   ....

5. Which option is used to preview the final Mail Merge document?

   ....

C. Answer the following questions.

1. What is Mail Merge?

2. Name the documents that are combined while using Mail Merge feature.

3. What do you mean by the term Data Source?

4. What is the use of a Merge field?

5. What is the Main Document?

6. How can you view the merged data?

7. How will you create a Recipient list for the main document?

Your school is organising an Inter-School Computer Quiz. You are a member of the School Quiz Club. So, your teacher asked you to create an invitation letter to seek participation of various schools in the contest.

Dated: ....

To

The Principal
<<SchoolName>>
<<Address>>
<<City>>

Dear <<Title>>

Our school, in association with **KIPS**, is organising an **INTER SCHOOL COMPUTER QUIZ**, as part of our ongoing **SILVER JUBILEE CELEBRATIONS**.

We extend our invitation to your school to participate in the **INTER SCHOOL COMPUTER QUIZ**. The Quiz will be conducted in two categories: **Group A** for students of classes V–VII and **Group B** for students of classes VIII–X.

Kindly confirm the participation of your school latest by **16th November** and send us the annexed **registration form duly filled**.

We are annexing the curriculum, rules and regulations, and details about the conduction of the Quiz with the letter.

Looking forward to your positive response.

Thanking You

With Warm Regards
Yours Sincerely
....(NAME)

➤ Type the letter in the Main document, but do not type the Merge fields. Save the letter by clicking on the **File** tab > **Save** option and specify a name to it.

➤ Click on the **Mailings** tab. Click on the **Start Mail Merge** button and select **Step by Step Mail Merge Wizard** from the drop-down menu. The 'Mail Merge' task pane will appear.

➤ Choose **Letters** option under **Select document type** section. Click on the **Next: Starting document** under 'Step 1 of 6' wizard step.

➤ In the next step, Choose the type of setup for your letter. Select 'Use the current document' radio button. Click on the **Next: Select recipients** under 'Step 2 of 6'.

➤ Select the **Type a new list** radio button and click on the **Create** option. Click the **Customize Columns** button to add or remove fields.

- Make the list with the field name: School Name, Address, City, and Title. Click on **OK** button.
- Now, enter the records of ten participating schools and click **OK**.
- You will get a **Save Address List** dialog box. Specify a name in the **File name:** Text box and click the **Save** button.
- You will get a list of all the entered records in **Mail Merge Recipients** dialog box.
- Click on the check box that you want to deselect.
- Click the **OK** button to get back to wizard. Click on the **Next: Write your letter** under 'Step 3 of 6'.
- Now, place the cursor at the position where you want to display the record fields in the letter. Select the **Mailings** tab and click on the **Insert Merge Field** button in the **Write & Insert Field** group.
- Choose a field that you want to display and click on the **Insert** button.
- Similarly, insert other fields and then click on the **Close** button. Separate the field names by pressing the **Enter** key as needed.
- To view the merged records, click on the **Preview Results** button in the **Preview Results** group on the **Mailings** tab.
- Click on the **Finish & Merge button** and select the **Print Documents** option from the drop-down menu.
- Click on the **Next : Complete the Merge** option under 'Step 5 of 6' section and click on the **Print** option.
- A **Merge to Printer** dialog box will appear. Give desired details to print and click **OK**.
- Now a **Print** dialog box will appear, define the print settings and click on the **Print** button.
- This is how Mail Merge is used for sending the same letter at different addresses.

PROJECT WORK   Using Creativity

Prepare a list (Data Source) of your friends. Using Mail Merge feature, create an invitation letter and invite them for your **Brother's marriage**.

ONLINE LINK   Looking For More

To know more about Word 2016, visit the following website:
- https://www.laptopmag.com/articles/mail-merge-microsoft-office

MORE ON POWERPOINT 2016

A **presentation** is a collection of slides, arranged in a sequential manner, to convey new ideas and impart information effectively. A **Slide** is like a page in a presentation. It contains brief information that you want to communicate to your audience. In the previous class, you learnt many features that enhance the look of a presentation. In this lesson, you will learn some new features of PowerPoint 2016 that make your presentation more interesting. You will also know about various views, in which, you can create and organise your presentation.

CREATING PHOTO ALBUM

The Photo Album is a feature that allows you to club your personal and business photographs together to use for a presentation. It does not provide a way to insert online pictures directly, so you should download pictures from your online storage and put them in a folder on your hard drive. This way, you can access all the images that you want to include.
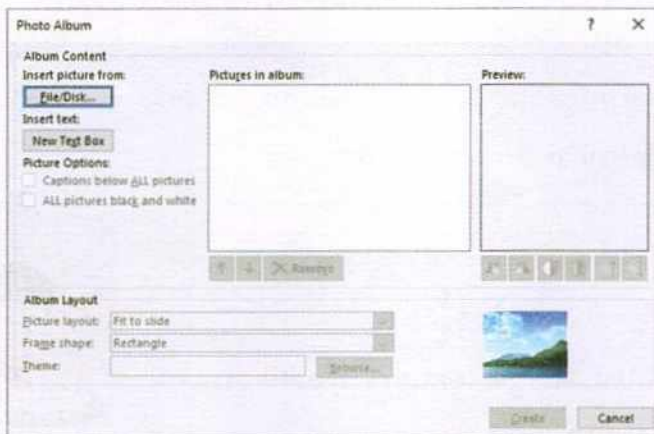
Figure 5.1: Photo Album Dialog Box   **Figure 5.2: Selecting Picture Layout**

➤ Go to **Insert** tab, under the **Images** group select the **New Photo Album** option from the **Photo Album** drop-down menu.

➤ The **Photo Album** dialog box will appear. Choose the **File/Disk** tab to pick images from your computer under the **Insert picture from** section. The **Insert New Pictures** dialog box will appear.

➤ Choose the location and select as many pictures as you need to insert in the album.

➤ As you click on the files, the pictures will be added under the **Pictures in album:** box. The preview of

the picture gets displayed in the **Preview** pane. You can rearrange pictures by clicking the up and down arrows below the **Pictures in album** box.

➤ Choose the picture layout and photo frame shape by clicking on the drop-down arrows next to **Picture layout** and **Frame shape** in the **Album Layout** section. Once all the files have been added, click on the **Create** button. This creates a new photo album presentation.

PowerPoint 2013

You can also create the photo album in PowerPoint 2013 by following the above-mentioned steps.

➤ INK EQUATIONS

This is a new feature using which you can add math equations into your presentation. Ink Equation is easier to use if you have a touch-enabled device connected to your system. You can use your finger or a stylus to write equations directly on the screen and PowerPoint converts them into text. However, you can also use a mouse to write the equations if you do not have a touch device. To add Ink Equations:

➤ Select the **Insert** tab, from the **Symbols** group click on the drop-down arrow of the **Equation** button .

➤ Select the **Ink Equation** option from the displayed list.

➤ The **Math Input Control** dialog box appears. Bring the mouse pointer on the light yellow coloured grid area. A small black dot appears. It is the cursor from where you can start writing the equation.
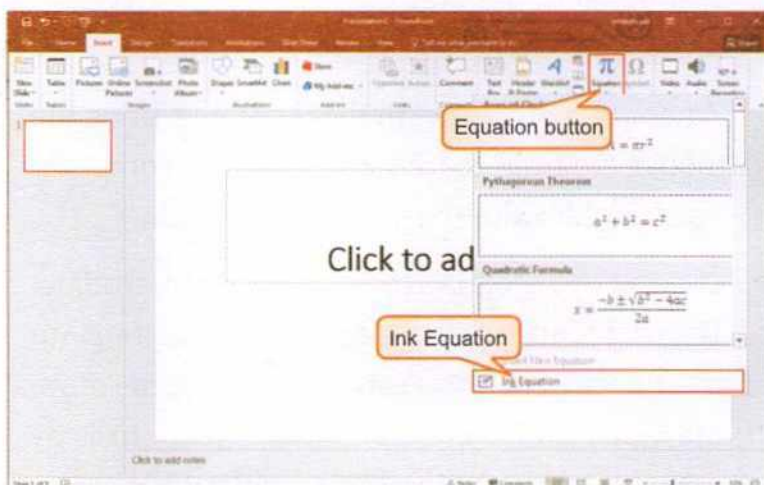
Figure 5.3: Ink Equation Option is Selected

➤ Now, write the equation in the grid area. Once you are done, click on the **Insert** button present at the bottom of the dialog box.

➤ Select the **Erase** tool from the toolbar at the bottom, if required.

NOTE

You can correct any part of the equation at anytime by selecting the **Select and Correct** option from the **Math Input Control** dialog box.
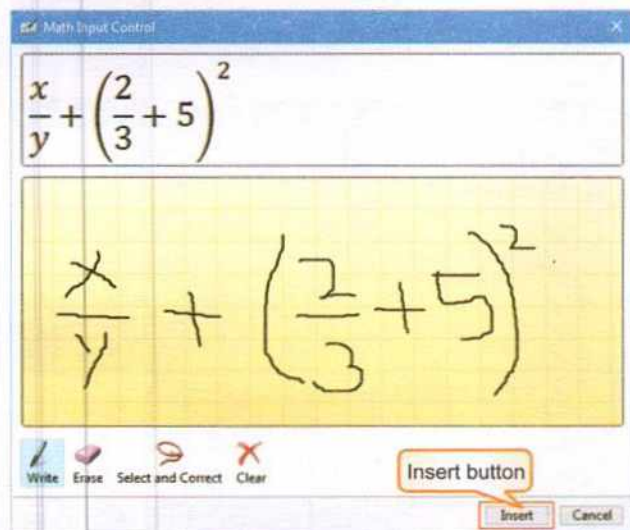
Figure 5.4: **Math Input Control Dialog Box**

⯈ SCREEN RECORDING

➤ Open a PowerPoint presentation.

➤ Select the slide in which you want to add the screen recording.

➤ Click on the **Insert** tab and select the **Screen Recording** option from the
  Media group . A small pop-up window appears at the top of the screen.

Figure 5.5: Selecting Screen Recording Option

➤ Select the screen area that you want to record by clicking on the **Select
  Area** button and then dragging the mouse to highlight the desired
  screen region. You may record a specific area or the full screen.

➤ You can also turn on the **Audio** option 🔊 if you want to insert sound
  in your screen recording.

Figure 5.6: Pop-up Window

➤ Now, click on the **Record** button to start the recording.

➤ A Countdown dialog box appears, which indicates that the recording is going to start in a few
  seconds and displays the shortcut key combination, i.e., **Windows** ⊞ + **Shift** +Q to stop the
  recording.

➤ When you are done with the recording, bring the
  mouse pointer to the top of your computer
  screen to show the pop-up window again.

➤ Click on the **Stop** button to save the recording.
  The recorded screen video will get inserted into
  the current slide. You can move, resize or rotate
  the video and also add special effects to it by
  using the special **Video Tools** tabs that appear on
  the ribbon.

Figure 5.7: Using Screen Recording Feature

⯈ CHANGING OFFICE THEME

MS Office 2016 provides you with three new themes
that can be applied to PowerPoint 2016: Colourful,
Dark Gray, and White. By default, the Colourful
theme is applied, which shows the title bar, ribbon,
background, and other components in orange
colour. Selecting a new theme will change the
colour of these components.

➤ Click on the **File** tab and choose the **Options**.
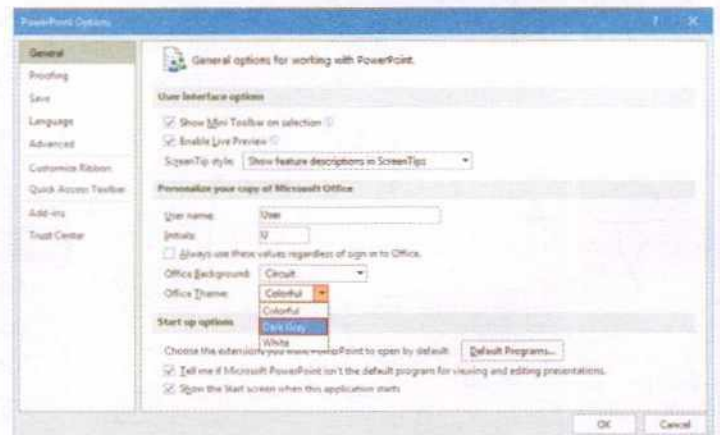
Figure 5.8: PowerPoint Options Dialog Box

The **PowerPoint Options** dialog box will appear.

➤ By default, the **General** tab is selected. Click on the **Office Theme** drop-down arrow on the right pane and select the **Dark Gray** option from the displayed list. Observe the change.

⯈ COMMENTS

Comments are a great way to provide feedback to others about their presentation. They can also be used to collaborate and work together on a presentation. They are more like sticky notes that can be added to an object, text, or whole slide. Comments in a slide can be turned On or Off anytime. To add comments in a slide.

Place the cursor on the object/text where you want to add comments.

➤ Click on the **Review** tab and select the **New Comment** button in the **Comments** group.

Figure 5.9: Comments Option is Selected

➤ A comment icon appears on the slide and the **Comments** task pane opens.

➤ Type the comments and then click outside the comment box. Now, close the **Comments** task pane.

➤ In order to view the comment, either click on the comment icon on the slide or click on the **Show Comments** button in the **Comments** group on the **Review** tab.

Figure 5.10: Comments Task Pane

PowerPoint 2013

To add comments in PowerPoint 2013, click on the **REVIEW** tab and follow the same steps as you did in PowerPoint 2016.

⯈ SMART LOOKUP

Smart Lookup is a new feature in Office 2016. This feature allows you to find the information for the selected word or phrase on the web, using the search engine Bing. It does not force you to open up the web browser everytime you need a quick word definition. To make use of this feature:

➤ Select the word or phrase that is to be searched.

➤ Click on the **Review** tab and select the **Smart Lookup** option from the **Insights** group. Or

- Right-click on the selected word or phrase and select the **Smart Lookup** option from the shortcut menu.

- The **Smart Lookup** task pane will appear on the right side of the slide with results from various online resources. It also contains two tabs: **Explore** and **Define**.

  - The **Explore** tab previews the information associated with the selected text from different online resources.

  - The **Define** tab contains the definition and pronunciation for the selected text.
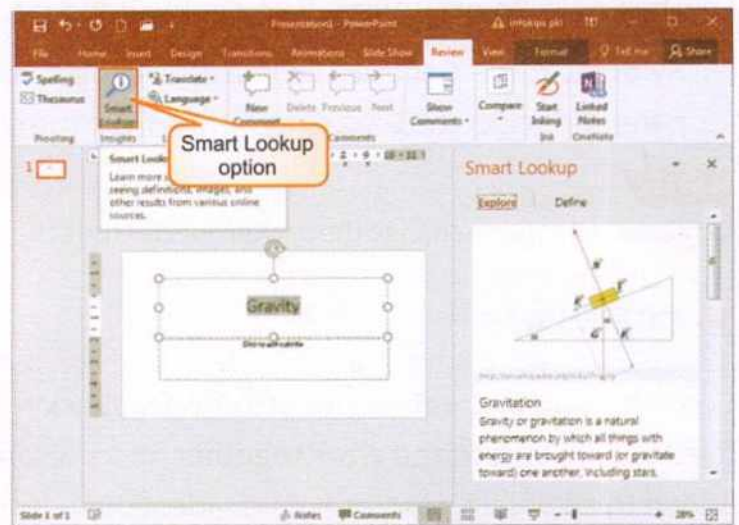
Figure 5.11: Using Smart Lookup Feature

You can also open the Smart Lookup window, by typing the word to be searched in **Tell me** text box and select the **Smart Lookup** option from the drop-down list.

⭗ INK ANNOTATION

Office 2016 provides you with another amazing feature that enables you to annotate with ink, to write notes, create shapes, highlight a key concept, and much more. You can also convert the hand drawn shapes to uniform geometric shapes by selecting them and then selecting **Convert to Shapes**.

HANDWRITING TEXT

To write notes in your own handwriting, follow the given steps:

- Select the **Review** tab and click on the **Start Inking** option from the **Ink** group. This will display the **Pens** tab with various **Ink Tools**.

- By default, the **Pen** option is selected in the **Write** group. Choose a coloured pen from the **Pens** group. Click on **More** drop-down arrow to view more options for your selection.

- To change the ink colour or thickness of the pen, click on the **Color** and **Thickness** options under the **Pens** group.

- After selecting the ink option, you can write your notes with the help of a stylus, light pen, or a mouse.
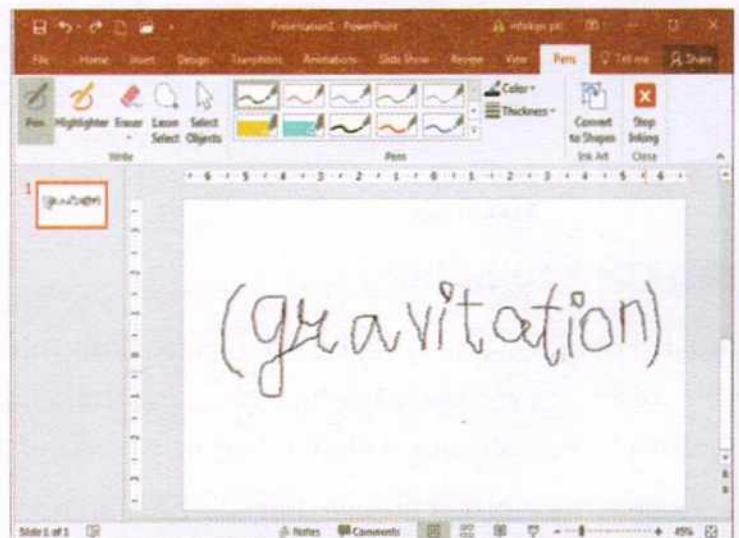
Figure 5.12: Using Pen Tool

HIGHLIGHTING TEXT

Follow the given steps to highlight the text in your presentation:

➤ Select the **Highlighter** tool in the **Write** group on the **Pens** tab.

➤ Choose a highlighter from the various options under the **Pens** group.

➤ Drag your pen or stylus over the text that you want to highlight.
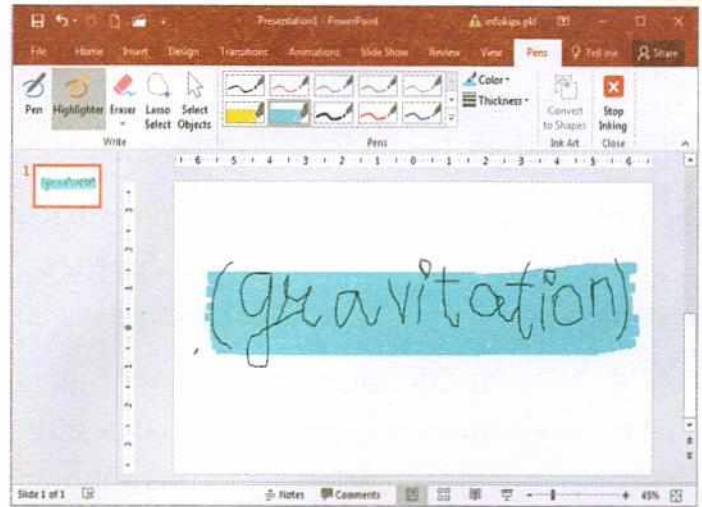
Figure 5.13: Text is Highlighted

DRAWING IN YOUR PRESENTATION

To draw an object or a shape in your presentation , follow the given steps:

➤ From the **Pens** tab, select the **Pen** tool in the **Write** group.

➤ Choose a pen from the **Pens** group with an appropriate colour and thickness.

➤ To convert your ink drawn shape into common geometric shapes, select the option **Convert to Shapes** in the **Ink Art** group on the **Pens** tab. Draw a shape and you will observe that it is automatically converted to a similar geometric shape. **Convert to Shapes** is a toggle button.
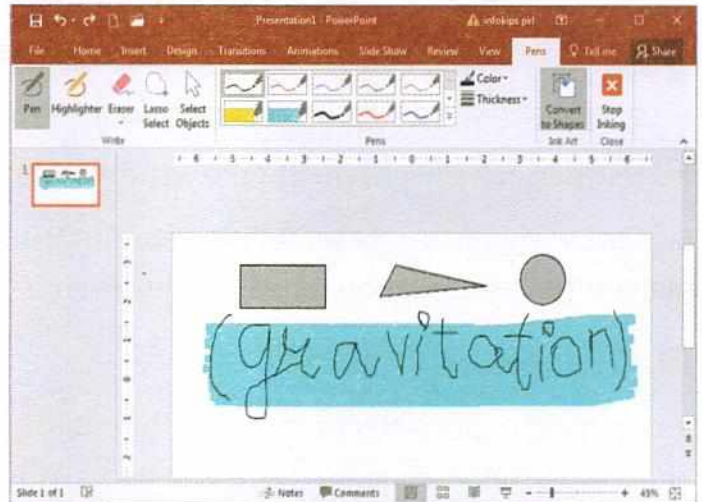
Figure 5.14: Drawing Objects

> **NOTE**
>
> PowerPoint can convert only those drawings that look similar to common shapes. If it is not near to the geometric shape, drawing remains unaffected.

DELETING THE ANNOTATIONS

➤ Select the **Eraser** tool in the **Write** group on the **Pens** tab.

➤ Click on the required eraser type by clicking on the drop-down arrow of the **Eraser** option.

➤ Move the eraser over the text or drawing that you want to erase.

SELECTING OBJECTS

The Lasso select tool on the **Pens** tab allows you to select an object drawn by the **Pen** tool .

To select the object:

➤ Choose the **Lasso Select** tool in the **Write** group.

➤ The Pointer changes into a '**+**' symbol.

➤ Drag the mouse to encircle the part that you want to select. A faded selection region appears around the object. Now, you can copy the selected part and paste it elsewhere in your presentation. This is useful if you want to copy some text or diagram that you have drawn.

While delivering your presentation to the audience, you may need to emphasise a word or phrase or make some explanatory notes on the slides. The Slide Show view provides you with various options to annotate your presentation. To add ink annotations during the slide show:

➤ Right-click on the slide where you want the annotation pen to appear.

➤ Select the **Pointer Options** from the Context menu.

➤ Now, select the **Pen** or **Highlighter** option as desired. Change the colour by selecting the **Ink Colour** option and choosing the desired colour from the palette.

➤ Use pen or highlighter either to write or emphasise the text.

Similarly, you can use **Laser Pointer** feature to highlight the key points on the slide. Unlike the pen and highlighter, the laser pointer will not leave any marks on the slide.

VIEWING A PRESENTATION

You can view your presentation in different formats, such as Normal View, Slide Sorter View, and Slide Show View, depending on the task at hand. Most of the view buttons are available in the **Presentation Views** group on the **View** tab. By default, a user works in **Normal View**.

NORMAL VIEW

It is the main editing view, which is used to write and design the slides for the presentation. In **Normal** View, you can add text, graphics, sound, animation, and other effects to your slides. It has three parts. You can have a large view of an individual slide (in Slide Pane), notes (in Notes Pane) at the bottom, and slides displayed as thumbnails (in Slides Navigation Pane), all at the same time. Click on the thumbnail of a slide to view it in the **Slide** pane.

➤ To open this view, select the **View** tab and click on the **Normal** button from the
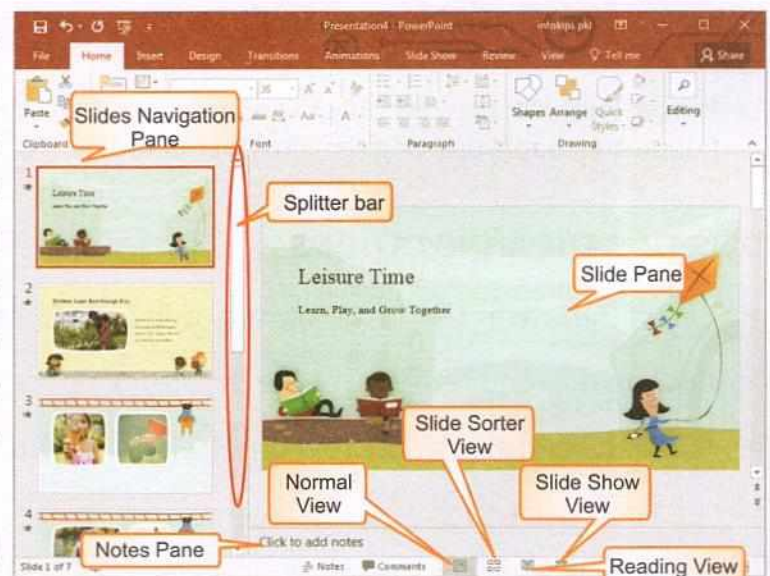
Figure 5.15: **Normal View is Selected**

Presentation Views group.   Or

Click on the **Normal View** button located at the bottom of the slide window.

OUTLINE VIEW

The **Outline View** displays only the text on your slides, in the **Outline Pane**. This view allows you to quickly edit the text on the slides and view the contents of all the slides at once. Use **Outline View** to create an outline or storyboard for your presentation. You can get to **Outline View** from the **View** tab on the ribbon. It displays the slide text in the **Outline Pane**.

Figure 5.16: Outline View is Selected

PowerPoint 2013

In PowerPoint 2013 and later, you can no longer get to **Outline View** from the **Normal View**. You can access it from the **View** tab.

SLIDE SORTER VIEW

It displays a miniature view of all the slides of a presentation in horizontally sequenced thumbnails. **Slide Sorter View** is helpful if you need to change the order of slides, insert or delete the slides, add transitions and set the timings for the slide show.

➤ Select the **View** tab and click on the **Slide Sorter** button from the **Presentation Views** group.

➤ All the slides of your presentation will be displayed in thumbnails with a thick border around the selected slide.

Figure 5.17: Slide Sorter View is Selected

Figure 5.18: Notes Page View

NOTES PAGE VIEW

You can show or hide your notes with the **Notes** button at the bottom of the slide window or you can get to **Notes Page View** from the **View** tab on the ribbon. Clicking on the **Notes** button will open a notes box at the bottom of the slide. You can print your notes or include the notes in a presentation that you want to send to the audience, or just use them as indications for yourself while showing the presentation.

READING VIEW

Using this view, you can view the presentation as a slide show that fits within a window. It contains some buttons at the bottom-right corner that allow you to navigate through your presentation and switch to other views. In this view, taskbar is also visible. To enter into the Reading View, either click on the **Reading View** button 📖 on the **View** tab or select the **Reading View** button 📖 at the bottom of the slide window.
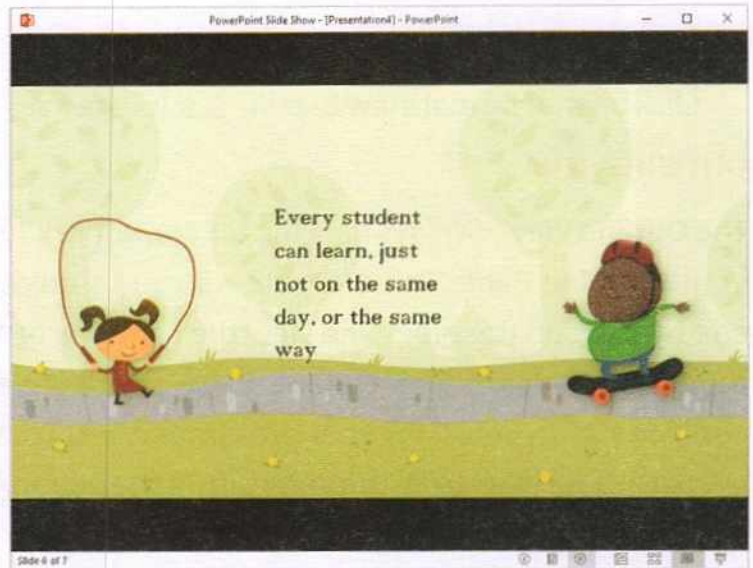
Figure 5.19: Reading View

SLIDE SHOW VIEW

The **Slide Show View** is used when you deliver your presentation to the audience. It is just like the pictures in a photo album. It displays all the slides in a presentation, one by one, on the full screen.

You can select the **Slide Show View** button 🖵 at the bottom of the slide window. Or

Select the **Slide Show** tab. It displays commands that help you with various choices to run the presentation. You can use any one of the following options to run the slide show:

Figure 5.20: Slide Show View

From Beginning — Starts the slide show from the first slide.

From Current Slide — Starts the slide show from the current slide.

Present Online — This feature broadcasts the slide show to remote viewers who can watch it through the web browser.

Custom Slide Show — It displays only the slides that you select.

You can also use **F5** key to view the Slide Show.

> **NOTE**
>
> The **Present Online** feature requires a network service to host the slide show. You can send the link (URL) of your presentation to your audience, by an e-mail.

REARRANGING SLIDES

You can rearrange the slides of a presentation in Normal, Outline, and Slide Sorter View.

IN NORMAL VIEW

➤ Open the presentation in **Normal View**.

➤ In the **Slides Navigation** pane, select the thumbnail of the slide and drag it to its desired position.

Figure 5.21: Rearranging Slides in Normal View

IN SLIDE SORTER VIEW

➤ Open the presentation in **Slide Sorter View**.

➤ Select the thumbnail of the slide to be moved and drag it to its desired location.

Figure 5.22: Rearranging Slides in Slide Sorter View

IN OUTLINE VIEW

➤ Open the presentation in the **Outline** View.

➤ Select the thumbnail from the **Outline Pane** and drag it to the desired location. A horizontal line appears as you drag the slide.

Figure 5.23: Rearranging Slides in Outline View

WORKING WITH SLIDE OUTLINE

The **Outline View** is quite similar to **Normal View** except that it provides a summary of each slide in the Outline pane. You can do the following tasks in the Outline View:

➤ Create presentation structures.

➤ Edit text entries and rearrange the text on slides as needed.

➤ Hide or display text levels.

Let us try the following activity that demonstrates the use of the Outline View:

Let's Know More

To add any tool or menu on the **Quick Access Tool bar**, right-click on the tool or command and select the **Add to Quick Access Toolbar** option. The tool will be added on the Quick Access Toolbar.

- Create a new presentation.

- Select the **Outline View** from the **Presentation Views** group on the **View** tab.

- In the Outline pane, type "Special Days for Special People" next to the slide icon.

- Now, press the **Enter** key. As you press the Enter key, a new slide appears.

- Type 'Mother's Day' and press the **Enter** key. A new slide appears. Right-click at the cursor position and click on the **Demote** option. You will observe that the slide icon disappears and the text moves one level lower. Type the text as shown in the figure and press **Enter**.

- Now, right-click again and choose the **Promote** option from the context menu. A new slide appears.

- Repeat the above two steps to enter information related to Father's Day, Brother's Day, Sister's Day, and Friendship Day.

- Bring the mouse pointer right next to the slide icon. Right-click at cursor position and select **Collapse** option form the Context menu. It will hide the bulleted text relevant to the selected slide and display only the slide title, whereas **Collapse All** hides the bulleted text for the outline of the entire presentation.

- Now, right-click on the option and select the **Expand** option from the Context menu. It will reveal the bulleted text relevant to the selected slide, whereas, **Expand All** reveals the bulleted text for the outline of the entire presentation.
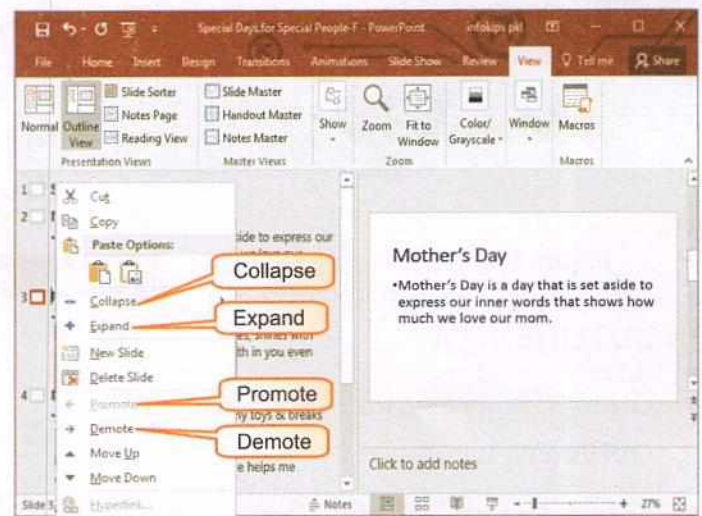
Figure 5.24: Presentation Structure

RECAP

- A presentation is a collection of slides arranged in a sequential manner to convey new ideas and impart information effectively.

- The Photo Album is a feature that allows you to club your personal and business photographs together to use for a presentation.

- Ink Equations option helps you in adding math equations into your presentation.

- Comments are a great way to provide feedback to the others about their presentation.

- The Smart Lookup feature allows you to find the information for the selected word or phrase on the web using the search engine Bing.

- Office 2016 provides you with another amazing feature that enables you to annotate with ink, to write

- notes, create drawings, highlight a key concept, and much more.
- ➤ Normal View is the main editing view, which is used to write and design the presentation.
- ➤ The Outline View displays only the text on your slides in the Outline Pane.
- ➤ Slide Sorter View displays a miniature view of all the slides of a presentation.
- ➤ Notes Page View is used to include notes to your presentation.
- ➤ Reading View displays presentation as a slide show that fits within a window.
- ➤ Slide Show View displays all the slides in a presentation, one by one, on the screen.

BRAIN DEVELOPER

SECTION - A

A. Fill in the blanks.

1. A presentation is a collection of .... that are arranged in a sequential manner.

2. Most of the View buttons are present in the .... group.

3. .... is the new feature using which you can add math equations into your presentation.

4. The .... view displays a miniature view of all the slides of a presentation.

5. .... are a great way to provide feedback to others about their presentation.

6. The .... is a feature that allows you to club your personal and business photographs together to use for a presentation.

HINTS • Photo Album • Slides • Comments • Ink Equations • Slide Sorter • Presentation Views

B. State True or False.

1. There are seven views available in Powerpoint 2016.

2. By default, the Gray theme is applied to the PowerPoint window.

3. To move to the next slide in the Slide Show View, Esc key is used.

4. Using Notes Page View, you can include the notes in a presentation that you send to the audience.

5. Comments in a slide cannot be turned off.

6. Using Convert to Shapes tool, you can convert the hand drawn shapes to uniform geometric shapes.

C. Application-based questions.

1. Aaryan wants to create a Photo Album in which he wants to import six different pictures as six different slides. But he does not know how to do this. Help Aaryan do the same.

   ....

2. Roopali has created a presentation with sixteen slides. The teacher asked her to display all the slides on a single screen. Help Roopali in selecting the appropriate view.

   ....

SECTION - B

A. Multiple-choice questions.

1. Which function key is used to display the Slide Show?

   a. F9   b. F5   c. F10

2. In which view do you get the Outline pane?

   a. Normal View   b. Slide Sorter View   c. Outline View

3. Which of the following requires a network service to start the Slide Show?

   a. Present Online   b. Custom Slide Show   c. From Beginning

4. Which feature finds the information related to the selected item on the web, without forcing the users to open up an internet browser?

   a. Ink Annotation   b. Smart Lookup   c. Ink Equation

5. Which of the following options hides all the slides text in the Outline View?

   a. Promote   b. Demote   c. Collapse All

6. On which tab do you find the Screen Recording option?

   a. View   b. Insert   c. Edit

B. Which View am I?

1. I am the main editing view to write and design the slides.   ....

2. I can show you the notes that you can include in a slide.   ....

3. I display all the text of your slide but not objects.   ....

4. I display a miniature view of the slides of a presentation.   ....

5. I am used when the presentation is delivered to the audience.   ....

C. Answer the following Questions.

1. What is the use of the Slide Sorter View?

2. State the difference between Normal View and Outline View.

3. Explain the utility of Smart Lookup.

4. What do you understand by Comments? How are they useful?

5. What is the utility of a Photo Album?

6. How is Ink Annotation helpful?

7. What is use of Ink Equations?

Create a presentation on the topic Eat Healthy and Stay Healthy.

➤ Open PowerPoint 2016 and select a **Blank Presentation** and then select a **Blank** slide. Change its colour to red. Add the **Rectangle** shape in the slide and change its colour to yellow. Add the images by selecting the **Insert> Online Pictures**. Add a **Text Box** in the apple. Apply **WordArt** effect and type the text 'EAT HEALTHY AND STAY HEALTHY'.

➤ Select the heading and apply **Font: Bastion, Size: 54 pt, Font color: Yellow**, and **Bold** effect.

➤ After completing the slide, press the **Enter** key to add a new slide.

➤ Select the **Title Slide**. Choose the **Design** tab and change the background theme. Write the text 'What is Healthy Eating?' in the **Click to add title** placeholder.

Slide:1

Slide:2

➤ Click on the **Insert > Shapes**. Select the **Rectangle** shape and create three boxes on the slide.

➤ Now, insert the text boxes inside the shapes and add the text, IMPROVES HEALTH, INCREASE HAPPINESS and PREVENTS CHRONIC HEALTH RISKS in the boxes, respectively.

➤ Select **Insert > Online Pictures** option and insert the relevant pictures in the shapes.

➤ Add another slide in the presentation and type the title as shown in the **Slide 3**. Format the title as desired.

➤ Add the callout in the slide by using **Insert > Shapes** option. Type the text 'EAT BALANCED DIET', in the text.

➤ Search the relevant picture for the balanced diet and add in the slide.

➤ Add another **Title Slide** and type the text 'Eat Smart STRATEGIES'. Format the text and add the picture through **Online Pictures** option.

Slide:3

➤ Insert another **Text Box**. Apply the bullets from the **Paragraph** group in the **Home** tab and type the
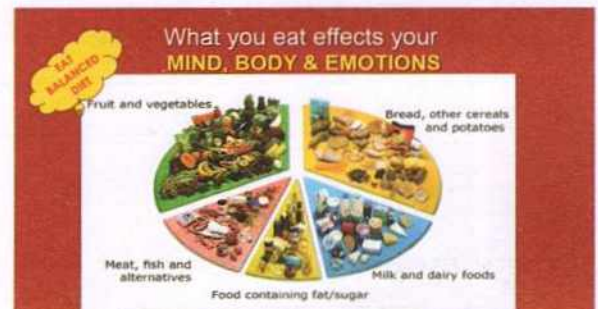
sub-points. Format the text according to your need.

- Add **Picture with Caption** slide. Add the title 'PRECAUTIONS' in the slide.
- Type the sub-points and add picture as shown in the image.
- Click on the **Review** tab and select the **Start Inking** button from the **Ink** group.
- Click on the **Pen** tool in the **Write** group and select the option **Convert to Shapes**.

Slide:4

Slide:5

- Draw a circle, it will get converted into a proper shape. Cross the lines in the circle as shown in the image.
- Save the presentation by clicking on the **Ctrl+S** key combination.
- Select the **Slide Show** tab and choose **From Beginning** button from the **Start Slide Show** group.

GROUP DISCUSSION   For Concept Clarity

Discuss the topics with the students:

- **New features of PowerPoint 2016**
- **Types of Views in PowerPoint**

PROJECT WORK   Using Creativity

- Select the template **Four seasons nature presentation** from the **Online Templates** and create an informative presentation on various seasons of the year.
- Ask the students to prepare a PowerPoint presentation on the topic: **Festivals of India**. Collect information and pictures from the net with the help of your elders.
- Ask the students to create a Photo Album on **My Family Tree**. The presentation should contain photographs and some basic information about each family member.

ONLINE LINK   Looking For More

To know more about PowerPoint 2016, visit the following website:
https://support.office.com/en-us/article/What-s-new-in-PowerPoint-2016-for-Windows-e8ef980c-5b12-4fff-ae3f-0819e6a21a1f

A. Fill in the blanks.

1. A small hollow square at the bottom-right corner of the table is called .... handle.

2. To open the Task View Pane, press the .... key combination.

3. .... is the new feature in PowerPoint using which you can add math equations into your presentation.

4. The .... key is used to update the calculation.

5. The .... feature minimises all the open windows except the one that you want to focus on.

| **HINTS** | • Windows + Tab | • Aero Shake | • Table Resize | • Ink Equations | • F9 |

B. State True or False.

1. Snap feature allows you to drag and drop a window to the corner of screen.

2. You cannot resize a Live tile.

3. AutoFit contents option adjusts the column width according to the data entered.

4. To move to the next slide in the Slide Show View, Esc key is used.

5. The two main components required during a Mail Merge process are the Main document and the Merge field.

C. Match the following.

A	B
Lady Augusta Lovelace	Pascaline
Second Generation Computers	The first programmer
Blaise Pascal	Transistors
Third Generation Computers	1833
Analytical Engine	Integrated circuits

A. Choose the best answer.

1. Name the feature that allows you to access your computer by showing your face, finger prints, or iris?

   a. Cortana   b. Windows Hello   c. Task View

2. The era of first generation computers was ....

   a. 1920–1936   b. 1940–1956   c. 1950–1958

3. .... is a row on a datasheet, which consists of a number of fields.

   a. Field   b. Record   c. Database

4. Which shortcut key do we use on a numeric keypad to select an entire table?

   a. Alt + F6   b. Shift + F5   c. Ctrl + 5

5. On which tab Screen Recording option is present?

   a. View   b. Insert   c. Edit

B. Answer in one word.

1. Name the first general purpose electronic computer. ....

2. Which option will help you to insert a pre-designed table in your Word document? ....

3. Name the latest version of the Windows operating system. ....

4. Which feature helps you club your personal and business photographs together to be used for a presentation? ....

5. Which option is used to print a Mail Merge document? ....

C. Answer the following questions.

1. What is Mail Merge?

   ....

   ....

2. What are Universal apps?

   ....

   ....

3. What is the use of Slide Sorter View?

   ....

   ....

FORMATTING A PRESENTATION

The **Slide Master** is an element of a template that stores information, including font styles, placeholder sizes, position of text and objects, bullet styles, background design, and colour schemes.

A Slide Master sets the default layout and formatting for all the other slides. It actually controls an entire presentation. Any changes made in the Slide Master page automatically reflect on every slide in the presentation. A Slide Master consists of two placeholders:

➤ Slide Title placeholder

➤ Body Text placeholder

SLIDE TITLE PLACEHOLDER: It is the first placeholder for the title of the page. You can move the title placeholder anywhere on a slide.

BODY TEXT PLACEHOLDER: This placeholder includes general objects, like text with bullets, charts, pictures, and many more.

Each slide master contains one or more standard or custom sets of layouts.

⯈ WORKING WITH SLIDE MASTER

➤ To open the **Slide Master** view, click on the **Slide Master** button in the **Master Views** group on the **View** tab.

➤ The presentation will switch to **Slide Master View** and the **Slide Master** tab will be selected on the Ribbon.

➤ In the left Navigation pane, scroll up and select the first slide. This is the slide master.

➤ In the Slide Master view, each slide below the slide master is a master slide for a supporting layout. For example, if you want to make changes to all the slides that use Title and Content layout, select the **Title and Content**
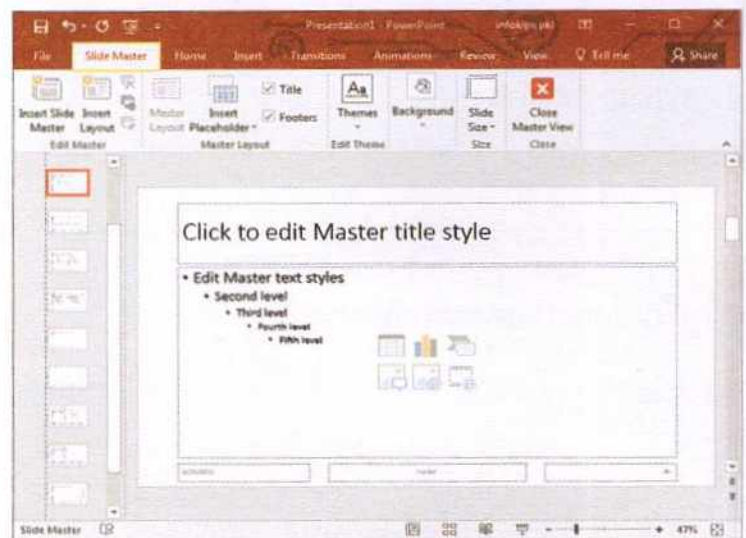

Figure 6.1: Working with Slide Master

layout master slide in the pane. To check this information, just hover the mouse pointer over any slide layout in the **Slide Master** task pane and read the screen tip.

➤ Click on the **Themes** button ⬚ in the **Edit Theme** group on the **Slide Master** tab and select the desired theme from the displayed list.

➤ Select the **Fonts** button ⬚ to change the font style and **Colors** button to change the colour of selected theme. Observe the changes.

➤ Click on the **Background Styles** button in the **Background** group on the **Slide Master** tab. Select the required background from the drop-down menu.

➤ To change the text colour, click on the **Home** tab. Select the text and then click on the **Font Color** in the **Font** group.

➤ Select any font colour from the drop-down menu. The changed font colour will appear in all the slides in the **Slide Master** task pane on the left. Likewise, you can apply different formatting changes on slides with a specific layout.

➤ Remember that text on the Master Slide is used only for styling. The text on the actual slide, such as titles and lists should be typed in **Normal View**.

➤ To enter and edit the header and footer contents, click on the **Header & Footer** button in the **Text** group on the **Insert** tab.

➤ Click on the **Close Master View** ⬚ button present on the Slide Master tab to close the **Slide Master View**.

Figure 6.2: Header and Footer Dialog Box

➤ CREATING A NEW CUSTOM LAYOUT

If you do not find a standard layout that suits your needs, you can create a custom layout that perfectly suits your slide content. You can customise that layout by adding text-specific and object-specific placeholders.

Follow these steps to do so:

➤ Click on the **View** tab. Select the **Slide Master** button in the **Master Views** group.

➤ Choose the **Blank Layout** slide from the displayed list present in the **Slides Master** task pane.

➤ To remove any unwanted or default placeholders, such as header, footer, or the date and time, click on the border of the placeholder, then press the **Delete** key.

> To add a placeholder on the **Slide Master**, click on the **Insert Placeholder** drop-down arrow in the **Master Layout** group. Select a placeholder from the list according to your need. Drag the mouse on the slide to position the new placeholder. You can resize the placeholder, by dragging one of its resizing handles.

> Right-click on the selected Layout thumbnail and select the **Rename Layout** option from the context menu.
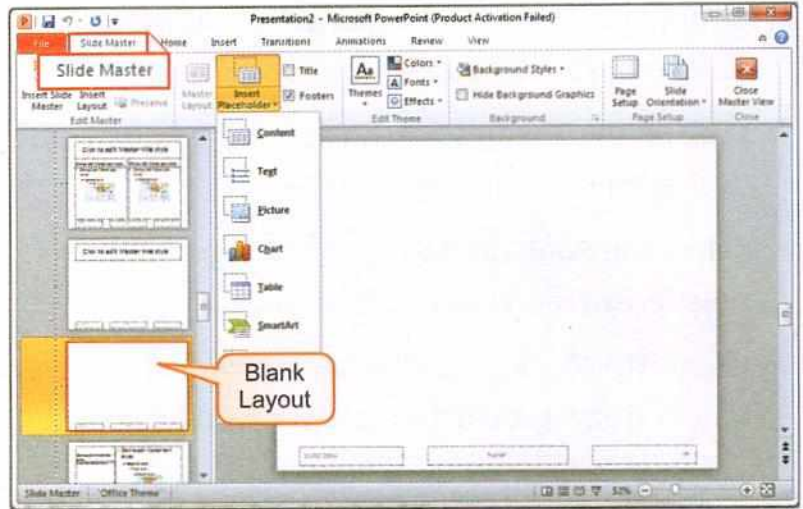
Figure 6.3: Creating a New Custom Layout

> In the **Rename Layout** dialog box, type a new name that describes the new layout you have customised. Click on the **Rename** button.

> Click on the **File** tab and select the **Save As** option.

> Browse the location from the 'Save As' window. The **Save As** dialog box appears.

> Type a file name in the **File name** box. In the **Save as type** list, select the **PowerPoint Template** and then click on **Save** option.

> Click on the **Close Master View** button.

> The layout that you added and customised now appears in the list of standard built-in layouts in **Normal View**, located on the **Home** tab, in the **Slides** group.

NOTE

You can also rename any layout using the **Rename** button present in the **Edit Master** group on the **Slide Master** tab.

≫ CHANGING COLOUR SCHEME

Every presentation comes with colour schemes. You can change the colour scheme of the complete presentation or a single slide. The colours of specific elements on a slide, such as **Title** and the **Background** can also be changed.

> Open any slide of a presentation. Click on the **Design** tab, go to **Themes** group. As you hover the mouse over any theme, it is reflected on the slide.

> Left-click on the theme that you want to apply to all the slides. Or

Right-click on the selected theme. A Shortcut menu appears, select the **Apply to All Slides** option. The theme will be applied to all slides.

- Click on **More** drop-down arrow in the **Variants** group and select the **Colors** option.

- Choose the desired colour scheme.

- To apply the colour scheme to all the slides, right-click on the colour scheme and select the **Apply to All Slides** option.

- In case you want to apply the colour scheme only to the selected slide, then select the **Apply to Selected Slides** option.
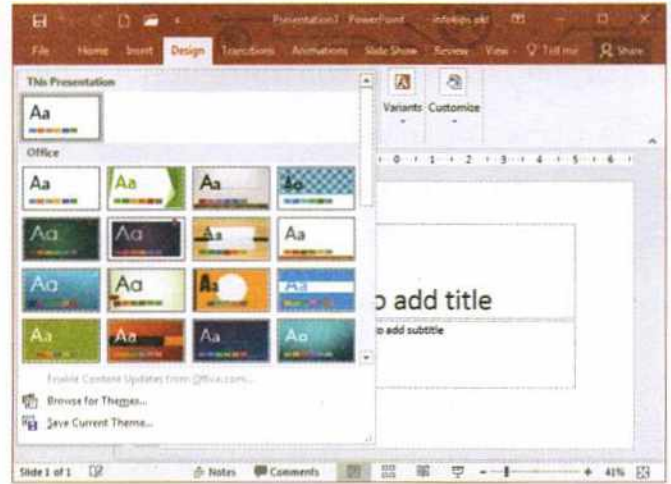
Figure 6.4: Changing Colour Scheme

CHANGING BACKGROUND COLOUR

You can change the background colour, pattern, and texture of a slide.

- Click on the **Format Background** button, present in the **Customize** group on the **Design** tab. The **Format Background** task pane will appear as shown in Figure 6.5.

- Select any **Fill** style option from the displayed list under the 'Fill' section.

- Click on the **Color** button. If you want to select a different colour apart from the displayed colours, select the **More Colors** option from the list.

- The **Colors** dialog box appears.

- Click on the **Standard** tab and choose the colour you want. You can also select the **Custom** tab and create your own colour scheme. Click **OK**.

- Click on the **Apply to All** tab to apply the colour scheme to all the slides. Click on the **Close** button to close the **Format Background** task pane.
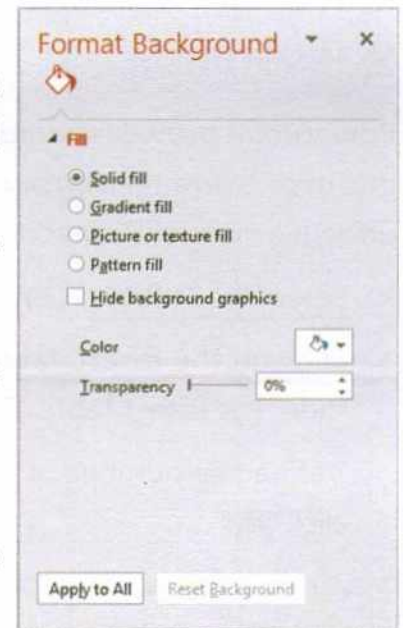
Figure 6.5: Format Background Task Pane

INSERTING A SMARTART GRAPHIC

SmartArt is a graphics tool that allows you to present data or information with graphics instead of just using text. These graphics help in conveying our ideas and messages easily and effectively. It contains a variety of graphical layouts, like Pyramids, List, Hierarchy, Matrix, etc., to display data in a presentation.

- To insert SmartArt in a slide, select the **Title and Content** layout.

- Choose the **Insert a SmartArt Graphic** icon present on the slide. The **Choose a SmartArt Graphic** dialog box appears.

- Select a category on the left, for example, **Hierarchy** and choose the desired layout, like, **Organization Chart** on the right side, then click **OK**.

- A blank Organisation Chart will appear on the slide. You will also find the **Design** and **Format** tabs with **Layouts** and **SmartArt Styles**.

- Now, click inside a box in the SmartArt graphic to add text to it. Add text at different levels and delete the unwanted boxes.

- You can change the colour scheme of the SmartArt graphic by selecting the **Change Colors** drop-down arrow in the **SmartArt Styles** group under the **Design** tab of **SmartArt Tools**.
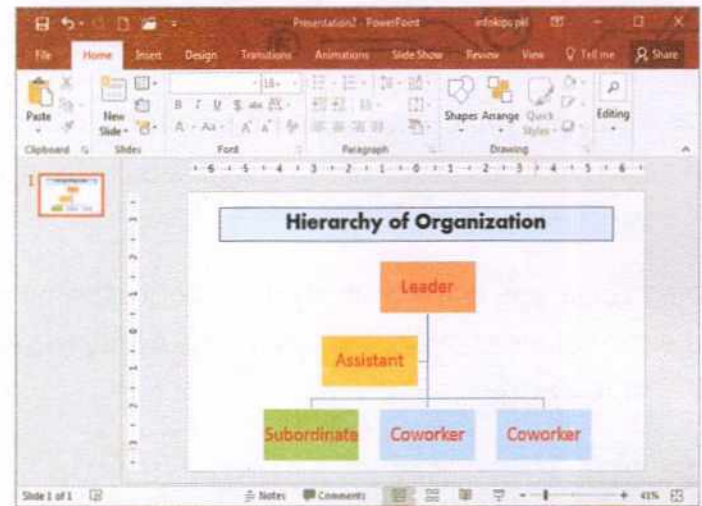
Figure 6.6: Inserting SmartArt in a Slide

INSERTING A TABLE

PowerPoint provides additional features to organise the information in a tabular format. A table is a grid of cells arranged in rows and columns. It is very useful in organising and representing the data in an effective manner. To insert a table:

- Select the **Title and Content** layout slide in a presentation.

- Click on the **Insert Table** icon present on the slide. The **Insert Table** dialog box will appear.

- Define the number of columns and rows and click **OK**.

- A new table will be displayed according to the defined rows and columns.

- Place the mouse pointer in the first cell of the table and type heading. Press the **Tab** key.

- Similarly, insert data for the other cells in the table, using the **Tab** and **Arrow keys** or clicking in the required cell.
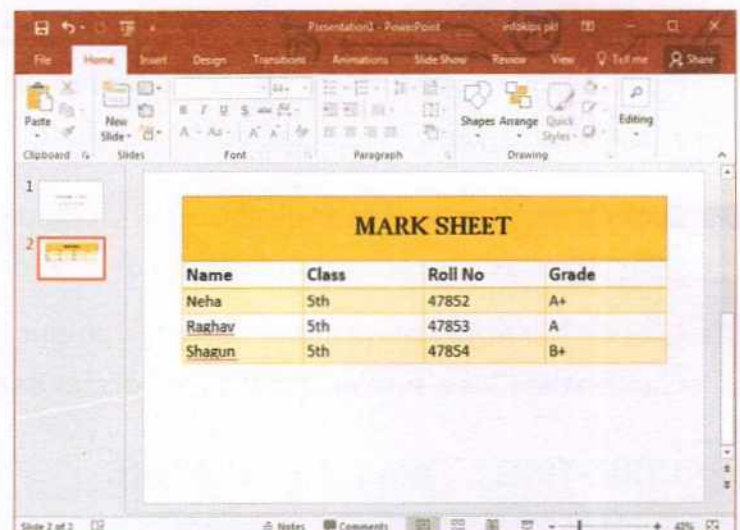
Figure 6.7: Adding Table in a Slide

NOTE

When you insert a table, a new tab, **Table Tools** appears. You will find various tools and commands present in the **Design** and **Layout** tabs, such as **Table Styles, Shading, Borders, Effects, WordArt Styles, Draw Borders** etc. These tools are helpful while formatting a table in a slide.

⟫ INSERTING A CHART

Chart is an effective way to display data in a graphical and pictorial form. Charts make it easier to show comparisons and growth, relationship among the values and trends in data. Charts provide an accurate analysis of the information.

➤ Click on the **Insert Chart** icon on the slide from the **Title and Content** layout. The **Insert Chart** dialog box appears. Select the chart type in the left pane, and the sub-types of the selected chart will be reflected on the right pane.

Figure 6.8: Inserting Chart in a Slide

➤ Select the **Column** chart and click **OK**. The chart will be displayed with a datasheet that contains the default data.

➤ You can replace the default data with your own data. To delete all the data from the datasheet, move the mouse pointer to the **Blank** button at the extreme-left corner of the column indicators.

➤ The mouse pointer changes into a large plus sign ✛ of white colour. Click on the button. The entire datasheet will be selected. Press the **Delete** key.

➤ Click the cell beneath Column B, i.e., B1. Type JAN, press the **Tab** key. Type FEB, press the **Tab** key. Type MARCH and press the **Enter** key.

➤ Click the cell adjacent to the Row2 header, i.e., A2. Type **FOOD**, press the **Down arrow** key. Type **WATER BILL,** press the **Down arrow** key and type **RENT** and then **ELECTRICITY BILL** in the next row.

➤ Click the cell **B2** and type **800**. Press the **Tab** key and type **850**. Similarly, type the entire data as shown in Figure 6.8. As you enter the data, the chart gets plotted automatically.

> To close the datasheet, click on the **Close** button on the Title bar of the datasheet.

NOTE

When you insert a chart, the three new tabs–**Design** and **Format** containing various chart tools and commands appear on the ribbon. These commands allow you to modify and format the chart.

RECAP

> Slide Master sets the default layout and formatting for all other slides.

> Slide Master consists of two placeholders–Slide Title Placeholder and Body Text Placeholder

> A table is a grid of cells arranged in rows and columns. It is very useful in organising and representing the data in an effective manner.

> Chart is an effective way to display data in a graphical and pictorial form.

> SmartArt is a graphics tool that allows you to present data or information with graphics instead of just using the text.

BRAIN DEVELOPER

SECTION - A

A. Fill in the blanks.

1. ....provides an accurate analysis of information.

2. The.. key combination is used to decrease the font size.

3. A.. is a grid of cells arranged in rows and columns.

4. You can also rename any layout using the .... button present in the Edit Master group on the Slide Master tab.

5. Slide Master consists of.. placeholders.

HINTS   • Table   • Chart   • Rename   • Ctrl + Shift + <   • Two

B. State True or False.

1. Any changes made in the Slide Master page automatically reflect on every slide in the presentation. ☐

2. Ctrl+Shift+> is the shortcut key combination to decrease the font size. ☐

3. To insert a table in a presentation, we should use Title and Content Slide Layout. ☐

4. You cannot edit data in a Datasheet. ☐

5. A Chart can also be inserted by clicking on the Chart button present on the slide. ☐

C. Application-based questions.

1. Raj wants to create a presentation on the comparative analysis of Rainfall for the past five years. Which tool should he use to represent the same?

   ....

2. Meenakshi has created a presentation of six slides. All the slides have the same background, but she wants to change the background of each slide. Which option can help her in doing so?

   ....

SECTION - B

A. Multiple-choice questions.

1. On which tab is the Slide Master button available?

   a. View   b. Design   c. Animations

2. The intersection of row and column in a table is called ....

   a. Cell   b. Queue   c. Box

3. When we insert a chart, the data is displayed in a special window called ....

   a. Application   b. Datasheet   c. Report

4. Which shortcut key combination opens the Font dialog box?

   a. Ctrl+T   b. Ctrl+Shift+F   c. Shift+T

5. The ....tab appears when you insert a table in a presentation.

   a. Insert   b. Table Tools   c. Format

B. Answer the following questions.

1. What is a Slide Master?

   ....

   ....

2. What do you understand by creating a new custom layout?

   ....

   ....

3. Write the steps to insert SmartArt in a presentation.

   ....

   ....

4. What are the benefits of using chart in a presentation?

   ....

   ....

ACTIVITY SECTION

LAB SESSION   Perfection Through Practice

> Open **PowerPoint 2016** and click on the **Blank Presentation** thumbnail.
> Right-click on the slide and choose **Layout** button from the shortcut menu, and choose the **Title and Content** layout. Click on the **View > Slide Master**.
> Click on the **Click to edit Master title style** placeholder. Select the text and apply formatting effects by using options in the **Font** group on the **Home** tab. Set the **Font–Gill Sans MT, Font Size–40, Font Color–Red**. Apply **Bold** and **Text Shadow** effects.
> Click on the **View > Normal View** button. Type the contents 'HIGHLIGHTS OF SCHOOL' in the 'Click to add title' placeholder and the sub-points in the 'Click to add text' placeholder.

HIGHLIGHTS OF SCHOOL

- Projects
  - Collection of Geographical Data
  - Zoological Survey
  - Model Display
  - Chart
  - Exhibition
  - Making Scrap Book
  - Excursion Tour
  - Quiz

- Apply bullets to the sub-points from the **Paragraph** group.
- Open the **Design** tab and go to **Themes** group. Click on a suitable design to apply.
- Select the heading 'Projects' in second placeholder. Click on the **Font** drop-down menu on the **Home** tab and choose the **Font- Bell MT, Font Size - 32, Font Color -Dark Blue** and apply the **Bold** effect. Insert 'Title and Content' slide in the presentation. Select the **Insert Table** icon. The **Insert Table** dialog box will appear.

Roll No	Name	Hindi	English	Science
		MARKS SHEET		
101	Ajay	50	70	60
102	Anita	88	79	90
104	Naveen	75	78	79
105	Harsh	98	67	76
106	Nidhi	90	67	56

- Define **5** columns and **6** rows in a table. Type **MARKS SHEET** in the 'Click to add title' placeholder.
- Position the mouse pointer on the first cell and enter the data as given here. Insert a new row before the **4th** row, i.e., **104**.
- Enter **103, Rashi, 79, 95,** and **80** in the newly inserted row in the respective fields.
- Apply the desired table design and border to your table.
- Insert another slide in the presentation and select the 'Insert Chart' icon in the slide.
- Select the **Column Chart** from the **Insert Chart** dialog box.
- The **Datasheet** will appear. Modify the data as shown in the given table. Close the **Datasheet**.
- Apply the desired formatting to chart using the **Format** menu under the **Chart Tools** tab.
- Save the presentation by using the **Ctrl + S** key combination.

GROUP DISCUSSION   For Concept Clarity

Conduct a group discussion on the topic: **Specific key points to be taken care while designing a presentation**.

PROJECT WORK   Using Creativity

Ask the students to create a presentation of ten slides on the Topic: **Five Great I.T. Personalities**. It must contain the brief background and achievements of each personality. Apply the formatting effects that you have learnt till now.

ONLINE LINK   Looking For More

To know more about Microsoft PowerPoint, visit the following website:
- www.teach-ict.net/software/ppt/powerpoint.htm

PROGRAMMING IN SCRATCH

LEARNING IN THIS CHAPTER

- Sensing Input and its execution
- Using Mathematical Operators in Scratch
- Comparing values
- Generating random numbers
- Changing location randomly

- Bouncing the ball up and down
- Counting length of the word
- Making a variable
- Applying reasoning to make decisions
- Applying condition in programming

In the previous class, you learnt about the different actions a Sprite can perform on the Scratch stage. You also learnt how to change background, colour, direction, costume, etc., of a Sprite. In this lesson, you will learn how to perform various mathematical operations, like addition, subtraction, multiplication, division, and apply condition to get the solution to a problem.

SENSING INPUT AND ITS EXECUTION

The **Sensing block palette** has light blue colour coded blocks, which are used to sense the keyboard input while executing the Script. The `ask What's your name? and wait` block prompts the user to type input using the keyboard and `answer` block stores the keyboard input. The question appears in a voice bubble on the screen. The program waits until the user types in his response by either pressing the **Enter** key or clicking the check mark ✅. Let us create a small stack block by using the **Sensing** instructions and execute it.

> Delete the **Cat** Sprite from the stage.

> Click on the **Choose sprite from library** button 👤 and add the **Kai** Sprite from the **People** folder. Choose the appropriate Costume, **Kai-b** for the Sprite.

Figure 7.1: Script for the Sprite

> Select the **Stage** thumbnail on the left and click on the **Choose backdrop from library** button 🖼️. Import the **school1** background on the stage.
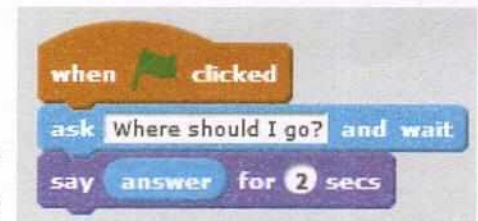
Figure 7.2: Sprite Displaying Question and Answer on the Stage

- Create the script by dragging and placing the three blocks as shown in Figure 7.1.
- The `ask Where should I go? and wait` block enables the user to type input with the help of a keyboard.
- Drag and place the `answer` block on the text field of the `say Hello! for 2 secs` block. Click on the green flag button.
- The message "Where should I go?" gets displayed on the stage along with a text box.
- Type the answer in the text box. Press the **Enter** key or click on the check mark ✅ present on the answer text box.
- The answer "To my friend's place." will be shown in the voice bubble on the stage for the specified number of seconds.

⟩ USING MATHEMATICAL OPERATORS IN SCRATCH

Blocks in the **Operators** block category are round in shape. They are light green colour coded blocks and used to solve mathematical equations. These blocks can easily be placed in the value box of any other block. Let us perform calculations in a Scratch project:
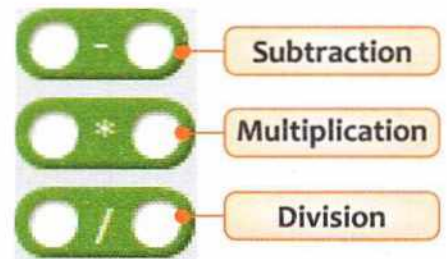
- Open a new file in Scratch window. Delete the default Cat Sprite. Click on the **Choose sprite from library** button 🧑. Select the category **Animals** from the **Sprite Library** dialog box.
- Select the **Duck** Sprite from the options and click **OK**.
- Drag the `when 🏳 clicked` block from the **Events** block category under the **Scripts** tab and place it in the Script area.
- Pull the `say Hello! for 2 secs` and `say Hello!` blocks from the **Looks** block category and snap them together underneath the `when 🏳 clicked` block.
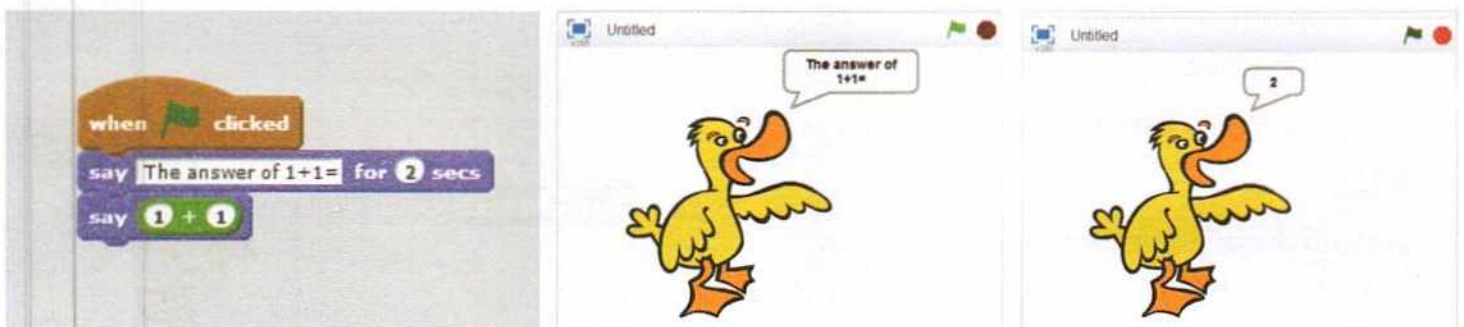- Click and drag the `◯ + ◯` block from the **Operators** block category and snap it inside the `say Hello!` block.

Subtraction
Multiplication
Division

Figure 7.3: Sprite Adding Two Numbers on the Stage

- Type the text and numbers inside the block as shown in Figure 7.3 on the previous page.
- Click on any block to run the script and observe the Sprite calculating the given numbers.
- Change the numbers and observe the Sprite displaying change in the result.

Similarly, you can use other blocks to perform subtraction ◯ - ◯ , multiplication ◯ * ◯ , and division ◯ / ◯ from the **Operators** block category.

⟩ COMPARING VALUES

The **Operators** block palette also includes blocks to compare the numbers. In mathematics, you use less than (<), greater than (>) and equal to (=) sign to compare two numbers. Similarly in Scratch, the ◁▭<▯▷ (less than) block reports true if the first value is less than the second value, the ◁▭=▯▷ (equal to) block reports true if the two numbers are equal and ◁▭>▯▷ (greater than) block reports true if the first value is greater than the second value. These blocks are known as 'Comparison blocks'. Let us make use of the comparison blocks:

- Create a script by dragging the blocks as shown in Figure 7.4 and type the numbers inside the ◁▭<▯▷ (less than) block. Click on the block to run the script. Likewise, we ◁▭=▯▷ (equal to) block.

Try the following scripts and check the result.

Figure 7.4: Sprite Comparing Numbers

⟩ GENERATING RANDOM NUMBERS

We can also generate a random number from a specified range by using the `pick random 1 to 10` block from the **Operators** block category. Let us see how the Sprite itself chooses the random numbers with the help of this block.

- Place the blocks in the Script area as shown in Figure 7.5 and change the values.

- Click on the block and you will see the Sprite speaking random numbers between 1 and 50.
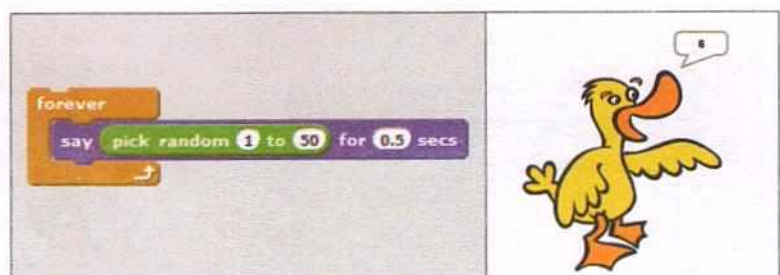
Figure 7.5: Script for Sprite to Say Random Numbers

CHANGING LOCATION RANDOMLY

> You can also use the `pick random 1 to 10` block to specify any random location of a Sprite on the stage.

> Delete the **Duck** Sprite and add **Starfish** Sprite on the stage.

> Adding `pick random 1 to 10` block on the `glide 1 secs to x: 0 y: 0` block will randomly change the x and y co-ordinates of the Sprite's position on the stage.

> Drag and place the blocks in the Script area to create the Scratch script as shown in Figure 7.6 and execute it to observe the Sprite changing its location, randomly.
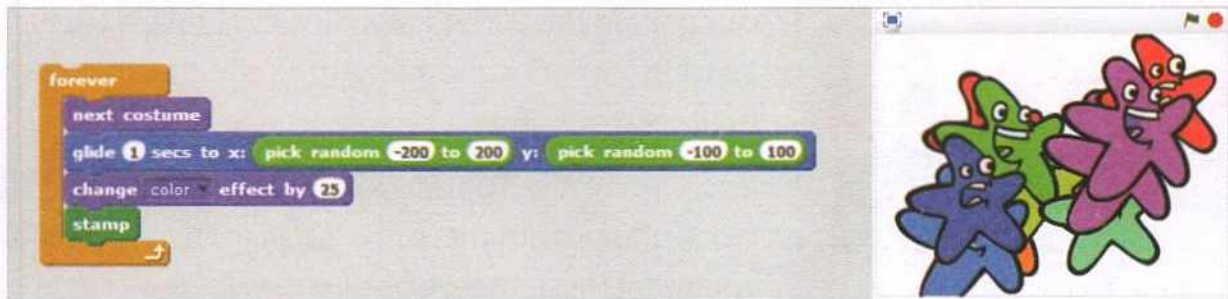
Figure 7.6: Script for Sprite to Change Location

BOUNCING THE BALL UP AND DOWN

To bounce a ball all around the stage you can use `pick random 1 to 10` block along with the other blocks. Create a new Scratch project using **Beachball** Sprite and the blocks as shown in Figure 7.7.

Figure 7.7: Script to Bounce the Ball Randomly

COUNTING LENGTH OF A WORD

Scratch blocks provide the facility to count the letters that are used to form a word. For example, the word **Encyclopedia** has **12** letters. Let us create a Sprite script to display the total number of letters.

> Open a new file in Scratch by clicking on the **File> New**.
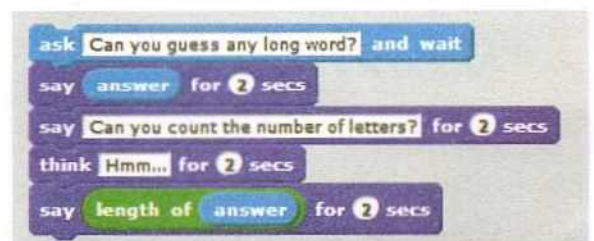
Figure 7.8: Script for the Sprite

- Select the Stage thumbnail and choose the **Backdrops** tab.

- Click on the **Choose backdrop from library** icon in **New backdrop** section and add **room3** from the **Indoors** category. Click **OK**.

- Select the **Scripts** tab and drag the `ask What's your name? and wait` block from the **Sensing** block palette and drop it on the Script area.

Figure 7.9: Typing the Input

- Type the text 'Can you guess any long word?' in the text field of the block.

- Drag the `say Hello! for 2 secs` block from the **Looks** block category in the Script area. Pick the `answer` block from the **Sensing** category and place it on the **Say** block where the **Hello!** text is written.

- Again place the `say Hello! for 2 secs` and `think Hmm... for 2 secs` block underneath the script. Change the text **Hello!** to 'Can you count the number of letters?'.

- Now, again, place the `say Hello! for 2 secs` block in the Script area and add `length of world` block from the **Operators** block to the text box of **Say** block.

- Now, drag the `answer` block from the **Sensing** category and place it on top of the text box in the `length of world` block.

- Click on any block to run the script and observe the Sprite displaying the length of the word.

Figure 7.10: Sprite Counting the Length of a Word

≫ MAKING A VARIABLE

You might have observed that while crossing the different levels of a computer game, the score of the player either increases or decreases. It is displayed on the screen at the end of the game. To store these score values, variables are used.

A **variable** is a placeholder in Scratch's memory that is used to store a changing value. Variables can hold one value at a time. These values can be either numbers or strings(text).

In Scratch, **Data** block is used to create variables in a project. Variables are represented by blocks shaped like elongated circles, uniquely labelled by the user. Let us observe the complete process of creating a variable.

➤ In the **Data** block palette, click on **Make a Variable** block. The **New Variable** box appears.

➤ Type any suitable name like 'Name' for the variable in the **Variable name** text box. Select a button specifying whether the variable is **For all sprites** or **For this sprite only**. Click **OK**.

➤ The 'Name' block will be added under the **Variables** block menu.

➤ Now, drag the blocks as shown in Figure 7.13 to create a script, using the different blocks palettes.
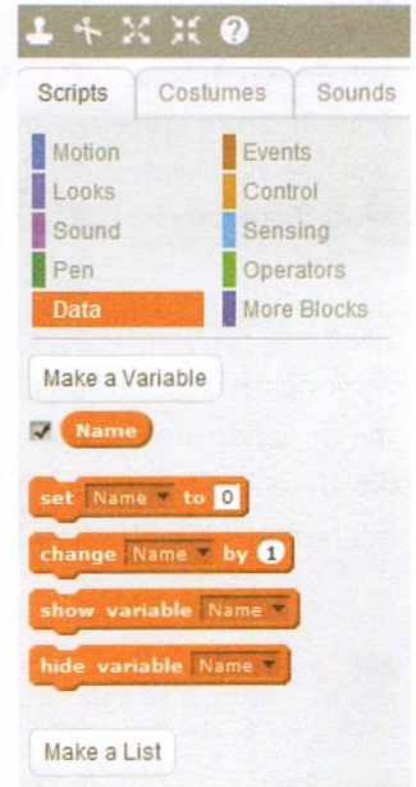
Figure 7.11: Making a New Variable

➤ Click on the green flag button to run the script.

➤ Type your name with the help of keyboard, in the **answer** box displayed on the stage and press the **Enter** key.

Figure 7.12: Variable Name Box

Figure 7.13: Using Variable in Script

➤ The Sprite will speak the answer in a voice bubble and it will be stored under the variable **Name** on the top-left corner of the stage.

Figure 7.14: Sprite Storing name in Variable Name Box

⮞ APPLYING REASONING TO MAKE DECISIONS

Everyone makes decisions in daily life. Some of our decisions are so general that we hardly take any time to decide on. But sometimes when a problem is complex, it needs our wisdom and experience to take decisions. Difficult situations require more reasoning and skills to solve problems. Let us understand this with a simple mathematical equation.

Example

We can solve the simple equations quickly like:

$20 + 20 = 40$ $\qquad$ $20/4 = 5$

$8 * 8 = 64$ $\qquad$ $50 - 20 = 30$

When the mathematical equation is complex, it needs our right reasoning to solve it.

$12 * 65 + (40 + 280/4) + 22 - 6 * 23$

Here, we need to follow proper mathematical rules to obtain the correct solution.

Let us take another situation. Suppose you have to select two hobbies in your school from the given list.

Example

A

Indoor activities	Days
Clay modelling	Monday
Salad making	Wednesday
Oil painting	Monday
Dance	Wednesday

B

Outdoor activities	Days
Yoga	Wednesday
Karate	Monday
Aerobics	Wednesday
Gymnastics	Monday

There are certain conditions and rules to be followed by every student before making the selection of the hobbies from the given list of eight hobbies. Rules to select the combination of hobbies are as follows:

➤ Each student has to select at least two hobbies.

➤ The selection of one hobby from each section is mandatory.

➤ The periods for two selected hobbies should not fall on the same day.

Here, keeping the choice of the selection of hobbies, the student has to determine whether the two hobbies are a valid combination or not.

Likewise, programming in a computer language includes logic and decision-making. In logical thinking, we should first identify the main steps and then work out the details of each step.

Look at the shapes given here:

The main steps in logical thinking are:

1. TASK:

Read the problem carefully. Here, three shapes are given.

What comes next in the sequence?
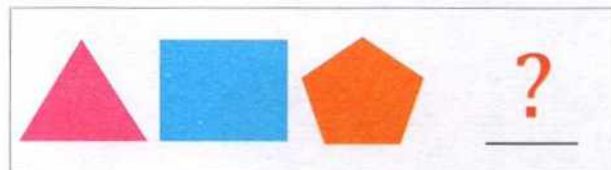
2. IDENTIFY:

> **Goal** : To find the fourth shape in the sequence

> **Information** : The sequence of shapes is given

In the sequence, the first shape has three sides, the second shape has four sides, and the third shape has five sides.

> **Condition** : In the sequence, the number of sides of the shapes is increasing by 1.

3. SOLVE:

To achieve the goal by using the given information and following the condition.

> **Reasoning** : The next shape should have six sides,

i.e., 5 + 1 = 6.
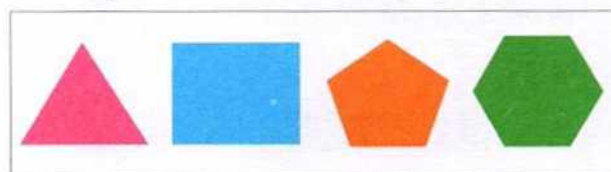
Solution:

To work out the solution, in step by step, manner.

This proves that with logical reasoning, any problem can be solved. In Scratch also, you can create projects with the help of blocks using logical reasoning.

▶ APPLYING CONDITION IN PROGRAMMING

To put a check in any problem, a condition is to be applied. It allows the program to select an action, based upon the user's input. Scratch provides various blocks enabled with conditional programming concepts. In Scratch, 'if', 'forever if', or 'if else' are the conditional blocks present in the **Control** block category.

In [forever if] block, the script inside it will execute, only if the condition given after **if** is true.

All the elongated diamond shaped blocks that are in the **Sensing** block palette are placed as a condition inside these blocks. You can use blocks from the **Sensing** category for controlling the Sprites in a better manner.

Let us observe them in a project.

➤ Open a new file in Scratch. Import the background **goal1** from the **Sports** category as shown in Figure 7.15.

Figure 7.15: Changing the if Condition of the Script

➤ Delete **Cat** Sprite and add **Soccer Ball** Sprite from the **Things** category on the stage. Reduce its size using the **Shrink** button.

➤ Drag the when clicked block to the Script area. Place the forever block beneath it.

➤ Add move 10 steps blocks from **Motion** category. Change the value to 15.

➤ Place the if then conditional block beneath the move 15 steps block.

➤ Drag the touching ? block from the **Sensing** block palette and place it over the value box in the if then block to check a condition and take decision.

➤ Select the **edge** option from the drop-down menu of the touching ? block.

➤ The touching edge ? block lets you check whether the Sprite is touching the edge of the stage or the mouse pointer.

Figure 7.16: Applying if condition on the Sprite

➤ Drag the turn 15 degrees block from the **Motion** category and place it beneath the if then block. Change the value from 15 to 5.

➤ Place the change color effect by 25 block from **Looks** category under the turn 5 degrees block. Place the if on edge, bounce block from the **Motion** category outside the if then block.

➤ Click on the **Green flag** button and observe the ball moving all around the stage.

➤ Now to observe the change in the condition, select **mouse-pointer** option from the drop-down list of the touching ? block.

- Again click on the green flag button and run the script.
- Observe that the ball is moving and changing its colour only if you place the mouse pointer on the ball. Click on the **Stop** button ● to halt the execution.

RECAP

- The Sensing block palette has light blue colour coded blocks, that are used to sense the keyboard input while executing the Script.

- Blocks in the Operators block category are round in shape. They are light green colour coded blocks and used to solve mathematical equations.

- The Operators block palette also includes blocks to compare the numbers.

- A variable is a placeholder in Scratch's memory that stores a changing value. Variables can hold one value at a time. These values can be either numbers or strings (text).

- Data block is used to create variables in a project.

- When a word is saved in a variable it is called a String Variable.

- The main steps in logical thinking are- Task, Identify, and Solve

- To put a check on any problem, a condition is to be applied. In Scratch 'if', 'forever if' or 'if else' are the conditional blocks present in the Control block category.

SECTION - A

A. Fill in the blanks.

1. Programming in computer language includes .... and ....

2. The blocks in .... block category are round in shape.

3. The Sensing block palette has .... colour coded blocks.

4. ▶ block reports .... if the first value is greater than the second value.

5. When a word is saved in a variable it is called a ....

6. All the elongated diamond shaped blocks are placed as a ...., inside blocks.

7. Variables can hold ....value at a time.

HINTS
- Light blue
- Decisions
- True
- Logics
- Operators
- String Variable
- One
- Condition

B. State True or False.

1. You cannot perform mathematical operations in Scratch.

2. All the blocks in Operators block category are light blue in colour.

3. Scratch provides the facility to count the letters that are used to form a word.

4. You cannot create variables in a Scratch project.

5. You can compare mathematical values using Operators block.

6. To solve tough problems, a logical reasoning is required for the solution.

C. Application-based questions.

1. Kartik is learning programming in Scratch. He wants to create a new project, which displays random numbers on stage. Suggest the block he can use for the same.

   ....

2. Priyanka wants to create a new variable 'Name' in her Scratch project. Suggest the appropriate block to do the same.

   ....

A. Multiple-choice questions.

1. The block to add two numbers are located under the .... block menu.

   a. Operators   b. Sensing   c. Pen

2. The .... block is used to calculate the product of two values.

   a. `( + )`   b. `pick random 1 to 10`   c. `( * )`

3. The Operators block menu has .... colour coded blocks.

   a. Light Green   b. Blue   c. Red

4. .... block category is used to create variables in Scratch project.

   a. Sensing   b. Data   c. Pen

B. Answer the following questions.

1. What is the purpose of using a variable?

   ....

   ....

   ....

2. What are the main steps in logical thinking?

   ....

   ....

   ....

3. List three names of blocks in Operators block, which compare two values.

   ....

   ....

4. Why do we use conditions in Programming?

   ....

   ....

   ....

A. Draw a maze using the Paint editor in **Backdrops** tab as shown in the image. Add **Dog2** Sprite on the stage and place it at the starting point of the maze. Create a small house Sprite and place it at the end of the maze. Now, create a script to perform the following activities.
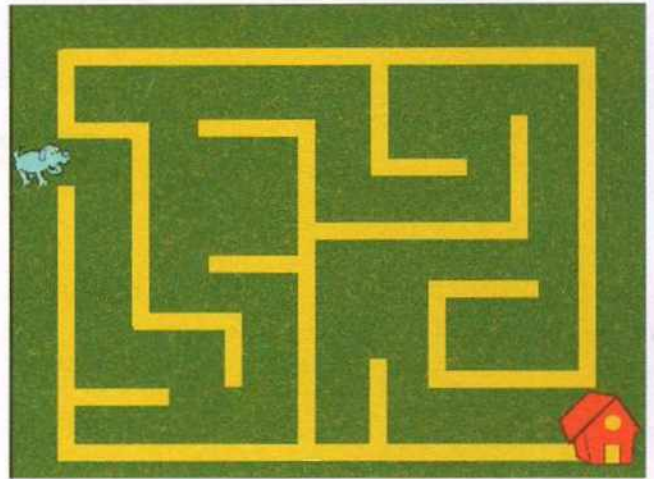
➤ Let the **Dog2** Sprite reach his home safely without touching the maze blocks.

➤ Every time the **Dog2** Sprite touches the wall of the maze, it hides from the stage and reappears only when the green flag is clicked again.

➤ When the **Dog2** Sprite reaches his house, make him say 'Hey! I have reached' using the voice bubble.

HINTS

➤ Reduce the size of the Sprite using **Shrink** button ⊁.

➤ Use `when space key pressed` block to move the dog with the help of arrow keys. To point the appropriate direction of the dog, use the `point in direction 90` block. You can use `hide` and `show` blocks to make the **Dog2** Sprite disappear or reappear on the stage.

B. Write a Scratch program to display and calculate the length of the following words:

➤ Achievement   ➤ Flattery   ➤ Knowledgeable   ➤ Zealous

Search the appropriate meaning of each word using the internet and display the meaning along with the word on the stage, using voice bubbles.

C. Create a project by dragging the blocks, given in the figure on the Script area to find the sum or difference of two numbers, depending on the user's choice. If the choice of the user is 1, then the numbers will be added, if the choice is 2, then the numbers will be subtracted.

> Modify the script and use other blocks to multiply or divide the numbers from the Operators block palette.

D. MATH PUZZLE: Ask the students to solve the mathematical equations given below and display the correct answers with the help of voice bubble on the stage. Use the blocks from 'Looks', 'Sensing', and 'Operators' category to create the script.

One has been done for you as an example : 58 + 35 * 56 / 6 - 4

Solve these equations:

(i) 2 + 4 / 2 - 1 * 3 + 10   (ii) 12 + 12 / 13 + 13 - 44 * 6   (iii) 6 + 6 + 6 - 5 - 5 *2

GROUP DISCUSSION   For Concept Clarity

Discuss with the students the topic: **Stage coordinates of Scratch**

PROJECT WORK   Using Creativity

> Create a background using the Paint Editor as shown in the image. Now, draw the Sun and Earth Sprite and add them on to the stage. Drag them to the appropriate locations.

> Create a script by adding blocks from different block palettes to show the movement of the Earth around Sun. Add different graphic effects to make a creative project.
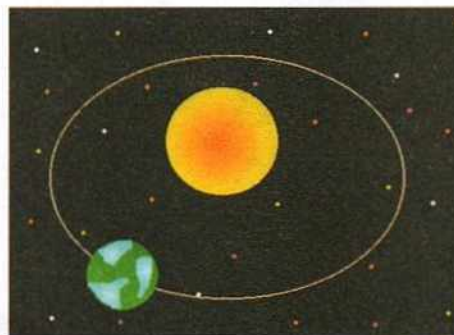
NOTE

You can use blocks from the 'Motion', 'Sensing', 'Looks', and 'Control' blocks palettes.

MICROSOFT EXCEL 2016

Microsoft Excel is a popular spreadsheet component of Microsoft Office Suite that allows you to store, organise, calculate, and manipulate the available data. It is widely used to perform mathematical calculations. The data is spread in a tabular form, consisting of rows and columns. It provides inbuilt features and tools, such as formulae, functions, and data analysis tools that make it easier to work with large amount of data.

FEATURES OF EXCEL

> Formulae are mainly used for performing simple and complex mathematical calculations. Functions are the built-in formulae used for calculating percentage, interest, average, etc.

> Formatting features improve the appearance of data.

> The data is automatically recalculated in the entire worksheet if any change is made in a single cell.

> The data can be searched quickly and if required replaced instantly.

> Quick data entry can be done in a large series of cells by using the **Auto Fill** option.

> The data can be viewed in a graphical form, such as charts, which help to understand, analyse, and compare data in an effective manner.

These advanced features have made Microsoft Excel, the first choice for professionals to quickly perform lengthy accounting and financial tasks, that help in taking prompt actions.

STARTING EXCEL 2016
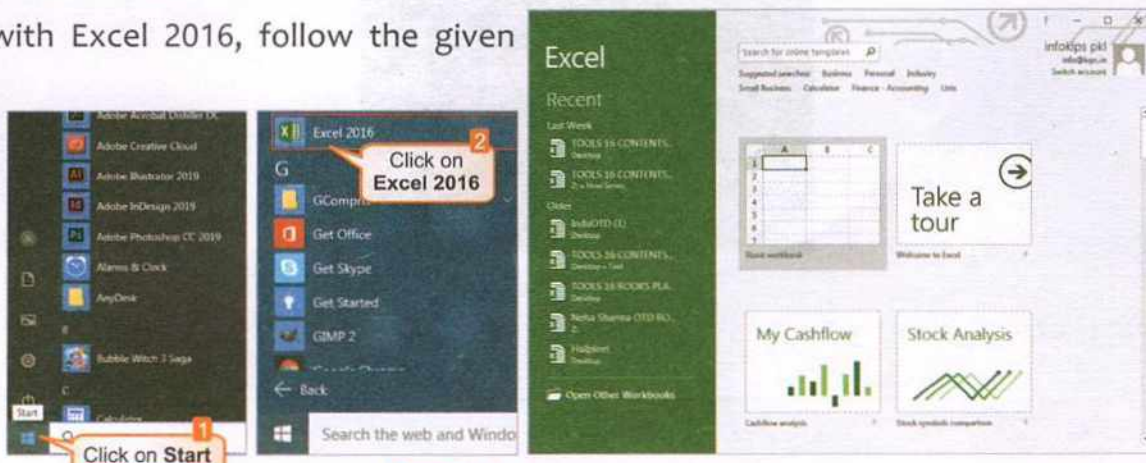
To start with Excel 2016, follow the given steps:

Figure 8.1: Starting Excel 2016

When you open Excel 2016, the Start Screen appears. Select the Blank workbook thumbnail from the screen. A new blank workbook named Book1 will open before you.

BASIC WORKSHEET AND WORKBOOK CONCEPTS

The Excel window that appears on the screen is called a Workbook. It is assigned a temporary name as Book1. Workbook is like a notebook, which consists of a number of pages called Worksheets. A **Worksheet** is a grid–like area, made up of rows and columns, where you can enter and work with data. By default, an Excel workbook displays a single worksheet, with the name **Sheet1**. We can add any number of worksheets in a workbook according to the limits of memory available on a computer.

A worksheet consists of 1,048,576 rows and 16,384 columns. Columns are represented by alphabets on the top and rows by numbers on the left side of the worksheet.
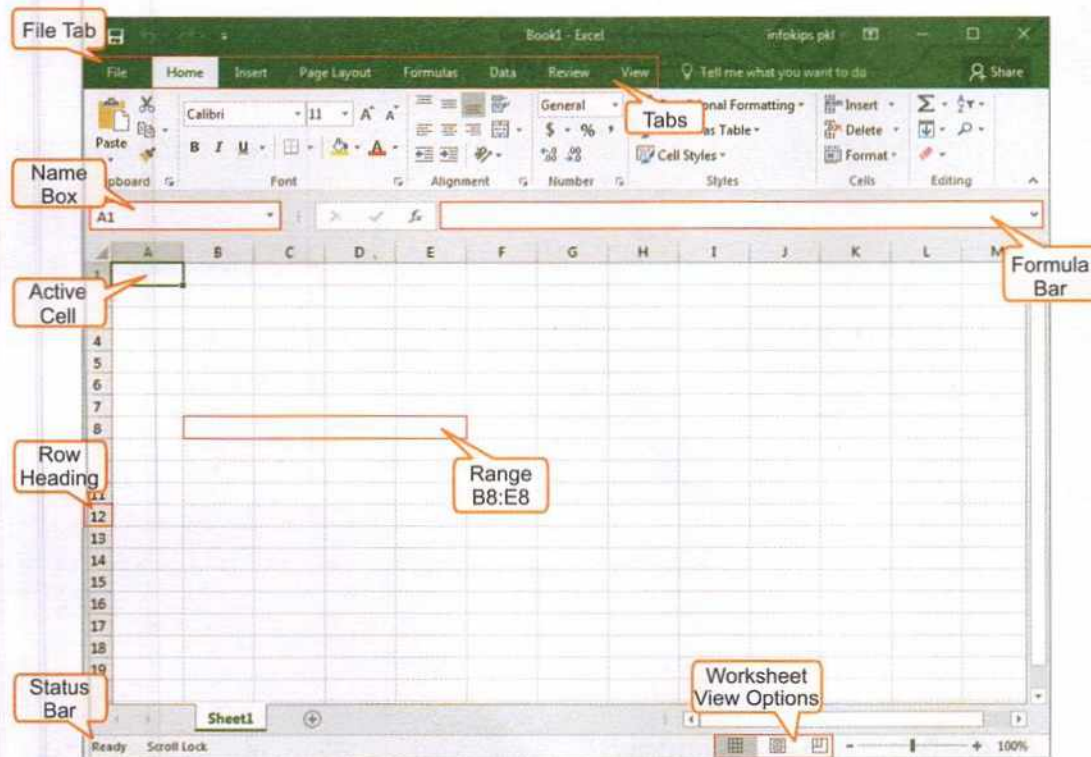

Figure 8.2: The Spreadsheet Window

COMPONENTS OF A WORKSHEET

CELL

A cell is an intersection of a column and row in a worksheet. Each cell is identified by its column letter and row number, which is known as **Cell Address.**

For example, A5 refers to the cell at the intersection of column A and row 5. A cell is used to store data, such as text, numbers, formulae, functions, etc. A cell can contain upto **32,767** characters.

ACTIVE CELL

When you click on a cell, a thick black border appears around it, which differentiates it from the rest of the cells. This highlighted box is called **Cell pointer**. It indicates that the current cell is active. Data can be entered only in the active cell.

RANGE

A range is a group of contiguous cells, which form the shape of a rectangle. It can be as small as a single cell or as big as an entire worksheet. You can specify a range by writing the starting cell address followed by the ending cell address, both separated by a colon (:). For example, C1:C10 indicates a range starting from C1 cell address and ending in C10 cell address.

NAME BOX

Name Box is located just above the Column heading on the left side of the window. This area displays the location of the cell pointer.

FORMULA BAR

The Formula Bar is located to the right of the Name Box. This bar shows the characters and formulae that you enter in an active cell.

COLUMN HEADINGS

Alphabets across the top border of each worksheet are called column headings. These headings identify columns with letters A to Z, AA.... AZ, BA.....BZ, ...XAA....XFD. Every worksheet in Excel contains **16,384** columns.

ROW HEADINGS

Row headings are the numbers marked from **1** to **1,048,576** along the left border of the worksheet to represent each row of it.

STATUS BAR

The Status bar is located at the bottom of the Excel window. It gives us information about the current selection. It includes the name of the currently selected command or current activity. It also displays warning messages.

⏩ MOVING AROUND THE SPREADSHEET

To input data in a worksheet, we have to move the cell pointer from one cell to another with the help of various keys defined in the given table.

Keys	Function
→	Moves one column right
←	Moves one column left
↑	Moves one row up
↓	Moves one row down
Page Up	Moves the active cell highlight to first row of the spreadsheet and can be used as an alternative to scroll up the worksheet
Page Down	Moves the active cell highlight to the next sheet and can be used as an alternative to scroll down the worksheet
Ctrl+Home	Moves the cell pointer to the first cell of the topmost row, i.e., A1
Ctrl+End	Moves the cell pointer to the last used cell on a spreadsheet

ENTERING DATA

Follow the given steps to enter data in a worksheet as shown in Figure 8.3.

➤ Open a new workbook by selecting the blank workbook thumbnail from the **Start Screen**.

➤ Click on the cell D1 and type 'Weekly Expense'. Now, select the cell range where you entered the text. Click on the **Merge & Center** button in the **Alignment** group on the **Home** tab. The selected cells will be merged and the text will be centred.

➤ Click on the cell A2 and type 'Items'. Press the **Right** arrow key. Type 'Monday' in B2 and 'Tuesday' in C2. Likewise, enter data in the rest of the cells as displayed in Figure 8.3.

➤ Click on the cell A3. Type 'Eatables' and press the **Enter** key. The cell pointer shifts to cell A4.

Figure 8.3: Entering Data

➤ Type 'Cold Drink' and press **Down** arrow key to move to cell A5 and type 'Milk'. Similarly, enter the remaining data.

TYPES OF DATA
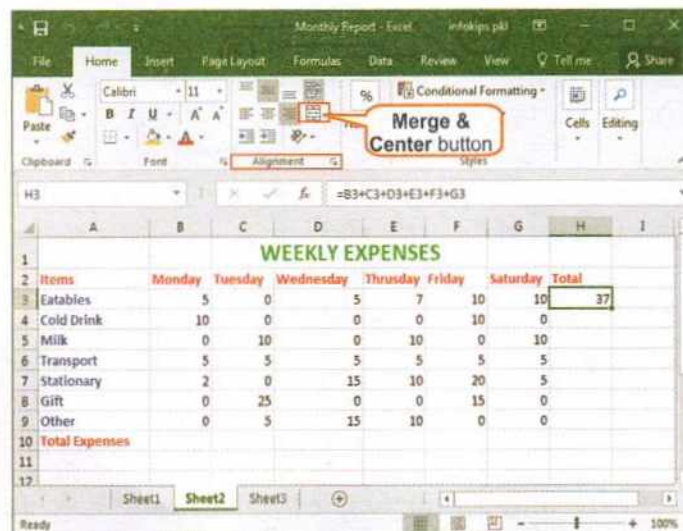
Three types of data can be entered in a Microsoft Excel worksheet. They are as follows:

➤ Numbers   ➤ Text   ➤ Formulae

NUMBERS

Numbers are values that consist of numerals from 0 to 9 and characters, like +, -, !, @, $, %, ^, &, etc. They can be used in calculations. In addition to actual numbers, Excel also stores date and time as numbers. By default, numbers are right aligned in a cell.

TEXT

Text data can contain alphabets, numbers, spaces, and special characters. Text data is not used in calculations. By default text data is left aligned in a cell. Most often, text entries are used for worksheet headings, names, and identifying columns of data.

FORMULAE
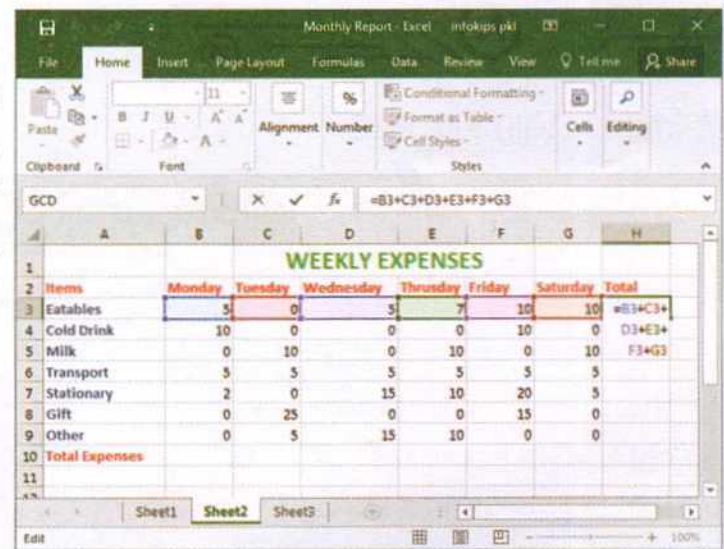
Formulae are mathematical equations involving number values, operators, and cell addresses used for performing calculations on a worksheet. Formulae can range from basic mathematical operations to complex calculations. Formulae begin with an equal to (=) sign.

PERFORMING CALCULATIONS

Excel has a powerful feature to perform calculations on the data. We can perform addition, subtraction, multiplication, and division of numbers, either using formulae or using functions. The result of the calculation is displayed in the cell where the formula is entered.

Example To calculate the total expense in H3, type = B3 + C3 + D3 + E3 + F3 + G3 and press the Enter key. The sum of the values in cells B3 to G3 is calculated and displayed in the cell H3.

Figure 8.4: Applying Formula

➤ We can use either upper–or lower–case letters while entering the cell address in a formula.

➤ Excel also provides a quicker and easier way of performing calculations. Click on the **AutoSum** button Σ present either on the **Formulae** tab or the **Home** tab. Excel suggests a range, which we can either accept or select a different range.

➤ To make use of the AutoSum option, move the cell pointer to cell H4. Click on the **AutoSum** button. Excel suggests the range B4 : G4. Accept the range by pressing the **Enter** key. The sum of the values

in cells B4 to G4 is calculated and displayed in cell H4.

Excel also provides special built-in mathematical functions, such as SUM, AVERAGE, COUNT etc. Instead of typing such a long formula (= B3+C3+D3+E3+F3+G3) the SUM function can also be used to calculate the total expense. For example =SUM (B3 : G3) and press the Enter key. Similarly, we can use AVERAGE, COUNT, MAX, MIN functions.

WORKING WITH WORKSHEET

SWITCHING BETWEEN WORKSHEETS

When we add a number of worksheets, only a few of them can be seen on the screen. To switch between worksheets, use **Ctrl + Page Up** and **Ctrl + Page Down** key combination.

RENAMING A WORKSHEET

➤ To rename a worksheet, double-click on the **Sheet** tab that you want to rename. It will be highlighted. Now, type a new name and press the **Enter** key.   Or

Right click on the **Sheet** tab that is to be renamed and click on the **Rename** option.

ADDING A NEW WORKSHEET

➤ To add a new worksheet, select the sheet before which you want to place a new worksheet.

➤ Right-click on the **Sheet** tab and select the **Insert** option. The **Insert** dialog box appears with the **Worksheet** option selected. Click **OK**. You will notice that a new worksheet gets inserted before the selected worksheet.   Or

Click on the **New Sheet** icon ⊕ present next to the **Sheet** tab. A new worksheet will be added. Or Select the **Insert >Insert Sheet** option in the **Cells** group on the **Home** tab.

REMOVING A WORKSHEET

➤ Place the mouse pointer on the **worksheet** tab that you want to delete.

➤ Right-click on the **Sheet** tab and select the **Delete** option.   Or

Select the **Delete > Delete Sheet** option in the **Cells** group on the **Home** tab.

SAVING A WORKBOOK

To save a workbook, follow the given steps:

➤ Click on the **File** tab and select the **Save** option.

➤ The **Save As** pane will appear.

➤ Click on the **Browse** option. The **Save As** dialog box appears. Browse the drive and the folder, where you want to save the workbook.

> Type the file name in the **File name** text box.

> Click on the **Save** button.

> The file will be saved with the extension **.xlsx**.

> You can save your file by using the **Ctrl+S** key combination.

> You can also select **Save** button on the **Quick Access Toolbar**.

> **F12** key can also be used to save the file.
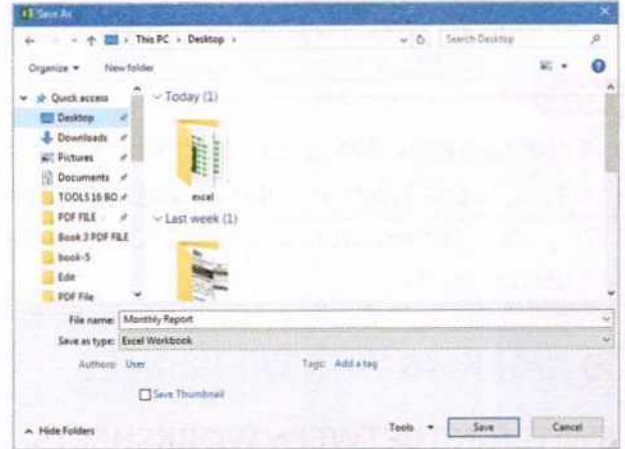
Figure 8.5: Saving a Workbook

Excel 2013

In Excel 2013, adding, removing, renaming, switching, and saving of worksheet requires the same steps as used in Excel 2016.

RECAP

> Microsoft Excel is one of the most popular spreadsheet software.

> A Workbook is like a notebook and worksheets are like the pages of a notebook.

> An Excel workbook displays a single worksheet by default with the name Sheet1.

> Three types of data that can be entered in a worksheet are Numbers, Text, and Formulae.

> Formulae are mathematical equations involving number values and operators used for performing calculation on a worksheet.

BRAIN DEVELOPER

SECTION - A

A. Fill in the blanks.

1. By default, a workbook contains a .... worksheet.

2. The .... button places the content in the centre of the cells across a number of columns/rows.

3. The .... bar shows the data and formulae entered in an active cell.

4. A worksheet becomes active by clicking on the .... tab.

5. Name Box is present above the .... heading.

HINTS

- Column
- Single
- Sheet
- Merge & Center
- Formula

B. State True or False.

1. Microsoft Excel is the most suited program for documentation.

2. A workbook can contain any number of worksheets according to a user's need.

3. Letters A to Z, AA to AZ are the row headings.

4. Status bar includes the name of the currently selected command or current activity.

5. F12 key can be used to save the Excel file.

C. Application-based questions.

1. Pallavi's class teacher asked her to create a worksheet displaying the time table of the class. She also asked her to save it with the name of her choice and further rename the worksheet by specifying the name 'Time Table'. Suggest the method to rename the worksheet.

....

2. Rohit's father gave him Rs 500 for his pocket expense. He asked him to maintain the expenses in an Excel sheet and show it at the end of the month. Which option should he use to calculate the total expenses and find the amount left with him?

....

SECTION - B

A. Multiple-choice questions.

1. In Microsoft Excel, the .... button is used to perform addition of a range in a cell.

   a. Sum   b. AutoSum   c. Addition

2. By default, the text data is .... aligned in a cell.

   a. Left   b. Center   c. Right

3. In a worksheet, there are .... rows.

   a. 16384   b. 104850   c. 1048576

4. The .... box shows the address of an active cell.

   a. Cell   b. Name   c. Formula

5. A formula starts with an .... sign.

   a. Equal to (=)   b. Plus (+)   c. Minus (-)

B. Answer the following questions.

1. Write down any two features of Microsoft Excel.

....

....

....

2. Differentiate between a Workbook and a Worksheet.

....

....

....

3. What is a cell? How many characters can a cell contain?

....

....

4. How many types of data can be entered in an Excel sheet? Explain each type briefly.

....

....

....

ACTIVITY SECTION

LAB SESSION   **Perfection Through Practice**

> Open **Microsoft Excel** application. Follow these steps to create the given datasheet.
> Click on the cell D2 and type 'Progress Report'. Select the cells A2 to G2 and click on the **Merge & Center** button on the **Alignment** group. Click the cell A4, type 'R.No'.
> The text appears on both places, i.e., in the cell and Formula Bar.
> The Status bar displays 'Enter' when you are writing, and 'Ready' when the cell is active.

➤ Click on the cell B4 and type 'NAME' in it. Note that the reference displayed in the Name Box gets changed from A4 to B4.

➤ Similarly, type the rest of the headings as shown in the figure.

➤ Now, select all the headings and centre align them.

➤ Click on the cell A5 and type 101.

➤ Press the Down arrow key and type 102 in cell A6.

	A	B	C	D	E	F	G
1							
2			PROGRESS REPORT				
3							
4	R.NO	NAME	HINDI	ENGLISH	MATH	TOTAL	PER
5	101	Anju	75	78	80		
6	102	Manju	65	70	76		
7	103	Ranjana	80	85	90		
8	104	Kirti	71	80	65		
9	105	Hemant	82	78	69		
10	106	Kunal	94	86	90		
11	107	Ankita	87	67	97		
12	108	Askash	85	76	82		
13	109	Shruti	63	89	78		
14	110	Adarsh	88	75	65		

➤ Similarly, fill the rest of the data in this column as well as in other columns as given in the figure.

➤ Calculate the total by placing the cell pointer in F5 and typing the formula=C5+D5+E5. Press Enter.

➤ Now, calculate the 'Per' (percentage) by placing the pointer in G5 and then typing = F5/3. Press Enter.

➤ Move the cell pointer to F6. Click on the **AutoSum** button. Excel will specify the range. Press Enter.

➤ Similarly, calculate the Total and Percentage of other students by applying **Copy** and **Paste** options present on the **Home** tab.

➤ Save the workbook with the name 'Progress Report'.

GROUP DISCUSSION   For Concept Clarity

Divide the class into two groups and discuss the following topic:
➤ **Types of Data in Worksheet**

PROJECT WORK   Using Creativity

Help your mother in maintaining the household expenses using Excel 2016. Create an Excel sheet, include all the necessary columns, and calculate the expenses by using the **AutoSum** feature.

ONLINE LINK   Looking For More

To know more about Microsoft Excel, visit the website:
https://support.office.com/en-use/article/Excel-2016-trainin-11af2a19-c46d-4b53-916d-f1597ba2b2ae

INTERNET AND E-MAIL

Internet is one of the best technologies gifted to mankind. It has brought the entire world closer. The term "internet" stands for 'International Network'. It is the largest computer network in the world, connecting millions of computers. A network is a group of two or more computer systems linked together to form a global network. These computers are connected through telephone wires, modem, satellite links, or other means enabling them to share information amongst each other.

The invention of the internet has transformed our living. It has revolutionised the whole world and made computers the most effective communication tools. Communication has given rapid growth to business worldwide. The internet is a constantly evolving tool that not only contains huge variety of information, but also provides new ways of interacting and connecting with people.

INTERNET AND ITS USES

NEWS AND INFORMATION

The internet provides facility to read different newspapers online and get the information regarding the various topics of our interest, such as politics, sports, education, etc. It also keeps us updated with the current events.

ART AND ENTERTAINMENT

By using the internet one can watch movies, listen to songs, play games and puzzles, read jokes, stories, and books, online. It also allows us to download and purchase various such software.

ONLINE SHOPPING

We can purchase various items, like books, clothes, electronic goods, etc., from different e-shops around the world, without actually going there.

MAILING LETTERS

Electronic mail is the most popular feature of the internet. It allows us to send and receive messages in real time. We can also attach pictures, videos, and sounds to an e-mail.

HEALTH AND FITNESS

With internet, one can find information on health and fitness. One can also search for remedies and precautions for different diseases.

TOURISM AND TRAVEL

The internet provides facility for online booking of hotels, railway tickets, air tickets, etc., all over the world and around the clock.

CHATTING

This feature allows us to exchange text messages instantly with another person on the internet.

BANKING OPERATIONS

Using internet/e-banking services, one can perform all banking operations from anywhere, without visiting the bank.

VIDEO CONFERENCING

Through video conferencing, you can communicate with another person, both verbally and visually, even from the locations that are geographically apart. For video conferencing, the communicating parties need to have web cameras.

⊗ REQUIREMENTS FOR CONNECTING TO THE INTERNET

To connect your computer with the internet, you need a modem, telephone line and an internet connection.

MODEM

MODEM stands for MOdulator DEModulator. It is a device that allows a computer to send or receive information through telephone lines by converting digital data into an analog signal, used on telephone lines. The modulator converts digital information of a computer to analog mode at the transmitting end and demodulator further converts back the analog signals to digital at the receiving end. Modems can be classified as:

Internal Modem: It is a device that is already installed in the computer. It is in the form of a card that is inserted into one of the slots on the main board.

External Modem: It is a modem that is installed outside the CPU. It is in the form of a box that is normally connected to the USB port of a computer. This type of modem has indicator lights that display the status of

modem. The speed of a modem is measured in bps and kbps (Kilo bits Per Second). Although a modem can have a maximum speed of 56 Kbps but if the telephone line quality is not good, it will not be able to work with its maximum speed.

PC Card Modem: It is specifically designed for laptops and handheld computers. It is similar to the size of a credit card and fits into the PC Card slot on notebook and handheld computers. This modem requires no cable other than the telephone line connection. One can remove this modem when it is not needed. Except for its size, the PC Card modem is like the combination of external and internal modems. This card is powered by a computer.

> **NOTE**
>
> Nowadays, it is not necessary to have telephone lines for setting the internet connection. It can be replaced by **Wireless Router**, that is connected to the modem. The wireless router allows you to connect your internet connection with any wireless device, such as a laptop, smartphone, or iPad within the home network. It takes the information from the modem and delivers it to your computer.

TELEPHONE LINE

A telephone line is a medium that is used to connect the computer with an internet Service Provider (ISP).

INTERNET CONNECTION

An internet connection is a service, provided by an internet Service Provider (ISP), in exchange for a fee. You will not be able to access the internet unless you subscribe for a connection with any ISP. Some of the most popular ISPs are:

- BSNL
- Reliance
- Airtel
- Sify
- Idea Cellular
- Vodafone

Types of Internet Connection

Several types of internet connections exist that enable us to connect with the internet.

Dial-up Connection

A dial-up connection requires the users to link their phone line to a computer, in order to access the internet. This particular type of connection does not allow the users to make or receive phone calls through their home phone service while using the internet. It is a slow connection.

Broadband Connection

As the term suggests, this connection uses wide bandwidth, which provides high-speed internet access through various transmission mediums. It is significantly faster than a dial-up connection. By using the broadband, you can share videos, download music, programmes, or photos within no time. Unlike a dial-up connection, a broadband connection does not disrupt your phone line, so you are free

to make and receive calls while online.

Cable TV Connection

This type of connection is provided through cable TV lines. It uses a cable modem that provides extremely fast access to the internet.

Satellite

In areas where broadband facility is not yet available, satellite connections are used. This requires a satellite dish to be installed in order to connect to the satellite.

Digital Subscriber Line (DSL)

A DSL uses 2-wire copper telephone line. It allows you to make calls even when you are connected to the internet. It is a form of broadband connection where you are required to pay a monthly fee to an ISP for accessing the internet.

Wireless

Wireless connection makes use of radio frequency to connect to the internet and offers great speed. It can be accessed from any location that comes under the network coverage area. It requires a Wi-Fi modem to be connected to your computer.

Mobile Internet

Mobile internet allows a user to access the internet over a smartphone using the network provided by the phone service provider. This technology provides high speed wireless internet access. The speed generally varies between 2G, 3G, and 4G.

Hotspots

Hotspots are sites that provide the wireless internet access over short distances (approximately 20 metres). It uses Wi-Fi technology and allows the users to connect to the internet through radio waves. Hotspots can be phone-based, commercial, or free to the public and found at places such as airports, universities, cafes, and hotels.

⧁ BROWSING THE INTERNET AND USING LINKS

Exploring the World Wide Web by following one link to another, without a planned search strategy, is called **Browsing** or **Surfing** the internet.

A link can be a highlighted text, a button, or an image. When we move the cursor over a link, the cursor changes to hand symbol shaped pointer. Clicking the link takes us to a web page in the website or different website.

⤳ SEARCH ENGINES

What will you do if you have to find a particular chapter in a book? You will see the index, find out the page number, and then directly open that page. Similarly, to look for any information on the internet, search engines can be used.

A search engine is a software that searches various web pages on the World Wide Web for a particular information. It requires a user to enter a keyword related to the information to be searched and displays the search results as a list of links to the pages on which the keywords are found. Examples of search engine are:

Figure 9.1: **Google Search Engine**

> **GOOGLE** : http://www.google.com   > **BING** : http://www.bing.com

> **YAHOO** : http://www.yahoo.com

Figure 9.2: **Search Result**

To find information using the Search Engine

> Connect to the internet and use the desired browser. Open any search engine, e.g., **Google**.

> Type a few key words related to the information that you want to search, for example, 'Cartoon network', and click on the **Search** button.

> It will display a list of websites, which have the relevant information.

> Read the information provided and click on the link that you consider the most appropriate. The website will open.
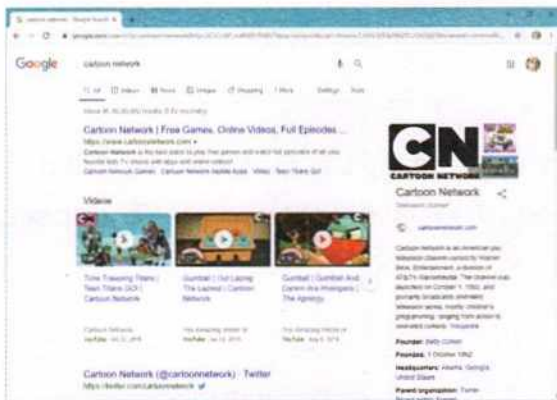
⤳ E-MAIL

E-Mail stands for **Electronic Mail**. It is a facility on the internet to send and receive messages anywhere around the world, in real time. It works like conventional correspondence, but is instant and convenient. The best part of e-mail is that a single mail can be sent to a number of persons at a time. We can attach photos, videos, or important data along with our message. These extra files are called **attachments**.
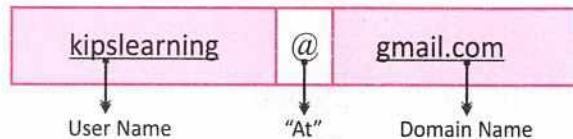
E-MAIL ACCOUNT

In order to use the e-mail facility on the internet, first we have to create our personal e-mail account. We have to select a username (e-mail address) and provide a secret code (password) along with our particulars, like Name, Address, Date of Birth, etc.

There are many websites on the internet that provide us with the facility of free e-mail accounts. The popular sites are: www.gmail.com, www.yahoo.co.in, and www.rediffmail.com.

WHAT IS AN E-MAIL ADDRESS?

An e-mail address consists of a username and domain name. A user name is the name of a person's account by which the server identifies him on the website. Whereas, a domain name is a unique name that identifies a website on the web. Whenever we create an e-mail account, we get an e-mail address on which people send their mails. Every e-mail account has a unique e-mail address, which means that no two individuals in the world can have the same e-mail address.

Figure 9.3: Login to Gmail Account

kipslearning	@	gmail.com
User Name	"At"	Domain Name

CREATING AN E-MAIL ACCOUNT

Let us understand how to create an e-mail account and get our e-mail address:

➤ Connect to the internet. Open the website **www.gmail.com**.

➤ Click on the Create account link and proceed to the next page.

➤ A registration form will appear. Fill the registration form, choose a username and password.

➤ Accept the agreement. An e-mail account gets created if all the entries have been filled properly.

After creating an e-mail account, it can be used to send and receive e-mails. To use the e-mail account, one must login with the username and the password.
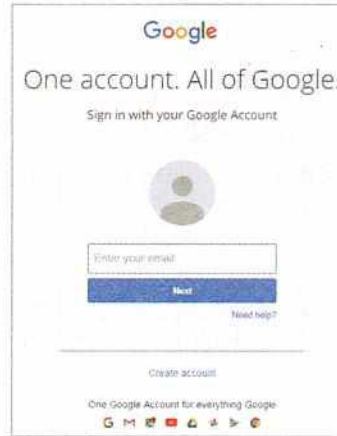
Figure 9.4: Creating an E-mail Account

Figure 9.5: Inbox of Gmail

INBOX

It displays information about all the received mails. Each message header displays the sender's name, subject line, time, and date when the mail is received, and sometimes the size of the message too. To read any mail, click on it. The mail will be displayed in a new window.

COMPOSE / WRITE MAIL

To write a mail, one has to click on the Compose option (or any other similar option provided by the website). It will open a new window with the following components:

To

Here, we can type the e-mail address of the person, to whom we want to send the e-mail.

Cc

Cc stands for Carbon Copy. In this field, one can specify the addresses of the persons to whom one wants to send a copy of the mail. The e-mail addresses mentioned in this field are visible to all the recipients of the mail.

Bcc

Bcc stands for Blind Carbon Copy. It is also used to send a copy of the mail to several people, but the e-mail addresses mentioned in this field are not visible to other recipients of the mail.

Subject

It is a brief description of the mail, which gives an idea about the content of the message.

Message

You can type the message just like a normal letter with greetings, one or more paragraphs, and your name at the bottom. You can also format the text using the available features.

Figure 9.6: Sending an E-mail

SENDING E-MAIL

After composing an e-mail, click on the Send button. The mail will be sent to its recipient/recipients.

≫ ATTACHING A FILE

E-mail provides the facility to attach files for high speed delivery, anywhere in the world. Attaching a file to an e-mail is an easy way to send important documents or files, which can be photographs, videos, music, or text. To attach a file to an e-mail, follow these steps:

➤ Click on the **Attach a file** icon 📎 on the toolbar at the bottom of the **Compose** window.

➤ The **Open** dialog box will appear.

➤ Browse through your files and select the file you would like to attach.

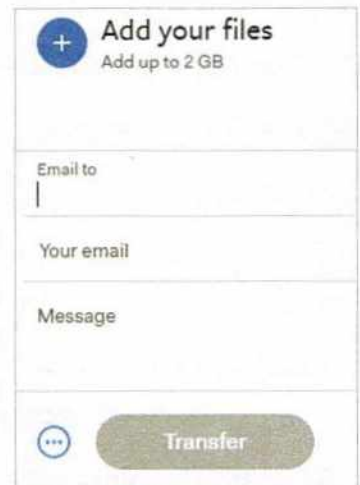➤ Click on the **Open** button. The file gets attached to your mail. Now click on the **Send** button.

Always remember, you cannot send executable files or messages larger than 25 MB as an attachment.

Nowadays, the internet provides some emerging technologies that enable us to transfer files beyond 25 MB. Some of the most popular services are WeTransfer and Sendspace.

WETRANSFER

WeTransfer is a free online file transfer service that enables you to send files upto 2 GB from one system to another. Both the sender and the recipients are required to have an e-mail address to transfer the files. The recipients receive the file through mail. Follow the given steps to transfer a file through WeTransfer:

Figure 9.7: **Transferring File using WeTransfer**

➤ Open the link **www.wetransfer.com**.

➤ Click on the **Add your files** button ⊕ and select the files from the **Open** dialog box.

➤ Add the recipient's e-mail address in the **Email to** text box.

➤ Add your e-mail address in the **Your email** text box.

➤ Type a message in the **Message** text box, if required.

➤ Click on the **Transfer** button.

The recipients will receive a mail containing the files which can be easily downloaded.

Sendspace

Sendspace is another file transfer service that helps us to share large files of upto 300 MB, free of cost. Although registration is not required, but as a registered user, you can avail its other features alongwith uploading, like tracking the files, editing the files etc. Follow the given steps:

Figure 9.8: **Transferring File using Sendspace**

➤ Open the website **sendspace.com**.

➤ If you just want to send a file, click on the **Browse** button.

➤ An **Open** dialog box appears. Either select the file and click on **Open** button or drag and drop the desired file at the required place.

➤ Enter both the sender's and receiver's e-mail address in the provided space and click on the **Upload** button.

➤ The file will be sent through e-mail as a link, which can be downloaded by the recipients.

REPLYING AND FORWARDING E-MAIL

The **Reply** option is displayed when we open any mail. It is used to reply to a received e-mail. Click on the **Reply** button, type in the text, and then click on the **Send** button.

The **Forward** option is used to send any received mail to other e-mail address(es).

ADDING A SIGNATURE TO E-MAIL

A signature is a bit of personalised text (such as contact information or a favourite quote) that is automatically inserted at the bottom of every e-mail you send. To create a signature, follow these steps:

> Click on the **Settings** icon ⚙ in the upper right corner of the window and select the **Settings** option.

> Locate the **Signature** section and enter your signature text in the box next to the **Signature** field.

> Click on the **Save Changes** button.

Go back to classic Gmail

Display density

Configure inbox

Settings

Themes

Customize address

Get add-ons

Send feedback

Help

Figure 9.9: Adding a Signature to a Mail

MANAGING CONTACTS

ADDRESS BOOK

Once we start using e-mail, our contact list also grows gradually and it is beyond the capacity of a person to remember the e-mail address of each contact. Fortunately, every e-mail program provides an address book where we can store the e-mail addresses along with contact details, such as phone number, address, birthday, etc. To add a contact follow the steps:

> Click on the **Google apps** icon ⚏ present on the top right side of the window.

> From the drop-down menu select **Contacts**.

> The **Contact preview** window appears. Click on the **Add new contact** button ➕ present at the bottom right corner of this window. The Create contact window will appear.

> Add the contact information in the respective fields of this form, and click on the **Save** button.
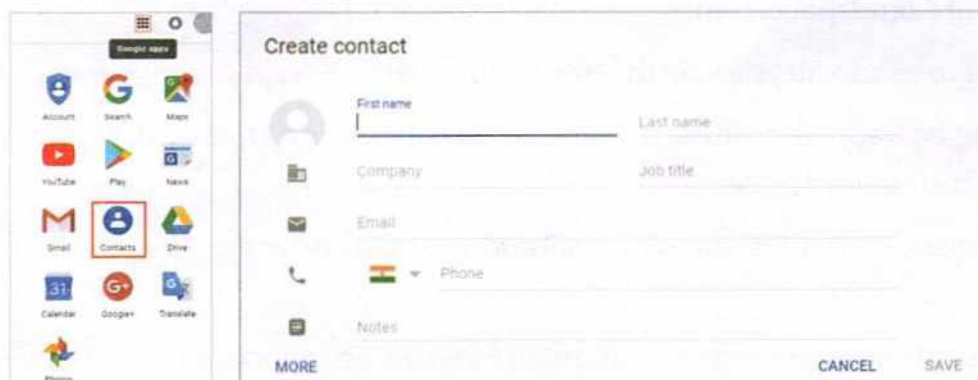
Figure 9.10: Adding New Contacts

GROUPS

We can create groups wherein we can club and store similar type of contacts, e.g., 'Family' with e-mail addresses of family members, 'Friends' with e-mail addresses of friends, 'Office' with e-mail addresses of office colleagues, etc. Creating groups of e-mail contacts is very easy.

➤ Click on the Contacts option from the **Google app**
   ▦ drop-down menu.

➤ Contact preview window appears.

➤ In the left pane, click on the **Labels** option and select **Create label** from the drop-down menu.

➤ A **Create label** dialog box appears. Enter the new group name in the provided space.
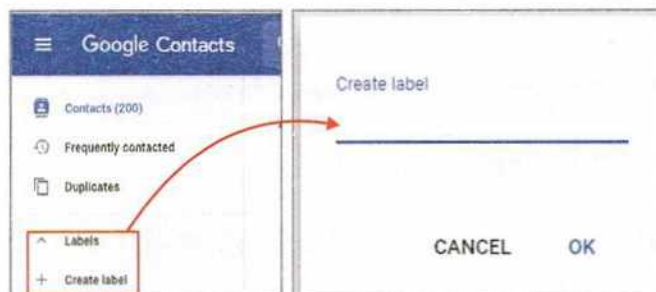

Figure 9.11: Creating Groups

➤ Click on **OK**. You will find the new group added in the left pane. To add contacts in that group, click on the **Add new contact** button ⊕ . Once a group is formed, you can easily send mails and share documents in it with multiple people at the same time.

⊗ LOGOUT/SIGN OUT

Once you have finished reading or sending the e-mails, click on the **Sign out** button. This option brings you out from your e-mail account. It is a good practice, and quite important, to sign out of your e-mail account, from the security perspective. If you are always signed-in, any miscreant can interfere with your account settings, and can also send abusive messages to the members of your contact list in your name, thus, misleading the recipients. This can land you in deep trouble.
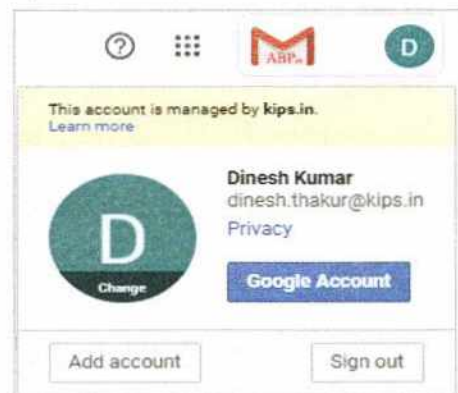
Figure 9.12: Sign out from Gmail

RECAP

➤ The internet is the largest computer network in the world, connecting millions of computers.

➤ Links are the highlighted text, buttons or images in a website.

➤ Google, Bing, and Yahoo are commonly used search engines.

➤ E-mail is a facility on the internet to send and receive messages, anywhere around the world in real time.

➤ WeTransfer is a free online file transfer service that enables you to send files of upto 2GB, from one system to another.

➤ Sendspace is a file transfer service that helps us to share large files of upto 300 MB with others, free of cost.

SECTION - A

A. Fill in the blanks.

1. The internet gives us access to .... on almost every subject.

2. The internet stands for... .

3. .... is one of the most popular search engines.

4. Bcc stands for ....

5. .... are the highlighted text, buttons, or images in a website.

HINTS
- Blind Carbon Copy
- International Network
- Information
- Links
- Google

B. State True or False.

1. Chatting allows us to exchange text messages on the internet.

2. Dial-up connection allows you to make calls even when you are connected to the internet.

3. A signature is a bit of personalised text, which is inserted at the bottom of every mail.

4. The Forward button is used to compose an e-mail.

5. Jerry Yang and David Filo are the founders of www.yahoo.com.

SECTION - B

A. Multiple-choice questions.

1. What does ISP stand for?

   a. Internet Service Provider   b. Internet Source Product   c. Internet System Provider

2. Who among the following has sent the first e-mail?

   a. Tim Berners-Lee   b. Sabeer Bhatia   c. Raymond Samuel Tomlinson

3. Which of following displays information about all the received e-mails?

   a. Compose box   b. Inbox   c. Cc field

4. Name the device that connects a computer with the telephone line.

   a. Mouse   b. Modem   c. Set Top Box

B. Answer the following question.

1. What do you mean by the internet?

   ....

   ....

   ....

2. Explain the term 'Search Engine'.

   ....

   ....

3. What do you mean by an e-mail?

   ....

   ....

   ....

4. What is the use of the Cc field in an e-mail?

   ....

   ....

5. Explain any two types of the internet connections.

   ....

   ....

   ....

   ....

6. Write a short note on:

   a. WeTransfer ....

   b. Sendspace ....

7. What is Modem? Name its types.

   ....

   ....

   ....

ACTIVITY SECTION

> Visit the site - www.google.co.in to find information on festivals like Diwali, Eid, and Christmas, and create a beautiful presentation on it. Send it to your friends using **WeTransfer** facility.

> To increase your vocabulary using Thesaurus and learn proper pronunciation, visit the site– www.merriam-webster.com (Merriam - Webster Online) and find the meaning of ten difficult words
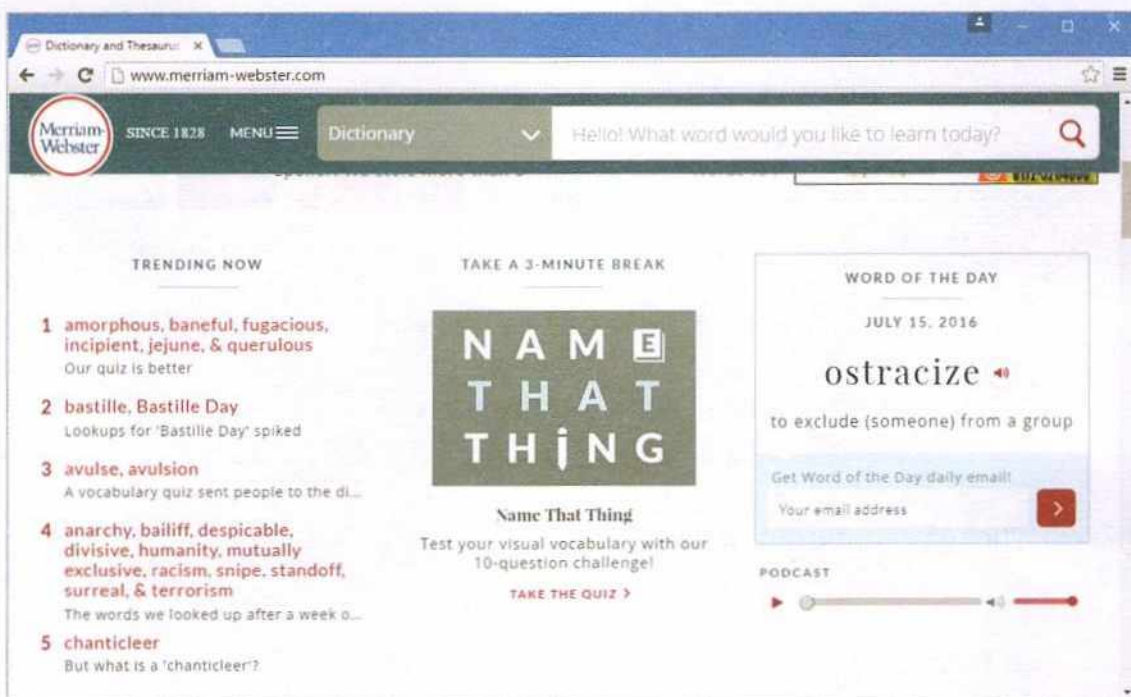
PROJECT WORK   Using Creativity

Create an e-mail account on **www.gmail.com** and send a mail to your friends describing about the place you visited in summer vacations.

ONLINE LINKS   Looking For More

To know more about e-mails, visit:
www.computerhope.com/jargon/e/email.htm

WORKSHEET

⊢ Chapters 6–9 ⊦

A. Fill in the blanks.

1. .... provides an accurate analysis of information.

2. Blocks in .... block category are round in shape.

3. .... are the pre-designed layouts that enhance the appearance of a notebook.

4. The .... bar shows the data and formulas entered in an active cell.

5. .... are the highlighted text, buttons, or images in a website.

HINTS   • Templates   • Chart   • Formula   • Links   • Operators

B. State True or False.

1. A DSL connection is a form of broadband connection that is available free of cost.

2. Scratch provides the facility to count the letters that are used to form a word.

3. F12 key can be used to save the Excel file.

4. A Modem converts digital data into analog signals.

C. Write the shortcut keys.

1. To open font dialog box ....

2. To increase the font size ....

3. To insert a new worksheet in Excel ....

D. Mention the block categories of the following blocks.

1. when ⚑ clicked ....

2. touching ▾ ? ....

3. move 10 steps ....

4. change color effect by 25 ....

5. length of world ....

A. Choose the best answer.

1. When we insert a chart, the data is displayed in a special window called ....

   a. Application   b. Datasheet   c. Report

2. .... block category is used to create variables in Scratch project.

   a. Sensing   b. Data   c. Pen

3. The .... tab contains tools that allow you to write notes in your handwriting.

   a. Draw   b. Insert   c. Review

4. In Microsoft Excel, ... button is used to perform addition of a range in a cell.

   a. Sum   b. AutoSum   c. Addition

5. Which of following displays information about all the received e-mails?

   a. Compose box   b. Inbox   c. Cc field

B. Answer in one word.

1. Which graphics tool in PowerPoint 2016 allows you to present data or information with graphics? ....

2. Name the block category which contains blocks to solve mathematical equations. ....

3. What was the name of the first electronic spreadsheet? ....

C. Answer the following questions.

1. Why do we use conditions in Programming?

   ....

2. How many types of data can be entered in an Excel sheet?

   ....

3. What is the use of a Search Engine?

   ....

WORD 2016

Project 1: Make an attractive **Tour programme** as shown here.

KULLU MANALI HOLIDAY PACKAGES
The best summer vacations awaits you.

ENJOY

| TREKKING | WATER RAFTING | PARAGLIDING |
| SKIING | HOT AIR BALLOONING | FISHING | CAMPING |

FOUR NIGHTS AND FIVE DAYS

Book Now!

Day 1	Day 2	Day 3	Day 4	Day 5
Leaving Chandigarh at 5 AM to **MANIKARAN SAHIB** Gurudwara	**MANIKARAN SAHIB** to **NAGAR**	**RAFTING** in Kullu at **Beas River**	**CAMPING** in **Solang Valley**	**SKIING** in Rohtang
Hot Water Spring without sulphur	Roerich Art Gallery	**PARAGLIDING** in Bhaikhali (9 Km from Kullu)	**Site seeing** & **Trekking** to **Anjani Mahadev**	Site seeing in **MANALI**
	Evening in KULLU			Return Journey to **CHANDIGARH**

Project 2: Draft a birthday invitation letter and use Mail Merge feature.

To

<Name>
<Address>,
<City>.
<Phone>.

Dear <Name>,

I hope this epistle of mine will find you in best of health and high spirits. I am celebrating my birthday on 21st January in Hotel Mount View, Chandigarh at 5 pm.

Name	Address	City	Phone
Manas Nanda	H.No. 645, Sector 5 C	Chandigarh	2661675
Rohan Bhatia	H.No. 1415, Sector 20	Panchkula	2518525
Samankit Gupta	H.No. 1523, Sector 10	Panchkula	2562621
Abhinav Goel	H.No. 128, Sector 18 A	Chandigarh	2626163
Rehan Khurana	H.No. 20, Sector 8 B	Chandigarh	2688088

I have got admission in St. Edwards School, Shimla and will be joining the hostel on 1st March. I sincerely wish to meet all my friends. This will be a nice occasion to meet you, have fun, and recall our sweet moments. Looking forward to see you. Do convey my regards to aunty and uncle.

Yours affectionately,

Kabir Nanda

⟫ SCRATCH

Project 1: Create a Scratch project to spread awareness about **Water Conservation**. Use your creativity to make an interesting project.
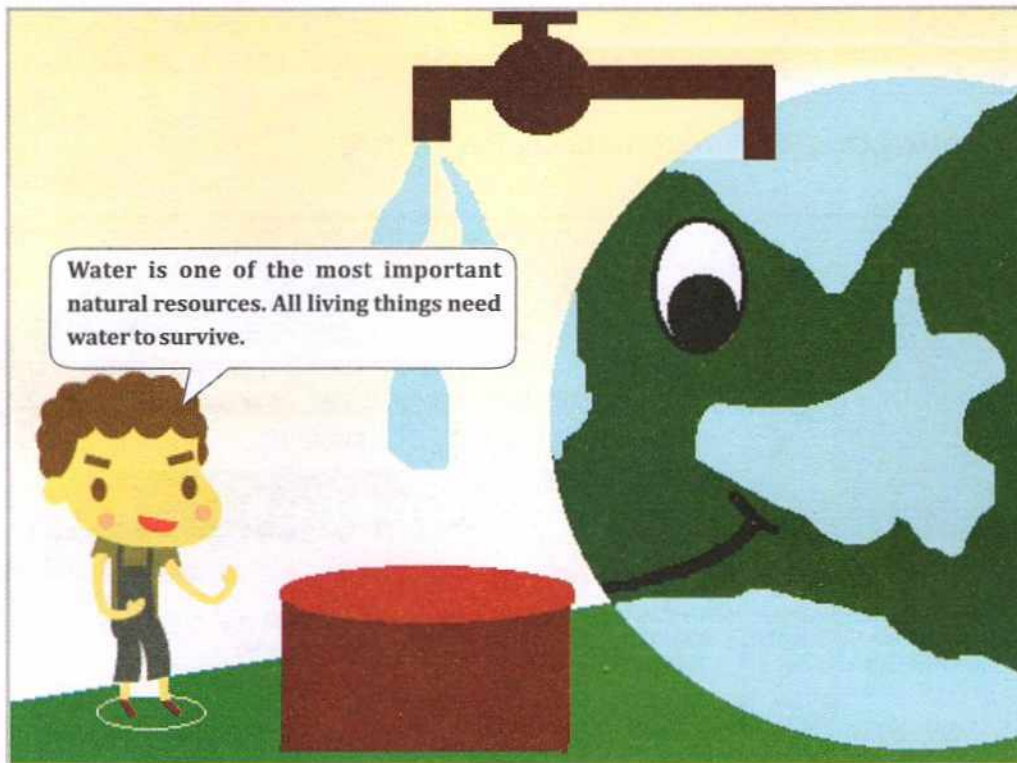
Add the points given below in your project and make the Sprite say them one by one along with changing background. One example is shown above.

> Turn off the tap after using water.

> Store rainwater in tanks, drums, etc.

> Do not waste water while brushing teeth and washing utensils.

Project 2: Create a Scratch project to spread awareness about **Recycling - Towards an Eco-friendly life.** Take guidelines from the basic ideas given here and use your creativity.

Draw the Background/Sprites using Paint Editor as shown below and select them one after another under the Costumes tab. You can either import or download the images from the Internet. Create a project using the `next costume` / `next background` block and perform the given actions on the stage:

RECYCLING
MAKING YOUR PLANET GREEN

TOWARDS AN ECO FRIENDLY LIFE
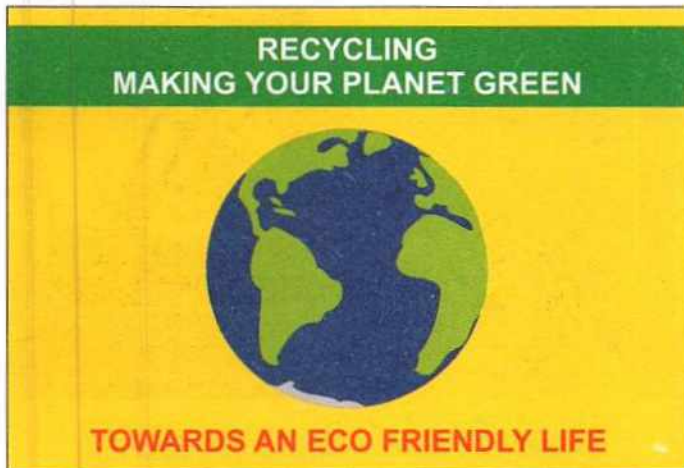
➤ Rotate the planet earth in clockwise direction.

➤ Make changes in the background colour.

Say No To Plastic Bag

Use Paper Bag

➤ First display the plastic bag and rotate it at 360°degrees.

➤ Now hide the plastic bag and display a paper bag.

GLASS AND ALUMINIUM can be RECYCLED

Glass

Aluminium

➤ Make the given Sprites appear one after another.

➤ Add text to the background 'GLASS AND ALUMINIUM can be RECYCLED'.

REDUCE REUSE RECYCLE

➤ Add this sprite on the stage and rotate it in clockwise/anticlockwise direction.

➤ Change the colour of the logo using the `change color effect by 25` block.

Project 1: Create a colourful presentation on the theme **Save Tiger**. Use your creativity and add more slides in this project.

1

TIGER

KiPS Educational Group

2

We are Fading

KiPS Educational Group

3

We are only 2500 in numbers

KiPS Educational Group

4

Tiger sightings have become quite rare these days in India, reason being that they possess numerous medicinal and magical properties for which they are killed.

Efforts are continuously made to preserve these magnificent predators from extinction.

Project Tiger Scheme is one of them. It has been under implementation since 1973 as a Centrally Sponsored Scheme of Government of India.

The aim of Project Tiger is to ensure a viable population of tigers in India for economic, aesthetic, cultural and ecological values and to preserve areas of biological importance as natural heritage.

KiPS Educational Group

5

FACT FILE

+ There are 49 tiger reserves in India, which are governed by Project Tiger and administered by the National Tiger Conservation Authority.
+ In 2006 there were 1411 tigers which increased to 1706 in 2011 and 2,226 in 2014. According to latest official count, the number has increase up to 2967 in 2018.

KiPS Educational Group

6

STEPS TO STOP
the declining population of tigers

- Create awareness
- Stop poaching and don't encourage poachers
- Severe punishment for poachers
- Ban the goods made of tiger skin
- Protect forests
- Support accredited zoos and wildlife sanctuaries
- Donate money to tiger conservation organisations

KiPS Educational Group

Project 2: Create an informative presentation on **Save Trees**. Take guidelines from the basic ideas given here. Use your creativity and imaginative skills.

1

TREES ARE OUR FRIENDS

2

Trees make our surroundings beautiful and help in keeping the environment pollution free.

3

Conserve the Existing **Greenery**

4

PLANT MORE TREES

for better living conditions

5

VAN MAHOTSAVA

Van Mahotsava is a festival of Planting trees. It is celebrated in the 1st week of July. It is a symbol of **Green Revolution**.

6

Save Trees

Save Mankind
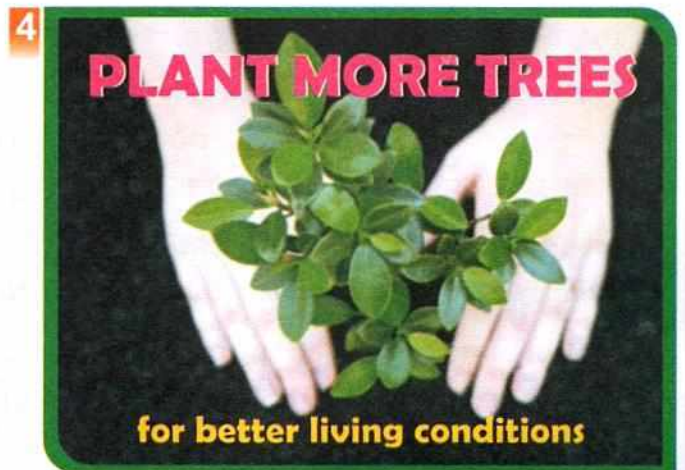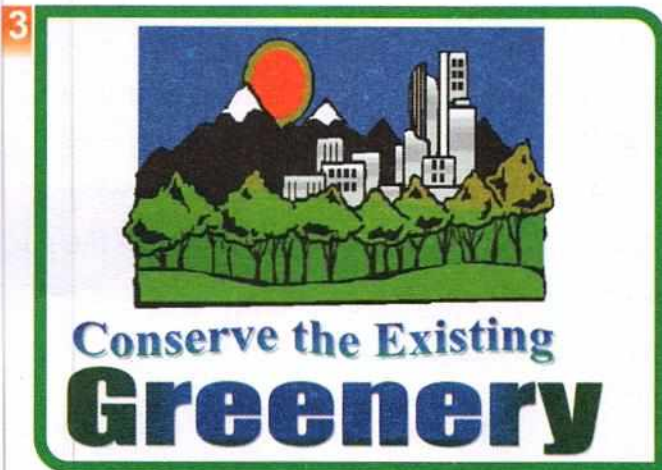
ONENOTE

Microsoft OneNote is a digital notebook that is a part of the Microsoft Office Suite. It helps in making notes either hand written or typed and creates a single place to store all your notes and information. It provides the flexibility to assemble and organize text, images, audio and video clippings together, at one location on your computer.

❯❯ FEATURES

> **Integration with other apps:** Using OneNote, you have the advantage of integration with other apps and services too.

> **Take notes right on the web:** With Microsoft Edge (the new browser for Windows 10), you can use the pen with your touch screen device or mouse to write on the web. After you take notes, or highlight on a webpage, you can share your handiwork to OneNote.

> **Send contents to yourself in email:** With *me@onenote.com*, you can send contents from your inbox, right to OneNote. It is a wonderful feature to store important contents so that you can find them quickly later on.

> **Insert Video and audio:** You can insert videos from Office Mix, YouTube and Vimeo into a page in OneNote. You can even incorporate audio notes, pictures, and clip the web directly to OneNote by using the OneNote Web Clipper.

> **Insert file from other applications:** OneNote provides the facility to insert an entire file such as Excel spreadsheet, a presentation or a word document into your notebook.

> **Capture images on your phone with Office Lens:** Office Lens is a phone app. It is an amazing built-in feature of OneNote to capture notes from white boards, menus, drawings, sketches, images or anything with a lot of text.

> **Built-in Search Facility:** OneNote provides an incredible built-in search facility wherein you don't have to keep your notebook aside. You can search for topic-related images, audio, video without opening a browser. Even you can use instant search to find anything you have created or saved in OneNote.

> **Sharing and Collaboration:** You can share your notebook with multiple people in real time and can collaborate on it at the same time. The changes that others make get reflected in real time. If you ever need to share a snapshot of your notes with someone who does not have OneNote, you can export your files in a variety of file formats.

> OneNote **saves and syncs** everything while you work, so you can concentrate on your thoughts and ideas instead of your file.

> It is available as a stand-alone application that can be used by different operating systems such as Mac, Android, iOS etc.

PARTS OF THE ONENOTE WINDOW

Quick Access Toolbar
It contains the frequently used commands.

Explore the Ribbon
Click the Ribbon tabs to see the various options and tools provided by OneNote.

Collapse the Ribbon
Click the arrow to collapse or expand the Ribbon.

Notebook Sections
Click these tabs to switch between sections in the current notebook.

Notebooks Pane
Displays the list of notebooks created in OneNote.

Instant Search
Search an item in the current page or the entire notebook at once.

Notebook Pages
These tabs display various pages in the current notebook section.

Slider to resize Notebook Window
Drag the edge to resize the window.

Force, Work and Energy
Friday, July 22, 2016   10:04 AM

Force is defined as a push or pull which changes or tries to change the state of motion of a body when acting on it. For example,
1. A vegetable vendor pushing the cart to move it
2. Pushing or pulling a door to open it,
3. Kicking a ball.
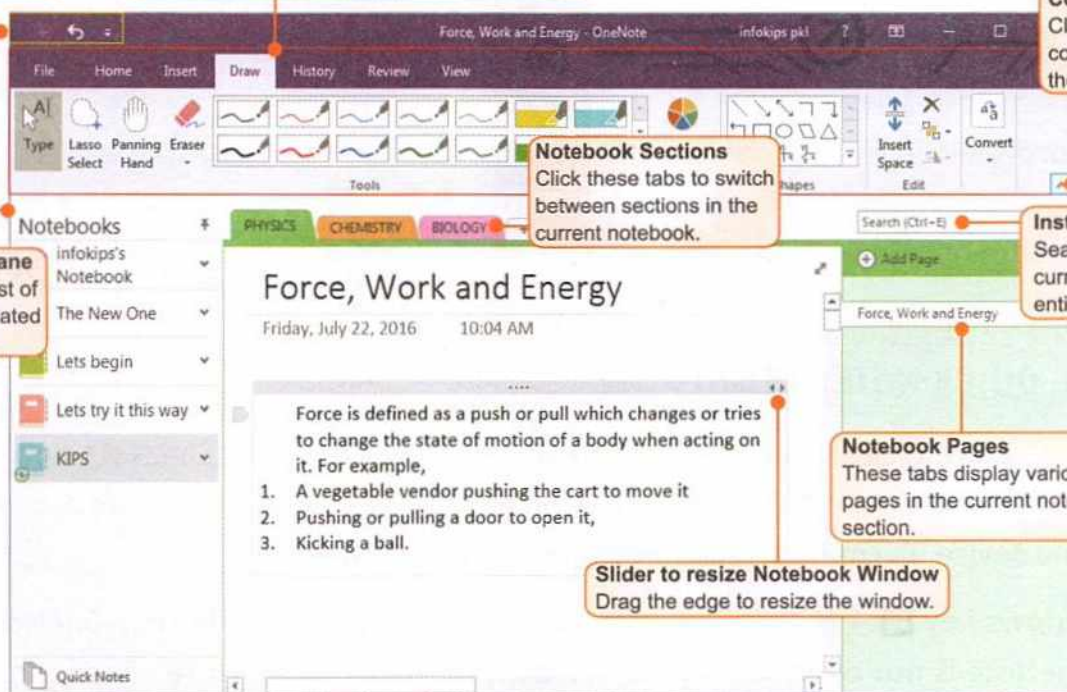
Parts of the OneNote Window

WORKING WITH ONENOTE

CREATING A NEW NOTEBOOK

To create a new notebook in OneNote:

➤ Click on **Start** > scroll down to **OneNote 2016.**

➤ The OneNote Start Screen appears which displays the default **Quick Notes** tab.

➤ Click on the **File** tab and select the **New** option.

➤ The **New Notebook** window appears in the right pane.

Creating a new Notebook

➤ Select **This PC** option and specify a name for your notebook in the **Notebook Name** textbox.

➤ Click on the **Create Notebook** button placed beneath the textbox.

➤ A new notebook opens with an untitled page.
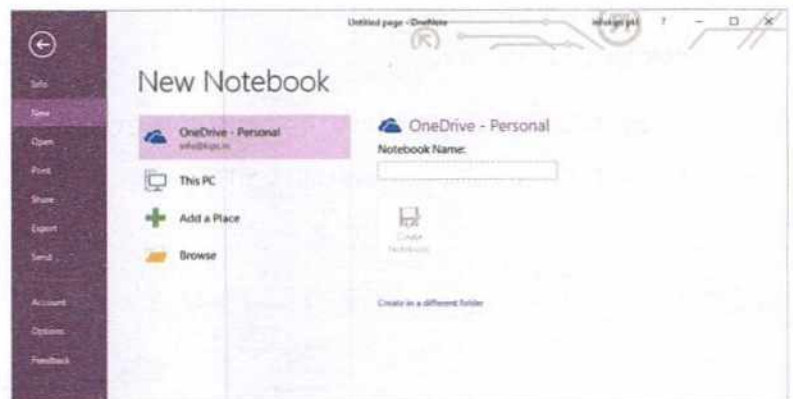
OPEN AN EXISTING NOTEBOOK

➤ Click on **Start** > scroll down to **OneNote 2016.** The OneNote Start Screen appears.

- Choose **File > Open**. Or Press **Ctrl + O**.

- Select the **Recent** option under **Open from other locations** section.

- Click on the notebook that you want to open.

You can also browse for a notebook that is saved in a different location (other than the default location) by clicking on the **Browse** option.
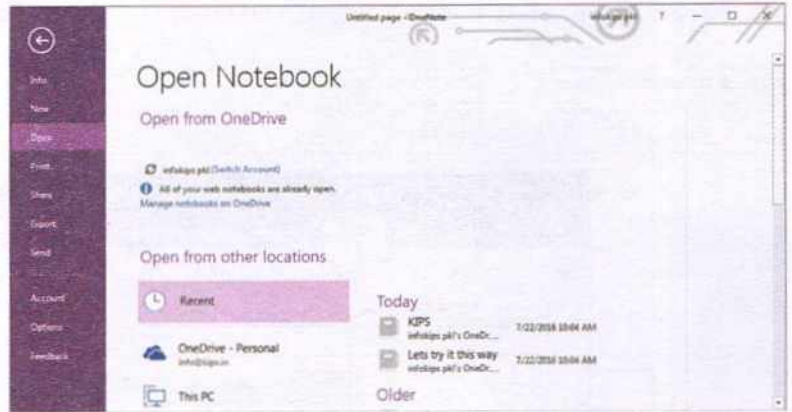
Opening an Existing Notebook

CREATING QUICK NOTES IN ONENOTE

OneNote allows you to create Quick Notes with or without opening the OneNote app. As you write down your thoughts and ideas on sticky notes, likewise Quick Notes are perfect to capture your thoughts on one device. To create a quick note, follow the given steps:

- Press **Windows key** ⊞ + **N.** It will open a small Quick Note window in your OneNote notebook. Even if OneNote is not opened on your desktop, the small Quick Note window opens on your computer.

- Type your notes in the window. Format the text using the mini toolbar, if required.

- To view the OneNote ribbon, click the three small dots ▄▄▄▄ displayed on the top of the Quick Note window.

- Click on the **Full Page View** on the **View** tab to view the quick note in full screen mode.

Creating Quick Notes

- You can also pin a quick note to your screen by clicking on the **View** tab and selecting the **Always on Top** option from the **Window** group.

- You may not be able to view the **Save** command in a Quick Note window. This is because a quick note is saved automatically under the 'Quick Notes' section located at the bottom of the Notebook pane.
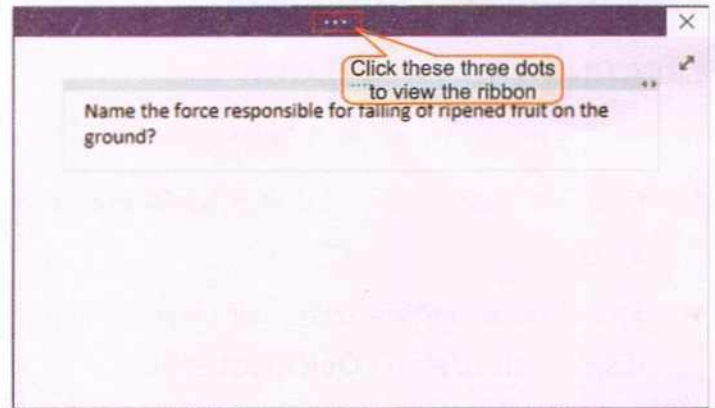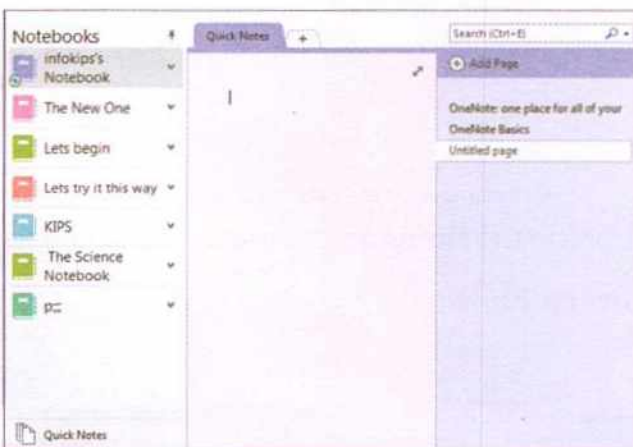
Quick Notes in Full Page View

TO ADD A SPREADSHEET

This option allows you to add an existing Excel spreadsheet or create a new one in your OneNote notebook.

➤ Click on **Insert** > **Spreadsheet** in the **Files** group.

➤ Choose **Existing Excel Spreadsheet** option from the sub menu.

➤ The **Choose Document to Insert** dialog box will appear. Browse to select the file and click on the **Insert** button.

➤ This will open the **Insert File** box, displaying the three different options to insert the spreadsheet into the notebook.
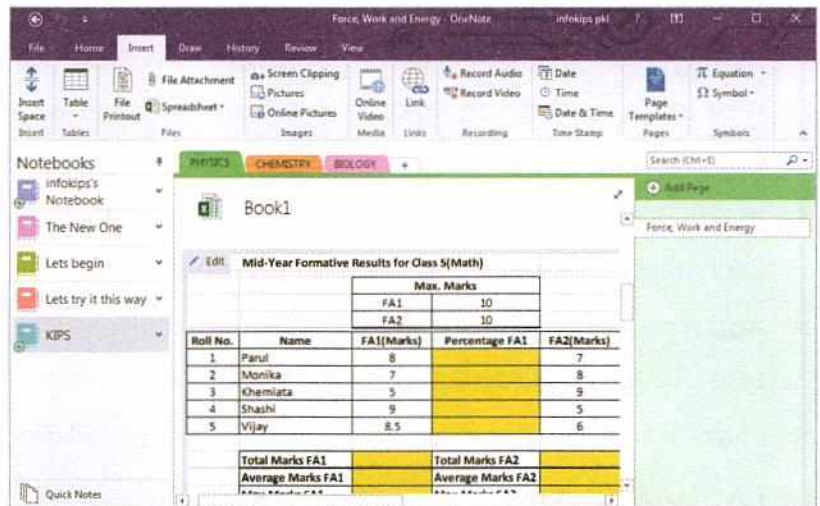
Adding an Excel Spreadsheet

Attach File: This includes the file as an attachment.

Insert Spreadsheet: This will insert the entire spreadsheet on the page.

Insert a Chart or Table: This compiles the data of the spreadsheet in the form of a Chart or a Table and displays it on the page.

▷ SHARING YOUR NOTEBOOK

OneNote allows you to share your notebook with multiple people at the same time. This sharing enables us to work in collaboration so as to include inputs from other people. While sharing, you can also specify if the other person can just view or can also make modifications in the work. The changes made by others are saved automatically and get reflected in real time. OneNote notebook can be shared through mail, via a link or as a shared notebook, in an online meeting.

NOTE

To share your notebook with other people, make sure you create the OneNote 2016 notebook on OneDrive so that others can access it. If you have already created a notebook on your computer, first move it to One Drive.

To share your OneNote notebook:

➤ Select **File** > **Share**. The **Share Notebook** window opens in the right pane.

➤ Put your notebook on OneDrive or SharePoint. To do so, click on the **Move Notebook** button in the **Share Notebook** pane. Once the process is completed, a new pane- 'Share with People' will appear.

SHARE WITH PEOPLE

- Under **Share with People**, type the names or email addresses of people you would like to share your notebook with.

- It may also display a list of relevant links of the recipients. Select the links with whom you want to share the notebook.

- In the drop-down box on the right, choose whether each person can edit or just view your notebook.

- Add a message and then click on the checkbox that says 'Require user to sign in before accessing document'.

Sharing with Multiple People

- Click on the **Share** button . The recipients will get an email invitation to open your notebook.

GET A SHARING LINK

OneNote allows you to generate a link to your notebook so that others can view or edit it. Sharing links are useful when you want to share your notebook with a large group of people or when you do not know the e-mail addresses of the other people.

- Choose **File** > **Share** > **Get a Sharing Link**.

- Now to get a View Link or Edit Link, click on the **Create Link** button located on the right side of the pane.

Getting a Sharing Link

SHARE WITH MEETING

If you wish to take notes during a meeting you may not be able to pen down everything people say. In such a case, you can take notes along with other people on a shared notebook. This type of sharing lets other people see and contribute to the shared notebook during a meeting.
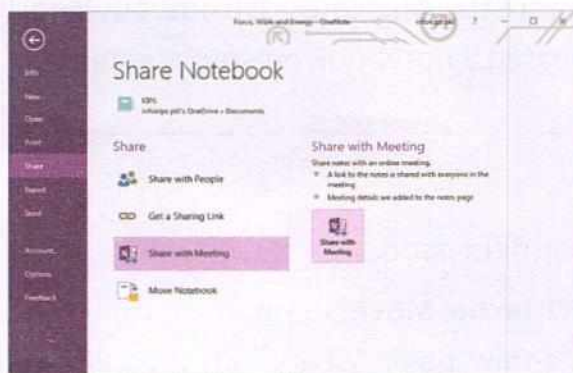
Sharing with an Online Meeting

- Choose **File** > **Share** > **Share with Meeting**.

- This will create a shared notebook that can be accessed by everyone who is a part of the online meeting.

- They can open and add meeting notes at anytime. OneNote syncs everyone's notes and the changes get reflected in real-time.

QUICK GLIMPSE OF OFFICE 365

Office 2016 suite contains applications, such as Word, Excel, PowerPoint, and Outlook which are available as a one-time purchase for use on a single PC.

Office 365 is a suite of services offered by Microsoft. It is a web based subscription service, where you have to pay a monthly or yearly fee to make use of the various services it provides. Office 365 subscription plans include, Office 365 Home, Office 365 Personal, Office 365 University, Office 365 for Mac, Office 365 for Business, etc. With each plan, you can install the 2016 versions of Word, Excel, PowerPoint, Outlook, and OneNote (Access and Publisher are also included for PC users).

With the subscription of Office 365, you get:

> The latest version of Office applications that are updated regularly, as and when a new version is released. Office 365 can be installed on up to 5 devices.

> One Drive cloud storage (free up to 1 TB) enables you to store all the documents in one place and allows you to access these documents at anytime and anywhere. Therefore, it is easier than ever to create, edit, and share the documents at one go.

> Free 60 minutes of Skype calling per month, which will help you to stay in touch with your friends around the globe.

> Office Mobile Apps to get the things done on any device - PCs, Macs, tablets (including iPad and Android tablet).

➢ KEY FEATURES OF OFFICE 365

Work smarter with the built-in Word Researcher and Editor

Researcher feature helps you to find and use the content, related to your topic, right within your Word document. It uses the Bing Knowledge Graph to extract the relevant content from the web and provides safe and credible information.

The Editor feature on the other hand provides intelligent suggestions for proof-reading and editing as you type in a document.

Find the right command in seconds with Tell Me

It's easier than ever to find the feature you need. Just type what you want to do in the intelligent "Tell me what you want to do" search box and go directly to the command you need.

Put your best foot forward with PowerPoint Designer and Morph

PowerPoint Designer is an intelligent, built-in tool that helps you to create high-quality slides in seconds. The new Morph transition effect creates cinematic motion in one click, seamlessly animating between the slides.

Keyboard, touch, or pen - it works the way you do

Touch and inking capabilities give flexible options for reviewing, editing, and presenting the views.

N OneNote

Organize and Share Your Work

OneNote is a digital notebook that helps you in making quick notes either handwritten or typed. It provides you with the flexibility to assemble and organize your notes, images, audio, and video clippings together in one location on your computer. You can share your notebook with anyone you desire and work on your projects also at the same time.

S SharePoint

Keep Projects Together

It is a platform, offering different services. You can use SharePoint to store and organize documents and collaborate with anyone in real time. You can sign-in to SharePoint from any device, like desktop or mobile phones and can use it to have access to any information.

Skype

Connect and Stay in Touch

It is the most popular application used for making voice and video calls on the Internet. Skype to Skype calls are always free but you can also use Skype to call mobile phones and landlines at affordable rates. You can also use it for instant messaging or chatting.

yammer

Connect across your Company

It is a private social network within a company or an organization that allows the team members to share information, to have group discussions, and build a body of knowledge that is instantly accessible by any co-worker at anytime and anywhere.

S Sway

Turn your Ideas into Stories

It helps in creating and sharing dynamic and interactive reports, presentations, newsletters, and personal stories. The built-in design templates help to enhance its look. It also provides you with a safe browsing tool to search relevant images, audio clips, videos, and other contents that you can drag and drop right into your creation. It is extremely easy to share a Sway with your family and friends without signing in or downloading additional software. Sway for Windows 10 is available for download in the Windows Store.

D Delve

Discover exactly what you need

Microsoft Delve, previously code-named "Oslo", helps you in searching your emails, meetings, contacts, social networks, and corporate documents stored across Office 365. It uses "machine learning" artificial intelligence to provide you with the stuff you need to see. You do not have to remember the title of a document and its location. Delve brings the right information to you proactively based on what you are working with. It shows you the documents no matter where they are stored in the cloud but you can only see the content that has been shared with you.

NATIONAL CYBER OLYMPIAD

LOGICAL REASONING

1. How many times exactly two X's occurs together?

X Y X X Y X Y Y X Y X Y Y X X Y X Y X X

(A) 5   (B) 4   (C) 2   (D) 3

2. Which of the following options replaces the question mark (?) in Fig. (X)?
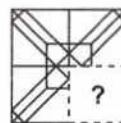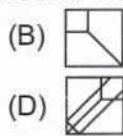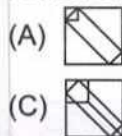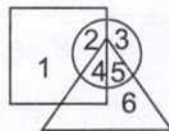
(A)   (B)

(C)   (D)

Fig. (X)

3. If "MATHEMATICS" is coded as "SCITAMEHTAM" then how will "OLYMPIAD" be coded ?

(A) DAMPOMYL   (B) OLYMDIAP   (C) DAIPMYLO   (D) IADYMPLO

4. Which number lies in the circle and square, but not in the triangle?

(A) 1
(B) 2
(C) 3
(D) 6

COMPUTERS AND INFORMATION TECHNOLOGY

5. Which of the following is NOT a Windows 7 Aero feature?

(A) Snap   (B) Peek   (C) Bump   (D) Shake

6. :KDWLVD¿UHZDOOQDQHWZRUN"

(A) It is the memory unit of a network.   (B) A network operating system.

(C) A system preventing unauthorized access to a network.

(D) It is a web browsing software.

7. Multimedia is used for many purposes like _____.

(A) Education   (B) Advertising   (C) Playing games   (D) All of these

8. Find the odd term out.

(A) Scanner   (B) Mouse   (C) OMR   (D) Printer

9. :KDWLVWKHVLJQL¿FDQFHRIVWDUOFRQSODFHGDGMDFHQWWRWKHVHQGHUQDPHLQER[[R?

(A) To mark them as spam message.

(B) To easily mark certain messages as important or to indicate that you need to reply to them later.

(C) Star marked mail will be deleted after some time automatically.

(D) Star marked mail will move to trash folder after 30 days.

10. Which of the following devices emits computer audio as audible audio?

(A) Trackball   (B) Cursor   (C) Webcam   (D) Speaker

11. Which of the following icons of MS-PowerPoint 2010 is used to insert the characters like □, ©, etc. that are not present on the keyboard?

(A) π (B)   (C)   (D) Ω

12. The small picture representing a program in Windows 7 is called _____.

(A) Icon   (B) Picture   (C) Image   (D) Drive

13. While working in MS-Paint, the option which is used to show the drawing in a small reference window is _____.

$ *ULG   % =RRPLQ   & %LWPDS   ' 7KXPEQDLO

ACHIEVERS SECTION

14. Mr. Kumar is making a presentation for his company in which he is required to include some graphics, audio and video clips. Which of the following options will help him to insert a video clip in MS-PowerPoint 2010?

(A)   (B)   (C) π (D)

15. Which of the following type of expansion cards can be inserted into a computer motherboard via expansion slot, to allow television signals to be received by a computer system?

(A)   (B)   (C)   (D)

16. Which of the following represent the correct sequence of actions for content to be copied and pasted?

(A) Select content, press the Copy button, press the Paste button, move the insertion point to where you want to insert the content.

(B) Press the Copy button, select content, move the insertion point to where you want to insert the content and press the Paste button.

(C) Select content, press the Copy button, move the insertion point to where you want to insert the content and press the Paste button.

(D) Select content, move the insertion point to where you want to insert the content, press the Copy button and press the Paste button.

17. Which of the following type of brushes is used to draw the given image in MS-Paint of Windows 7?

(A)   (B)   (C)   (D)

ANSWERS

1. (D) 2. (C) 3. (C) 4. (B) 5. (C) 6. (C) 7. (D) 8. (D) 9. (B) 10. (D) 11. (D) 12. (A) 13. (D) 14. (D) 15. (A) 16. (C) 17. (A)