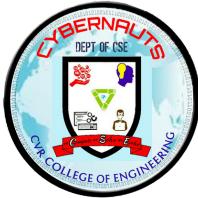




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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CYBERNAUTS

FUNDAMENTALS OF COMPUTERS AND TOOLS



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1. BASICS OF COMPUTER

Fundamentals of Computer

A **computer** is an electronic device that processes data and performs tasks according to a set of instructions (called a **program**). It takes input, processes it, and gives output.

Basic Components of a Computer

- **Input Devices** – Devices like keyboard, mouse, or microphone that help enter data.
- **Central Processing Unit (CPU)** – The "brain" of the computer that processes information.
- **Memory (RAM & Storage)** –
 - **RAM (Random Access Memory)**: Temporary memory that stores data while the computer is running.
 - **Storage (HDD/SSD)**: Permanent memory where data and software are stored.
- **Output Devices** – Devices like monitor, printer, or speakers that display results.
- **Software** – Programs and operating systems (Windows, macOS, Linux) that control the computer.

History of Computers

Computers have evolved over time from simple machines to powerful digital devices.

1. Early Calculating Devices (Before 1800s)

- **Abacus (3000 BC)**: First counting tool.
- **Pascal's Calculator (1642)**: First mechanical calculator.
- **Charles Babbage's Analytical Engine (1837)**: The first design of a programmable computer.

2. First Generation Computers (1940s-1950s)

- Used **vacuum tubes** for processing.
- Very large, slow, and expensive.
Example: **ENIAC** (first general-purpose computer).

3. Second Generation (1950s-1960s)

1. Used **transistors** instead of vacuum tubes (smaller, faster, and cheaper).

2. Example: **IBM 1401**

4. Third Generation (1960s-1970s)

- Used **integrated circuits (ICs)**, making computers even smaller and more powerful.
- Example: **IBM 360 series**

5. Fourth Generation (1970s-Present)

- Used **microprocessors** (chips with millions of transistors).
- Personal computers (PCs) became common.
- Example: **Intel 4004, Apple, IBM PCs**

6. Fifth Generation (Present & Future)

- Uses **AI (Artificial Intelligence), quantum computing, and advanced robotics.**
- Example: **Supercomputers, AI-driven devices like Siri & Alexa**



HARDWARE COMPONENTS OF A COMPUTER

A computer's hardware includes all the physical parts that make it work. The CPU (brain of the computer) processes information. RAM (memory) helps the computer run programs quickly, while storage (HDD/SSD) keeps files and data safe. Input devices like a keyboard and mouse help you give commands, and output devices like a monitor and speakers show results. The motherboard connects all parts, and the power supply gives electricity to run the computer. All these parts work together to make the computer function properly.



PRINTERS

A printer is a device that takes digital information from a computer or other devices and converts it into a physical (hard copy) format, usually on paper.

Types of Printers

Printers are mainly divided into two categories: Impact Printers and Non-Impact Printers.

1. Impact Printers

These printers use physical contact to print on paper, like a typewriter.

1. Dot Matrix Printer – Uses small pins to hit an ink ribbon and create characters on paper.

2. Line Printer – Prints a whole line at a time, used in large-scale printing.

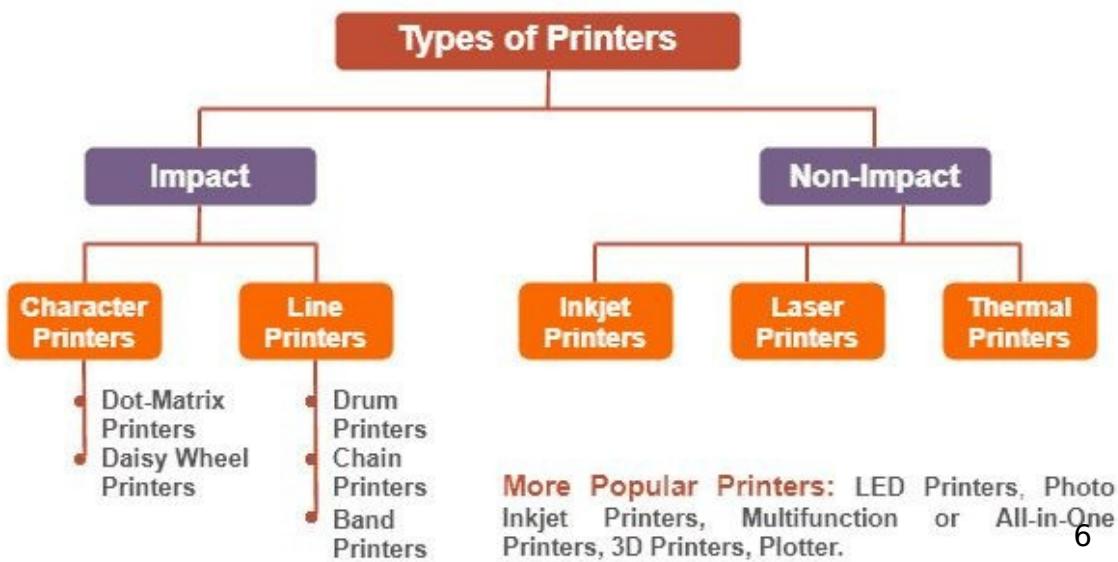
2. Non-Impact Printers

These printers do not touch the paper directly and are more modern and common.

1. Inkjet Printer – Sprays tiny ink droplets onto paper; good for home and office use.

2. Laser Printer – Uses a laser to create prints; faster and better quality, mainly used in offices.

3. Thermal Printer – Uses heat to print on special heat-sensitive paper; used in billing machines and receipts.



SOFTWARE AND IT'S COMPONENTS

Software is a set of instructions that tells a computer what to do. It is like a recipe that guides the computer to perform specific tasks. Without software, a computer is just a useless machine.

Components of Software

Software has two main components:

- 1. Programs** – These are sets of instructions written by programmers to make the computer do something. Examples include web applications, games, and mobile apps.
- 2. Data** – This includes the information that software processes, such as text, images, and numbers. For example, when you use a Student management application the information about students that is entered into the application forms data.

Types of Software Components

- **System Software** – It controls hardware and manages other software. Helps the computer work properly.
 - **Example:** Operating Systems (Windows, macOS, Linux).
- **Application Software** – Helps users perform tasks.
 - **Example:** Microsoft Word (for writing), Photoshop (for editing images), web browsers (for internet browsing).
- **Programming Software** – Helps developers create new software.
 - **Example:** Code editors (VS Code, Notepad++), compilers.
- **Middleware** – Connects different software systems so they can work together.
 - **Example:** Software that allows a website to connect to a database.

NETWORKS A **network** is a system where two or more computers or devices are connected to share information, files, and resources like the internet, printers, or storage. Networks can be wired (using cables) or wireless (using Wi-Fi).

Examples:

School Computer Lab: All computers are connected to a central server.

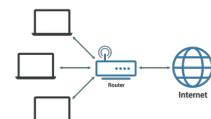
Home Wi-Fi: Phones, laptops, and smart TVs connect to the same network to access the

Internet: The biggest network that connects computers worldwide.

Computer networks are categorized based on their size, geographical coverage, and purpose. The most common types of networks are:

Types of Networks

1. LAN (Local Area Network)



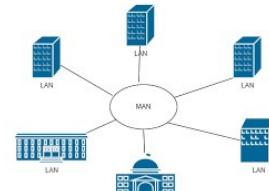
- o Small network within a home, office, or school.
- Fast and secure.

o Example: Wi-Fi at home or in a company.

2. MAN (Metropolitan Area Network)

- o Covers a city or large area.
- o Connects multiple LANs.

o Example: City-wide Wi-Fi, university networks.

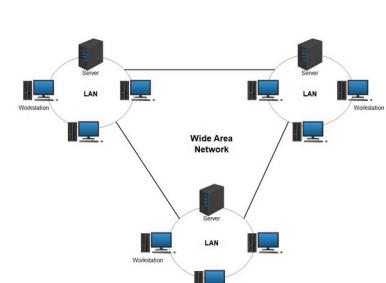


3. WAN (Wide Area Network)

- o Covers a country or the whole world.

o Connects multiple LANs and MANs.

- o Example: The Internet, banking networks.



Exercise for Practice

Fill in the Blanks:

- 1.A computer is an _____ machine.
- 2.The unit of memory in a computer is called a _____.
- 3.The device used to type on a computer is called a _____.
- 4.A monitor is an example of an _____ device.
- 5.A computer stores data in its _____.

Multiple Choice Questions (MCQs):

- 1.What is the full form of CPU?
 - a) Central Processing Unit
 - b) Computer Power Unit
 - c) Central Program Unit
 - d) Core Processing Unit
- 2.Which device displays output?
 - a) Keyboard
 - b) Mouse
 - c) Monitor
 - d) CPU
- 3.What do we use to move the cursor on a computer screen?
 - a) Keyboard
 - b) Mouse
 - c) Monitor
 - d) Printer
- 4.Which of these is **not** a storage device?
 - a) Hard Drive
 - b) CD/DVD
 - c) RAM
 - d) Speaker
- 5.What is the brain of a computer?
 - a) Monitor
 - b) Keyboard
 - c) CPU
 - d) Mouse

6.The software that manages the computer is called?

- a) Hardware
- b) Operating System
- c) Monitor
- d) Keyboard

7.The device used to print documents is called?

- a) Scanner
- b) Printer
- c) Monitor
- d) CPU

ANSWERS

Fill in the Blanks:

- | | | |
|---------------|-----------|-------------|
| 1. Electronic | 2. Byte | 3. Keyboard |
| 4. Output | 5. Memory | |

Multiple Choice Questions (MCQs):

- | | | | | | |
|------|------|------|------|------|------|
| 1. a | 2. c | 3. b | 4. d | 5. c | 6. b |
| 7. b | | | | | |

2. FILE MANAGEMENT



A file is a digital document that stores data, such as text, images, videos, or programs. A folder, on the other hand, is a container used to organize multiple files and subfolders. It does not store actual content but helps group files together for easy access and management. File management is the process of organizing, storing, and handling digital files on a computer or other devices. Just like keeping your school bag tidy helps you find books easily, managing files properly makes it simple to locate and use them. **Why is File Management Important?**

- Saves time by keeping files organized.
- Prevents loss of important documents.
- Helps keep the computer storage clean and efficient.
- Makes sharing and backing up files easier.

Types	of	Files
1.	Documents – Word files, PDFs, text files (e.g., Homework.docx, Notes.pdf).	
2.	Images – Photos, drawings, and screenshots (e.g., picture.jpg, logo.png).	
3.	Videos – Recorded clips and movies (e.g., video.mp4, animation.mov).	
4.	Audio – Music and voice recordings (e.g., song.mp3, lecture.wav).	
5.	Programs & Applications – Software and installation files (e.g., app.exe, setup.msi).	

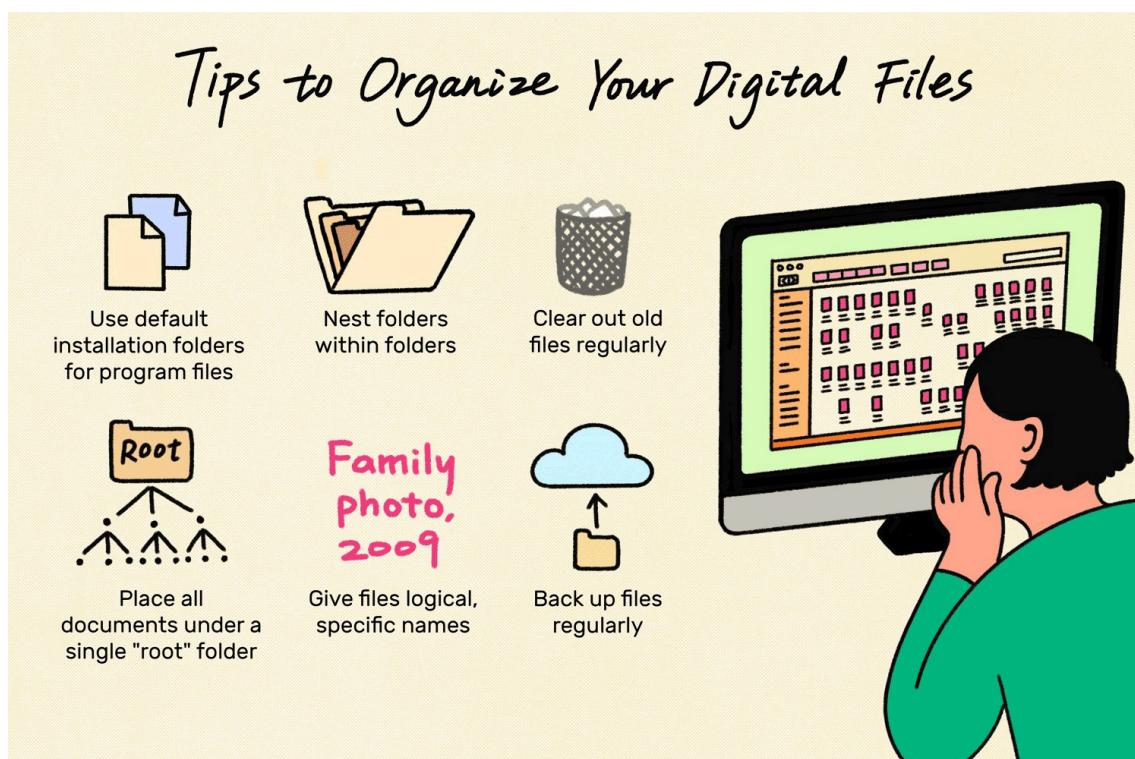
Basic File Operations

- Creating a File** – Open an application (e.g., Word), type your content, and save it.

- Renaming a File** – Right-click on the file, select "Rename," type a new name, and press Enter.
- Copying & Moving Files** – Drag and drop or use Ctrl + C (copy) and Ctrl + V (paste).
- Deleting a File** – Right-click the file and choose "Delete," or press Del on your keyboard.
- Restoring Deleted Files** – Check the Recycle Bin or Trash and restore the file if needed.

Organizing Files and Folders

- Create Folders:** Store related files in named folders (e.g., “School Projects” for assignments).
- Use Descriptive Names:** Instead of “New Document,” name it “Math_Assignment_2024.docx.”
- Sort Files by Date or Type:** Helps find the most recent work quickly.
- Use Shortcuts:** Right-click and create shortcuts for frequently used files.
- Back Up Important Files:** Save copies on USB drives, external hard drives, or cloud storage.



Exercise for Practice

Fill in the Blanks:

- 1.Files are stored in _____.
- 2.The process of arranging files in a specific order is called _____.
- 3.A _____ is used to store multiple files in one place.
- 4.The file extension for a text document is _____.
- 5.A deleted file goes to the _____ bin.
- 6.A file can be copied using the shortcut _____.
- 7.A new folder can be created by right-clicking and selecting _____.

Multiple Choice Questions (MCQs):

1.What is the purpose of file management?

- a) To delete files
- b) To organize and store files
- c) To play music
- d) To print documents

2.Which of these is a file extension?

- a) .exe
- b) .pdf
- c) .docx
- d) All of the above

3.How can you rename a file?

- a) Right-click and select "Rename"
- b) Double-click the file
- c) Press Ctrl + P
- d) Open the file

4.What is the function of the Recycle Bin?

- a) Store deleted files
- b) Open new files
- c) Edit files
- d) Copy files

5.The shortcut for pasting a file is?

- a) Ctrl + X
- b) Ctrl + V
- c) Ctrl + C
- d) Ctrl + S

6.How can you permanently delete a file?

- a) Move it to another folder
- b) Empty the Recycle Bin
- c) Rename the file
- d) Open the file

7.Which type of file can store pictures?

- a) .jpg
- b) .txt
- c) .exe
- d) .pdf

ANSWERS

Fill in the Blanks:

- | | | | |
|------------|--------------------|-------------|---------------|
| 1. Folders | 2. File Management | 3. Folder | |
| 4. .txt | 5. Recycle | 6. Ctrl + C | 7. New Folder |

Multiple Choice Questions (MCQs):

- | | | | | | |
|------|------|------|------|------|------|
| 1. b | 2. d | 3. a | 4. a | 5. b | 6. b |
| 7. a | | | | | |

3. MICROSOFT WORD

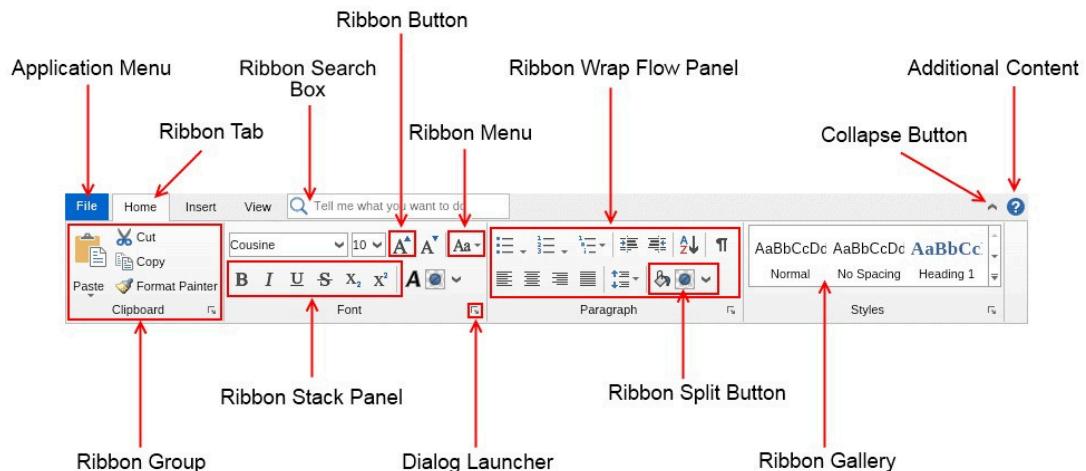


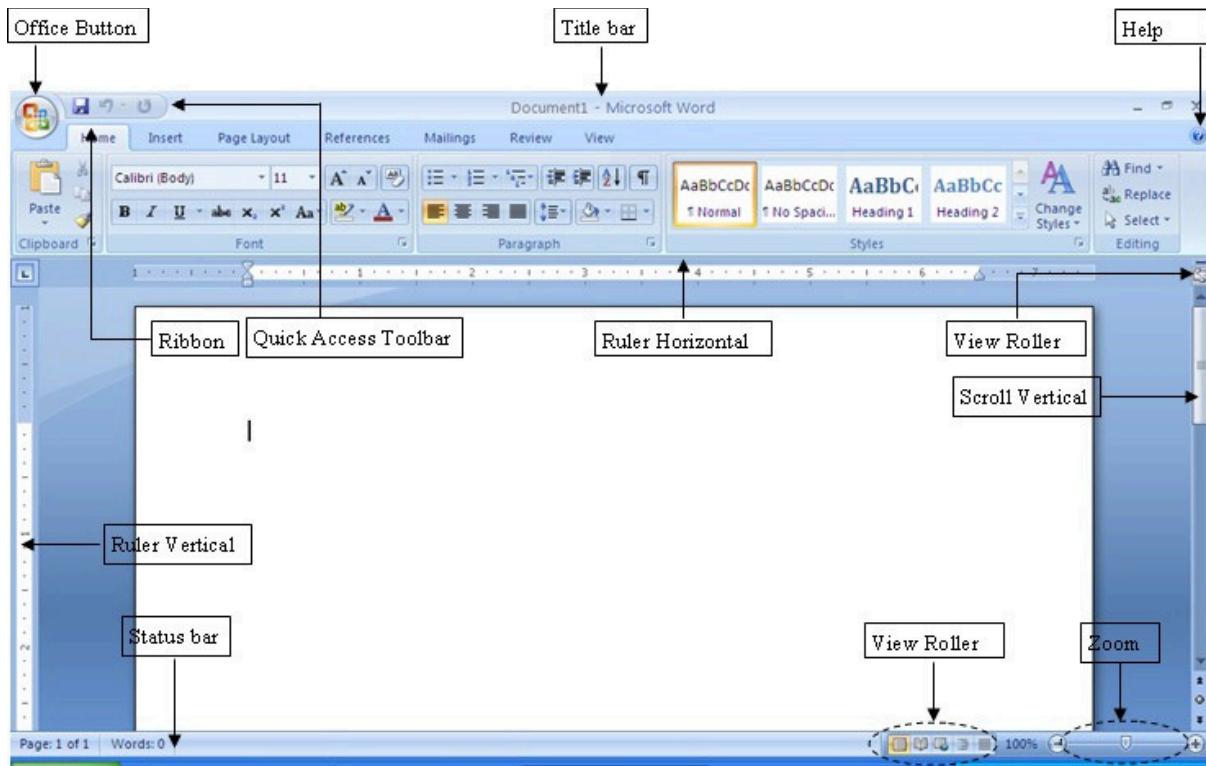
Microsoft Word is a powerful word processing software that allows users to create, edit, format, and share documents. It is widely used for writing letters, assignments, reports, and even books. With Word, users can enhance their documents with images, tables, styles, and templates.

Understanding the Word Interface

When you open Microsoft Word, you will see different sections:

- **Title Bar:** Displays the document name and program name.
- **Ribbon:** Contains multiple tabs like Home, Insert, and Layout, with formatting tools and options.
- **Toolbar:** Provides quick access to frequently used commands like save, undo, and redo.
- **Status Bar:** Shows information like the page number, word count, and zoom options
- **Document Area:** The main workspace where you type and edit your text.





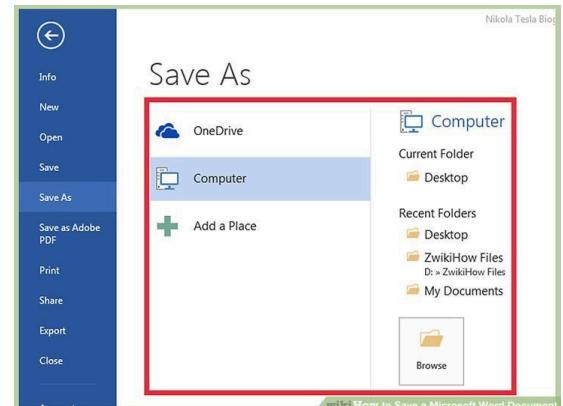
Creating and Saving a Document

1. Creating a New Document

- o Click **File > New.**
- o Select **Blank Document** or choose a template.
- o Start typing in the document area.

2. Saving a Document

- o Click **File > Save As.**
- o Choose a location (Computer or OneDrive).
- o Enter a file name and click **Save.**



3. Opening a Document

- o Click **File > Open.**
- o Browse and select your document.
- o Click **Open** to edit or view.

Formatting Text

Formatting text improves readability and appearance. You can:

- **Change Font Style and Size:** Select text, then choose a font and size from the **Home** tab.
- **Apply Bold, Italic, and Underline:** Use **B**, **I**, or **U** buttons.
- **Change Text Color:** Click on the font color option and pick a color.
- **Align Text:** Choose **Left, Center, Right, or Justify** alignment.

Paragraph Formatting

- **Line Spacing:** Adjust space between lines for better readability.
- **Indentation:** Move text inward from the left or right margin.
- **Bulleted and Numbered Lists:** Organize content using **bullets** or **numbers**.
- **Borders and Shading:** Add decorative borders or background shading to text.

Working with Page Layout

- **Margins:** Set custom margins under Layout > Margins.
- **Page Orientation:** Choose between Portrait (vertical) and Landscape (horizontal).
- **Page Breaks:** Manually split content into separate pages.
- **Columns:** Format text into multiple columns for a professional look.

1. Setting Custom Margins

Margins define the space between the content and the edge of the page.

Steps to Set Custom Margins:

1. Open **Microsoft Word** and go to the document where you want to adjust margins.
2. Click on the **Layout** tab in the Ribbon.
3. Select **Margins** from the **Page Setup** group.
4. You will see predefined margin options (Normal, Narrow, Wide, etc.).
5. To set custom margins:

o Click **Custom Margins** at the bottom.

- o A **Page Setup** dialog box appears.
- o Enter the desired values for **Top, Bottom, Left, and Right** margins.
- o Click **OK** to apply.

 **Tip:** Use **Mirror Margins** for book layouts where left and right margins mirror each other.

2. Changing Page Orientation

Page orientation determines whether your document is displayed in a **vertical (Portrait) or horizontal (Landscape) format**.

Steps to Change Page Orientation:

1. Open your document in **Microsoft Word**.
2. Click on the **Layout** tab.
3. Select **Orientation** in the **Page Setup** group.
4. Choose:
 - o **Portrait** (default, vertical layout).
 - o **Landscape** (horizontal layout, useful for tables and charts).
5. The document will adjust to the selected orientation.

 **Tip:** If you need different orientations within the same document, use **Section Breaks** before changing orientation.

3. Inserting Page Breaks

Page Breaks help move content to the next page manually.

Steps to Insert a Page Break:

1. Place the cursor where you want the new page to begin.
2. Click on the **Insert** tab.
3. Select **Page Break** from the **Pages** group.
4. The content after the cursor moves to a new page.

 **Shortcut:** Press **Ctrl + Enter** to insert a quick page break.

4. Formatting Text into Multiple Columns

Columns give your text a professional appearance, often used in newspapers, magazines, or reports.

Steps to Format Text into Columns:

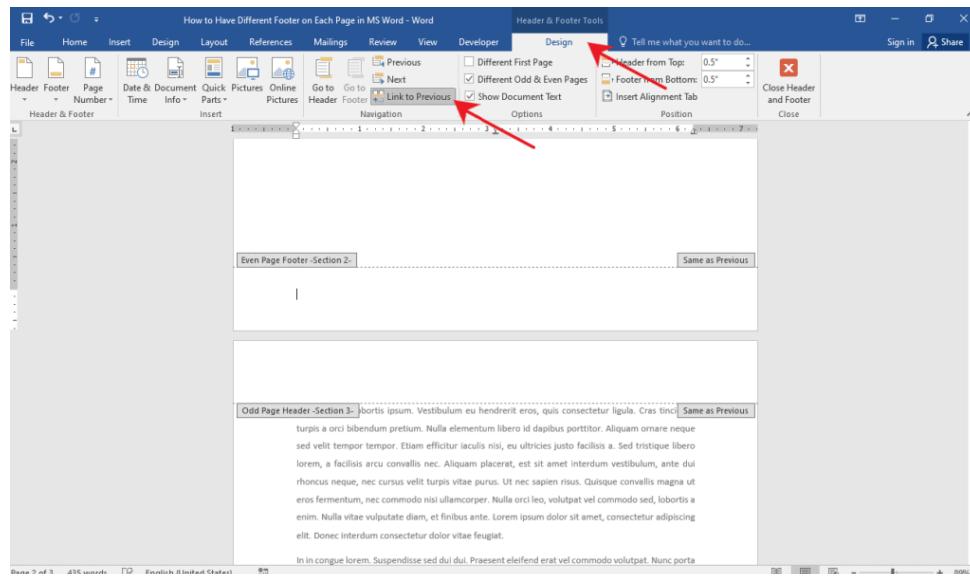
1. Select the text you want to format into columns.
2. Click on the **Layout** tab.
3. Click **Columns** in the **Page Setup** group.
4. Choose:
 - o **One Column** (default).
 - o **Two Columns** (split into two equal sections).
 - o **Three Columns** (splits into three sections).
 - o **More Columns...** for custom settings.
5. In the **More Columns** dialog box:
 - o Set the number of columns.
 - o Adjust column width and spacing.
 - o Choose whether to add a **line between columns** for better separation.
 - o Click **OK** to apply.

 **Tip:** To apply columns to only part of the document, highlight the text before selecting columns.

Adding Headers and Footers

Headers and footers appear at the top and bottom of each page.

- **Insert a Header/Footer:** Go to **Insert > Header & Footer**.
- **Add Page Numbers:** Click **Insert > Page Number** to automatically number pages.



Using Tables

Tables help organize information neatly.

Insert a Table: Click **Insert > Table**, then select the number of rows and columns.

Modify Tables: Change border style, cell shading, and alignment using the **Table Tools**

Merge and Split Cells: Combine multiple cells into one or divide a single cell into multiple parts.

Understanding File Formats

Different file types are used for saving documents:

- DOCX** – Standard Microsoft Word format.
- PDF** – A non-editable document format ideal for sharing.
-
- TXT** – A plain text format without any styling.
- RTF** – A format that maintains basic formatting across programs.

Printing and Print Preview

Before printing a document, check its layout and settings.

- Print Preview:** Click **File > Print** to see how the document will appear on paper.
- Print Settings:**
 - Choose the number of copies.
 - Select a printer.
 - Adjust page range and layout.
- Saving as PDF:** Instead of printing, save the document as a **PDF** for easy sharing.

Exercise for Practice

Fill in the Blanks:

1. Microsoft Word is a _____ processing software.
2. The shortcut key for saving a document is _____.
3. The default file extension for Word documents is _____.
4. To undo the last action, we press _____.
5. The area where we type in Word is called the _____.
6. The feature used to make text appear slanted is called _____.
7. The shortcut for printing a document is _____.

Multiple Choice Questions (MCQs):

1.What is Microsoft Word used for?

- a) Playing games
- b) Writing and editing text
- c) Watching videos
- d) Listening to music

2.Which tab contains font size, bold, italic, and underline options?

- a) Insert
- b) Home
- c) View
- d) Design

3.The shortcut key for **undo** is?

- a) Ctrl + X
- b) Ctrl + P
- c) Ctrl + Z
- d) Ctrl + S

4.What does the **B** button do in Microsoft Word?

- a) Makes text bold
- b) Makes text italic
- c) Underlines text
- d) Changes text colour

5.Where is the **Ribbon** located in MS Word?

- a) At the top of the window
- b) At the bottom of the window
- c) On the left side
- d) On the right side

6.What is the function of the **Spelling & Grammar Check**?

- a) Fixes formatting
- b) Checks for spelling mistakes
- c) Changes font colour
- d) Saves the document

7.Which option allows you to insert pictures into a Word document?

- a) Insert
- b) Home
- c) View
- d) Page Layout

8.What is the shortcut for opening a new document?

- a) Ctrl + N

- b) Ctrl + O
- c) Ctrl + P
- d) Ctrl + Z

ANSWERS:

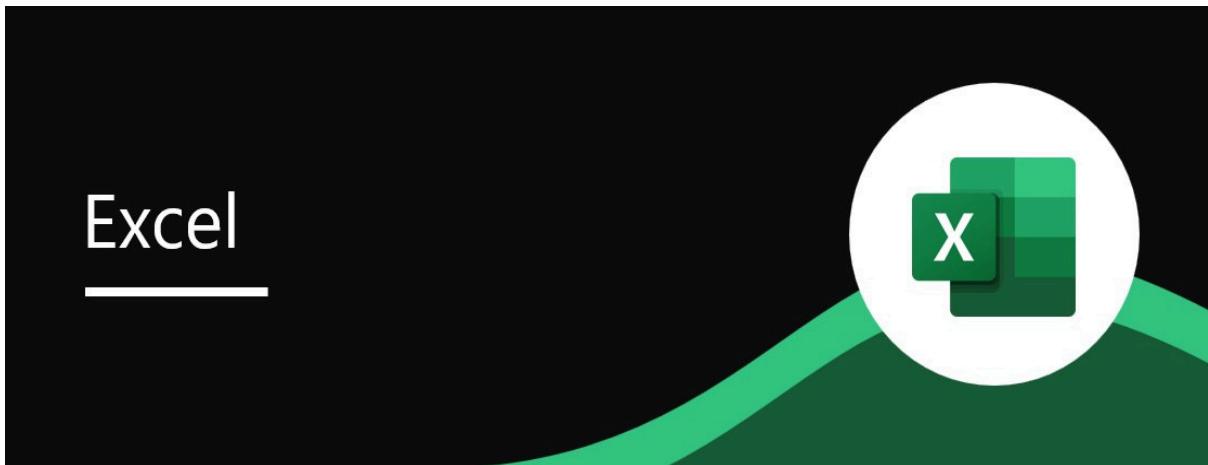
Fill in the Blanks:

- | | | | | |
|-----------|-------------|----------|-------------|------------------|
| 1. Word | 2. Ctrl + S | 3. .docx | 4. Ctrl + Z | 5. Document Area |
| 6. Italic | 7. Ctrl + P | | | |

Multiple Choice Questions:

- | | | | | | | |
|------|------|------|------|------|------|------|
| 1. b | 2. b | 3. c | 4. a | 5. a | 6. b | 7. a |
| 8. a | | | | | | |

4. MICROSOFT EXCEL



Excel is a software program used to enter, organize, and analyse data. It works like a digital notebook where you can store information in a structured format. The Excel interface includes a **toolbar (Ribbon)**, **rows**, **columns**, and **cells**.

Example: If you want to track your daily expenses, you can list items in one column and their costs in another.

Understanding Rows, Columns, and Cells

Rows run horizontally and are numbered (1, 2, 3, etc.). Columns run vertically and are labelled (A, B, C, etc.). Cells are the intersections of rows and columns, where data is entered (e.g., A1, B3).

A screenshot of the Microsoft Excel application window titled "rows-columns-and-cells - Excel". The ribbon is visible at the top with tabs like File, Home, Insert, etc. The Home tab is selected. The main area shows a grid of cells. A red box highlights the first row (labeled 1) and the first column (labeled A), with the word "Rows" written in red near the bottom left of the highlighted area. A red box highlights the range from A1 to I1, with the word "Columns" written in red near the center of the highlighted area. A single cell at position A4 is also highlighted with a red box, with the word "Cell" written in red near its center. The status bar at the bottom right shows "Ready" and "100%".

Example: Think of an Excel sheet as a school timetable, where subjects are in columns and time slots are in rows.

Data Types in Excel

1. Excel supports different types of data, including:
2. Text (Words): Names, Labels (e.g., "John", "Math")
3. Numbers: Numeric values for calculations (e.g., 100, 75.5)
4. Dates: Recognized time formats (e.g., 21-Feb-2025)
5. Boolean (True/False): Used in logical conditions

Example: In a student marksheets, student names are text, marks are numbers, and Pass/Fail can be True/False.

Formatting Basics

Formatting improves readability and presentation of data. You can:

- Change font colour, size, and style.
- Apply borders to cells.
- Use number formatting (currency, percentage, dates).

Example: Highlighting all failing marks in red helps teachers quickly identify students who need help.

Understanding Formulas vs. Functions

Formulas are user-created calculations using cell references (e.g., =A1+B1).

Functions are predefined Excel operations (e.g., =SUM(A1:A5)).

Example: Instead of adding 10 students' marks manually (=A1+A2+A3...), you can use =SUM(A1:A10).

Common Excel Functions (SUM, AVERAGE, MIN, MAX)

These functions perform basic calculations:

- =SUM(A1:A10): Adds numbers in a range
- =AVERAGE(A1:A10): Finds the average value
- =MIN(A1:A10): Finds the smallest number
- =MAX(A1:A10): Finds the largest number

Example:

Calculating the average marks of a class using =AVERAGE(B2:B20).

Excel Formulas Cheat Sheet

The screenshot shows the Excel ribbon with the 'Formulas' tab selected. A dropdown menu is open under 'More Functions' in the 'Function Library' group. Three categories are highlighted with red boxes:

- Text Functions**: Examples shown are `=LEFT()`, `=RIGHT()`.
- Mathematical Functions**: Examples shown are `=AVERAGE()`, `=MIN()`.
- Statistical Functions**: Examples shown are `=NOW()`, `=DATE()`.

The formula bar shows examples of each function with their respective arguments and descriptions.

Conditional Formatting Basics

Conditional formatting changes the colour of cells based on rules.

Example: You can make all marks below 40 turn red to show failing students.

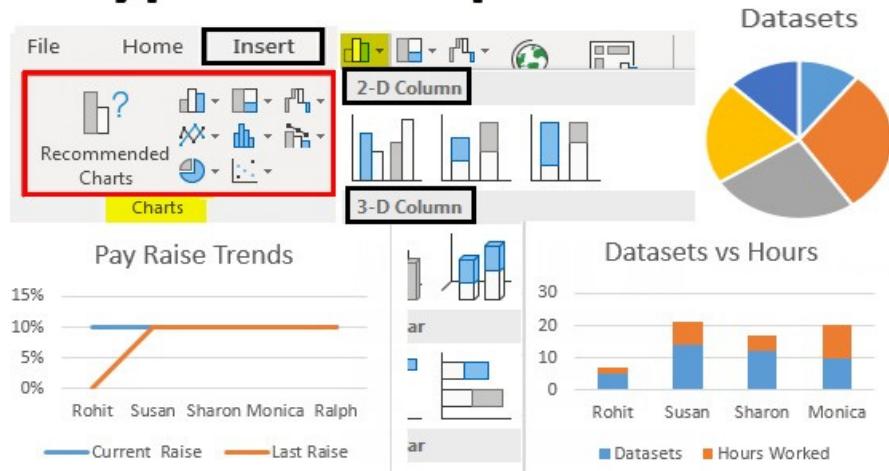
Introduction to Charts & Graphs

Charts make data visual and easier to understand. Common charts include:

1. Bar Chart: Best for comparing data
2. Line Chart: Shows trends over time
3. Pie Chart: Displays percentages

Example: A bar chart showing students' marks in different subjects.

Types of Graphs in Excel



Data Sorting & Filtering

Sorting arranges data in ascending or descending order, while filtering shows only specific data.

Example: Sorting student marks from highest to lowest or filtering only students who scored above 80.

	Name	Region	Product	Sales
1	Alex	South	TV	\$ 4,000.00
2	Karen	South	Fridge	\$ 3,000.00
3	Elizabeth	North	PC	\$ 3,200.00
4	Aaron	South	Refrigerator	\$ 5,000.00
5	Brian	East	AC	\$ 3,500.00
6	John	North	Refrigerator	\$ 2,200.00
7	Chris	West	AC	\$ 3,800.00
8	Lucy	West	Laptop	\$ 2,450.00
9	Rupert	North	TV	\$ 4,300.00

Importance of Excel in Real Life

Excel is used everywhere:

- 1.Schools: Student marksheets
- 2.Business: Sales tracking
- 3.Finance: Budget planning

Example: A budget sheet to track pocket money expenses.

Exercise for Practice

Fill in the Blanks:

- 1.The intersection of a row and a column is called a _____.
- 2.Columns in Excel are labelled with _____.
- 3.Rows in Excel are labelled with _____.
- 4.The default file extension for Excel files is _____.
- 5.Microsoft Excel is used for _____.
- 6.The function used to find the sum of numbers is _____.
- 7.The cell address A1 refers to _____.

Multiple Choice Questions (MCQs):

- 1.What is Microsoft Excel used for?
 - a) Writing letters
 - b) Making calculations
 - c) Editing pictures
 - d) Playing music
- 2.What is a single box in an Excel sheet called?
 - a) Row
 - b) Column
 - c) Cell
 - d) Table
- 3.Which symbol is used to start a formula?
 - a) #
 - b) =
 - c) \$
 - d) @
- 4.What does SUM (A1:A5) do?
 - a) Finds the largest number

- b) Adds the numbers in A1 to A5
- c) Multiplies A1 by A5
- d) Finds the average

5.What does the AutoFill feature do?

- a) Deletes data
- b) Copies a pattern automatically
- c) Prints the document
- d) Changes text colour

6.Which key is used to edit a selected cell?

- a) Ctrl
- b) Enter
- c) F2
- d) Esc

7.The shortcut to insert a new worksheet is?

- a) Ctrl + S
- b) Shift + F11
- c) Ctrl + Z
- d) Ctrl + X

8.What is used to represent charts in Excel?

- a) Data Table
- b) Graphs
- c) Cells
- d) Headers

ANSWERS

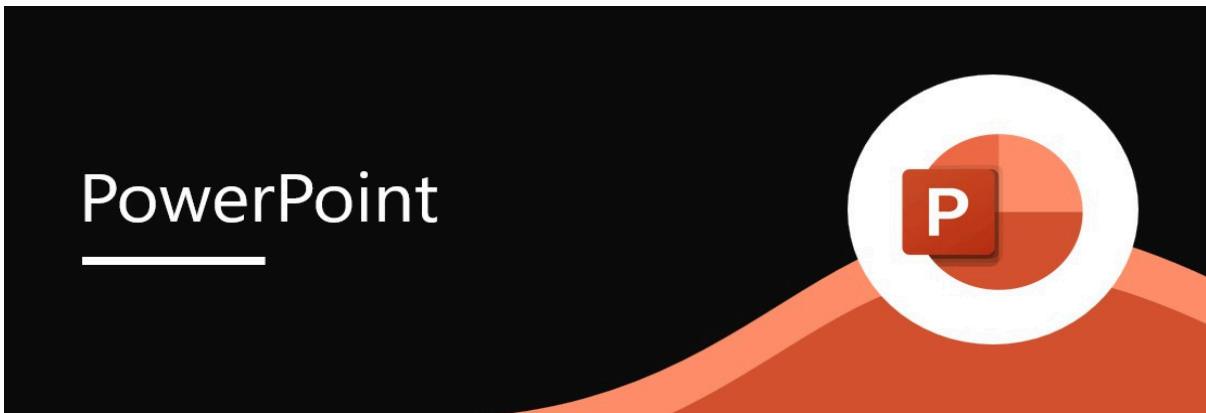
Fill in the Blanks:

- | | | | | |
|---------|--------------------|------------|----------|--------------------|
| 1. Cell | 2. Letters | 3. Numbers | 4. .xlsx | 5. Data Management |
| 6. SUM | 7. Column A, Row 1 | | | |

Multiple Choice Questions:

- | | | | | | |
|------|------|------|------|------|------|
| 1. b | 2. c | 3. b | 4. b | 5. b | 6. c |
| 7. b | 8. b | | | | |

5. MICROSOFT POWERPOINT

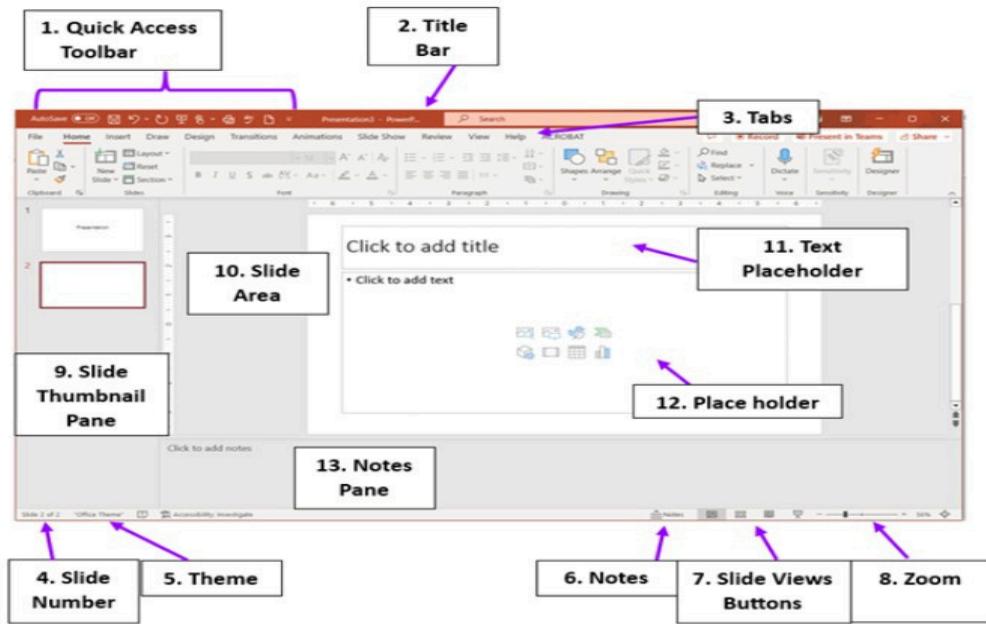


PowerPoint is a presentation software used to create slideshows for educational, business, and personal use. It allows users to design visually appealing presentations with text, images, animations, and more. Whether used for a classroom lecture, a business pitch, or an event presentation, PowerPoint provides a user-friendly way to organize and present ideas effectively.

Understanding the PowerPoint Interface

Key Components

- **Ribbon:** A toolbar containing tools for formatting and editing slides. It includes tabs like Home, Insert, Design, Transitions, Animations, Slide Show, Review, and View.
- **Slides Pane:** Displays a list of slides in order, allowing users to select and manage them.
- **Slide Workspace:** The main area where users design each slide.
- **Notes Pane:** A section where speaker notes can be added, useful for keeping track of key points while presenting.
- **Status Bar:** Displays the slide number, view options, and zoom controls.



Creating a New Presentation

1. Open PowerPoint and select **Blank Presentation** or choose from a template.
2. Click **New Slide** to add more slides.
3. Use **Slide Layouts** to structure content effectively, such as Title Slide, Title and Content, Two Content, Comparison, etc.
4. Save the presentation regularly by clicking **File → Save As** and choosing a location.

Working with Slides

Managing Slides

- **Adding and Deleting Slides:** Click **New Slide** on the Home tab or right-click a slide in the Slides Pane to delete.
- **Rearranging Slides:** Drag and drop slides in the Slides Pane.
- **Duplicating Slides:** Right-click a slide and select **Duplicate Slide**.
- **Using Sections:** Organize large presentations by creating sections from the Slide Sorter view.

Adding Text and Formatting

- Click inside a **text box** and start typing.
 - Use the **Font** options (size, color, bold, italics, underline) to style text.
 - Align text using the **Paragraph** options.
 - Use **Bullet Points and Numbering** to structure information for better readability.
- Apply **WordArt** for decorative text styles.

Enhancing Presentations with Visuals

Inserting and Editing Images

- Go to **Insert → Pictures** to add an image from your computer.
- Resize images** using corner handles to maintain aspect ratio.
- Use **Picture Format** tools to adjust brightness, contrast, and apply effects.

Using Shapes and SmartArt

- Shapes:** Insert from the Shapes menu and customize colors and styles.
- SmartArt:** Convert text into visually appealing graphics for better understanding.
- Icons:** Use built-in icons to enhance visual communication.

Applying Themes and Templates

5. Themes provide pre-designed color schemes and font styles.
6. Access themes from the **Design** tab and choose a professional or creative look.
7. Customize themes using the **Variants** section.
8. Use templates to save time and maintain consistency in formatting.

Inserting Tables, Charts, and Graphs

- Go to **Insert → Table** to create a table.
- Use **Insert → Chart** to display data visually.

- Choose from bar, line, pie, and other charts for effective data representation.
- Customize chart colors, labels, and titles for clarity.

Adding Audio and Video

- Insert audio or video from the **Insert** tab.
- Adjust playback settings in the **Playback** tab.
- Trim and format media within PowerPoint.
- Use **Video Styles** for professional appearance.

Presenting and Exporting Slideshows

Using Slide Show Mode

□ Click **Slide Show** → **From Beginning** to start the presentation.

- Use arrow keys or click to move between slides.
- Press **Esc** to exit Slide Show mode.
- Use **Presenter View** to see notes while presenting.

Utilize **Rehearse Timings** to practice slide transitions and timings.

Saving and Exporting Presentations

- Save as **.pptx** for editing later.
 - Export as **PDF** or **Video** for easy sharing.
 - Use **Save As** to store files in different formats.
- Create handouts by exporting to Microsoft Word.

Best Practices for Effective PowerPoint Presentations

Design Tips

□ Keep slides simple and uncluttered.

- Use high-contrast colors for readability.
- Stick to a consistent font style and size.

□ Limit the number of bullet points per slide (5-6 max).

□ Use images and icons to support text instead of overwhelming it.

Presentation Tips

- Speak clearly and confidently.
- Use a remote or keyboard shortcuts to navigate smoothly.
- Engage with the audience rather than reading slides verbatim.
- Allow time for questions and interactions.

Troubleshooting Common Issues

Presentation Not Playing Properly?

- Check if all media files are embedded correctly.
- Ensure animations and transitions are set properly.
- Save in a compatible format (older PowerPoint versions may not support newer features).

Fonts or Layouts Changing?

- Embed custom fonts before saving.
- Use standard fonts to avoid compatibility issues.

Practical Applications of PowerPoint

Where PowerPoint is Used

- **Education:** Classroom lectures, student presentations, and training sessions.
- **Business:** Presenting reports, proposals, and marketing pitches.
- **Personal Use:** Creating slideshows for special events like weddings, birthdays, and travel stories.

PowerPoint is a powerful tool for presenting information effectively. With practice, you can create engaging and professional slideshows that capture and retain audience attention.

Exercise for Practice

Fill in the Blanks:

1. Microsoft PowerPoint is used for making _____.
2. To exit a slideshow, press the _____ key.
3. The shortcut key to duplicate a slide is _____.
4. The shortcut for creating a new slide is _____.
5. The tool used to add animations is called _____.
6. Images can be inserted using the _____ tab.
7. The Slide Master is used to control the _____ of slides.

MCQs (with Answers):

1. What is PowerPoint used for?
 - a) Playing music
 - b) Creating presentations
 - c) Watching movies
 - d) Writing code
2. A single page in PowerPoint is called?
 - a) Document
 - b) Worksheet
 - c) Slide
 - d) Table
3. What is the shortcut to start a slide show?
 - a) F2
 - b) F5
 - c) Ctrl + P
 - d) Ctrl + M
4. Which shortcut key is used for **bold** text in PowerPoint?
 - a) Ctrl + I
 - b) Ctrl + B
 - c) Ctrl + U
 - d) Ctrl + P
5. What is the default extension for PowerPoint files?
 - a) .docx
 - b) .xlsx
 - c) .pptx

d) .txt

ANSWERS

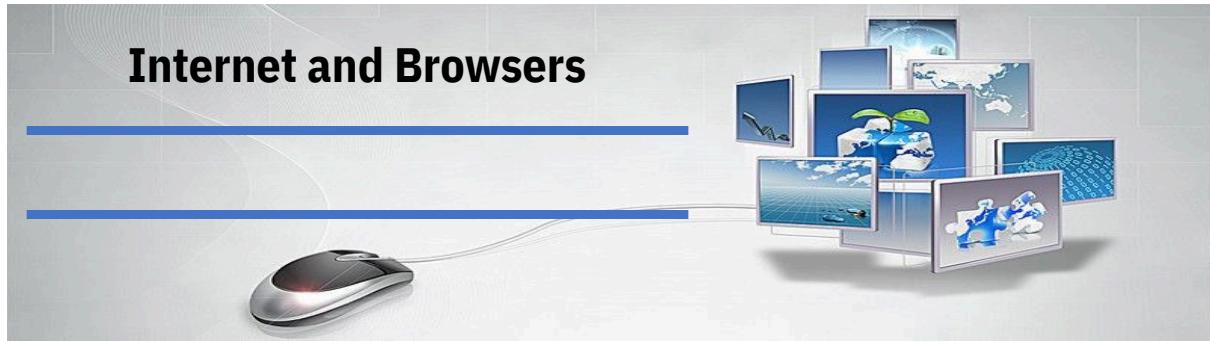
Fill in the Blanks:

1. Presentations
2. Esc
3. Ctrl + D
4. Ctrl + M
5. Transitions
6. Insert
7. Design

Multiple Choice Questions:

1. b
2. c
3. b
4. b
5. c

6. INTERNET



The Internet is a vast network that connects millions of computers worldwide, allowing users to share and access information, communicate, and perform online activities like shopping, banking, and learning.



How the Internet Works

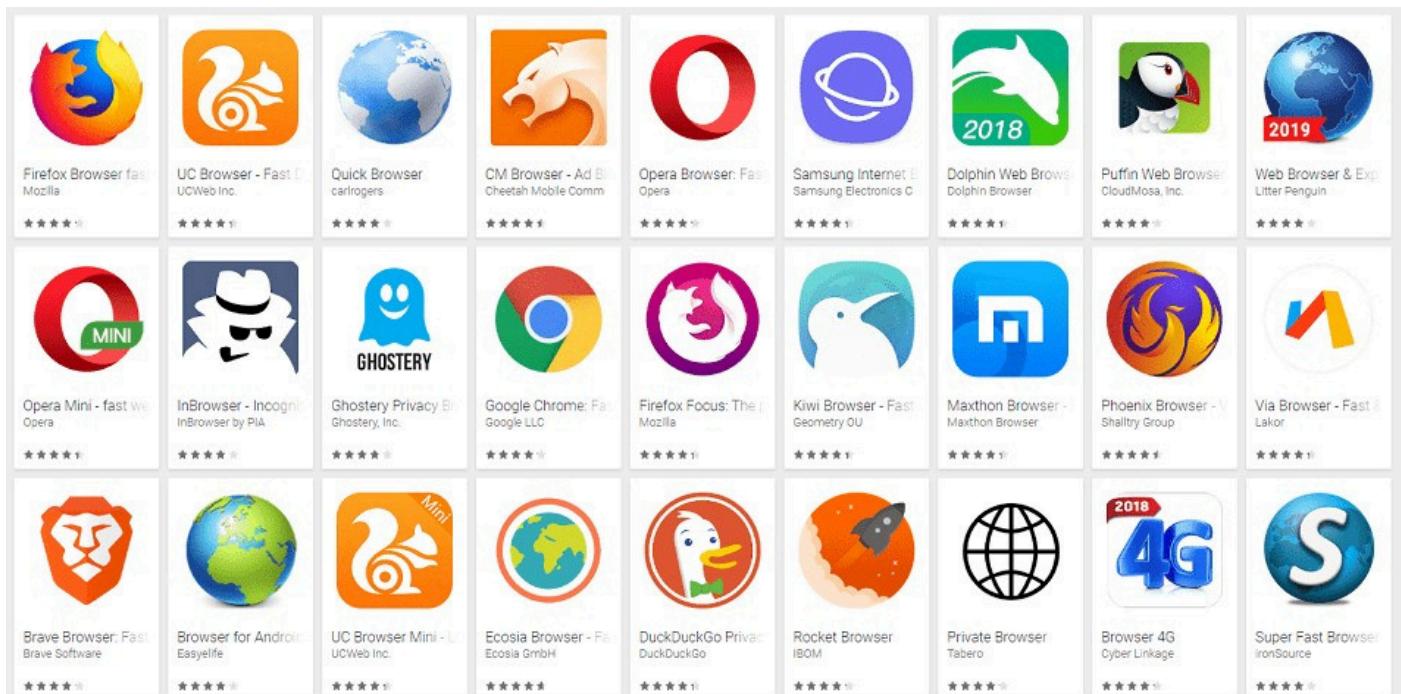
- **Websites:** Stored on servers and accessed through web browsers.
- **Search Engines:** Tools like Google and Bing help users find information.
- **URLs (Uniform Resource Locators):** Web addresses used to visit websites (e.g., www.google.com).
- **ISP (Internet Service Provider):** Companies like AT&T, Comcast, and Jio provide internet access.

What is a Web Browser?

A web browser is a software application that allows users to visit and interact with websites.

Popular Web Browsers

- 1. Google Chrome** – Fast, widely used, and supports many extensions.
- 2. Mozilla Firefox** – Open-source, customizable, and secure.
- 3. Microsoft Edge** – Integrated with Windows, optimized for performance.
- 4. Safari** – Default browser for Apple devices.
- 5. Opera** – Includes a built-in VPN and unique features.



Features of Web Browsers

- **Tabs:** Open multiple web pages at once.
- **Bookmarks:** Save frequently visited websites for quick access.
- **Search Bar:** Enter website addresses or keywords to find information.
- Private Browsing:** Also called Incognito Mode, it does not save history.

- **Extensions & Add-ons:** Additional features like ad blockers and password managers.

Safe Browsing Tips

- Use **strong passwords** and enable two-factor authentication.
 - Avoid clicking on **suspicious links** or downloading unknown files.
 - Keep browsers **updated** for security enhancements.
 - Use **trusted websites** for online shopping and transactions.
- Enable **pop-up blockers** to prevent malicious ads.



Introduction to Gmail

Gmail is a free email service by Google that allows you to send and receive messages from anywhere in the world. Just like a physical mailbox stores letters, Gmail stores your emails safely online.

Why Use Gmail?

- Send and receive emails instantly.
 - Store important messages and files.
 - Access emails from any device (computer, phone, or tablet).
 - Connect with friends, teachers, and family easily.
- Safe and secure with spam protection and privacy settings.

How to Create a Gmail Account?

Follow these simple steps to create your own Gmail account:

1. Open any browser (Chrome, Edge, etc.).
2. Go to www.gmail.com.
3. Click on "Create account" and choose "For myself".
4. Enter your details (Name, Username, Password).
5. Click Next and add your phone number for security.
6. Verify your phone number with the OTP sent via SMS.
7. Enter additional details (Birthday, Gender, etc.).
8. Click Next and agree to Google's Terms and Conditions.
9. Congratulations! Your Gmail account is ready.

How to Send an Email?

1. Open Gmail and log in to your account.
2. Click the "Compose" button.
3. In the "To" field, enter the recipient's email address.
4. Add a Subject (what your email is about).

5.Type your message in the box below.

6.Click "Send" to deliver your email.

 Tip: You can attach images or files using the paperclip icon.

How to Read and Reply to an Email?

- 1.Open Gmail and click on the email you want to read.
- 2.Read the message carefully.
- 3.To reply, click the "Reply" button.
- 4.Type your response and click "Send".

Useful Features of Gmail

Inbox Organization: Gmail automatically sorts emails into categories like Primary, Social, and Promotions.

- Attachments: You can send documents, pictures, and videos up to 25MB.
- Search Bar: Easily find old emails by typing keywords.
- Spam Filter: Unwanted or suspicious emails are automatically moved to the Spam folder.
- Gmail on Mobile: Download the Gmail app to access your email anytime, anywhere.

Exercise for Practice

Fill in the Blanks:

- 1.The Internet is a global network of _____.
- 2.The full form of WWW is _____.
- 3.A web page is displayed using a _____.
- 4.The full form of URL is _____.
- 5.Google Chrome and Mozilla Firefox are examples of _____.
- 6.The opposite of downloading is _____.
- 7.An email address always contains the symbol _____.

Multiple Choice Questions (MCQs):

1.Which of the following is a web browser?

- a) Google Chrome
- b) Windows
- c) MS Paint
- d) Notepad

2.What is used to search for information on the Internet?

- a) Web Browser
- b) Search Engine
- c) Email
- d) Antivirus

3.Which one is an example of an email service?

- a) WhatsApp
- b) Gmail
- c) Facebook
- d) YouTube

4.What does HTTP stand for?

- a) Hyper Text Transfer Protocol
- b) High Technology Transfer Process
- c) Home Text Transmission Protocol
- d) Hyperlink Text Type Program

5.The process of sending files from a computer to the Internet is called?

- a) Downloading
- b) Uploading
- c) Copying
- d) Surfing

6.What is the @ symbol used for in an email address?

- a) Separates the username and domain
- b) Ends the email address
- c) Starts the email
- d) Encrypts the email

7.What do we call the unique address of a website?

- a) IP Address
- b) Domain Name
- c) Web Server
- d) Data Packets

8.Which of the following is not a search engine?

- a) Google
- b) Bing
- c) YouTube
- d) Yahoo

ANSWERS

Fill in the Blanks:

1. Computers 2. World Wide Web

3. Web Browser

4. Uniform Resource Locator

5. Web Browsers 6. Uploading

7. @

Multiple Choice Questions:

1. a

2. b

3. b

4. a

5. b

6. a

7. b

8. c

7. HTML



HTML stands for **HyperText Markup Language**. It is a basic language used to create web pages. It helps organize text, images, and links on a website. Every webpage you see is built using HTML.

Basic Structure of an HTML Document

A Web Page is created using HTML code. The code tells the browser what to show on the screen. HTML helps organize text, images, links, and tables on a webpage. **Important Parts of an HTML Document:**

1. `<!DOCTYPE html>`: Tells the computer that this is an HTML5 document.
2. `<html>`: The main container for everything on the page.
3. `<head>`: Stores important information like the title of the page.
4. `<title>`: The name of the page shown on the browser tab.
5. `<body>`: This is where the content of the webpage goes, like text and images.
6. `<h1>`: A heading (like a title of a section).
7. `<p>`: A paragraph of text.

Example of a Simple Web Page:

```
<!DOCTYPE html>
<html>
<head>
<title>My First Web Page</title>
</head>
<body>
<h1>Welcome to My Web Page</h1>
<p>This is my first webpage. HTML is fun!</p>
</body>
</html>
```

Welcome to My Web Page

This is my first webpage. HTML is fun!

HTML Elements and Tags

HTML uses tags to define elements. Most tags have an opening tag (`<tag>`) and a closing tag (`</tag>`).

- `<h1>` to `<h6>` – Adds headings (from biggest to smallest).
- `<p>` – Adds a paragraph.
- `` – Creates a hyperlink.
- `` – Adds an image.
- `` / `` – Creates unordered (bulleted) or ordered (numbered) lists.
- `` – Adds an item to a list.
- `<table>` – Creates a table.
- `<tr>` – Defines a table row.
- `<td>` – Defines a table cell.
- `<th>`: Creates a table header.

Adding Colors, Backgrounds, and Borders

We can change the way a webpage looks by adding styles using the `style` attribute.

Changing Text Color and Background:

`<p style="color: blue; background-color: yellow;">This text is blue with a yellow background.</p>`

- `color`: Changes text color.
- `background-color`: Changes background color.

Adding Borders and Padding:

`<p style="border: 2px solid black; padding: 10px;">This paragraph has a black border and padding.</p>`

- `border`: Adds a border around the element.
- `padding`: Adds space inside the border.

`<p style="color: blue; background: yellow; border: 2px solid black; padding: 10px;">`

This is a styled paragraph.

`</p>`

This is a styled paragraph.

Creating Tables in HTML

Tables help organize data into rows and columns.

```
<table border="1">
  <tr>
    <th>Roll no.</th>
    <th>Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>1</td>
    <td>Manasa</td>
    <td>13</td>
  </tr>
  <tr>
    <td>2</td>
    <td>Bhanu</td>
    <td>14</td>
  </tr>
</table>
```

Roll no.	Name	Age
1	Manasa	13
2	Bhanu	14

Example Output Demonstration:

Below is an example of how HTML tables, colors, backgrounds, borders, and padding look when displayed in a web browser. HTML webpage related to **School lunch menu:**

Code:

```
<!DOCTYPE html>
<html>
<head>
<h1 style="color: blue;">Welcome to My School</h1>
</head>
<body style="background-color: lavender;">
    <p style="background-color: yellow; border: 2px solid black; padding: 10px;">
        Our school provides the best education with fun activities.
    </p>
    <h2 style="color: green;">Subjects Offered:</h2>
    <ol>
        <li>Mathematics</li>
        <li>Science</li>
        <li>English</li>
    </ol>
    <h2 style="color: red;">Lunch Menu</h2>
    <table border="1">
        <tr style="background-color: pink;">
            <th>Day</th>
            <th>Food</th>
        </tr>
        <tr>
            <td>Monday</td>
            <td>Pizza</td>
        </tr>
        <tr>
            <td>Tuesday</td>
            <td>Pasta</td>
        </tr>
    </table>
</body>
</html>
```

Welcome to My School

Our school provides the best education with fun activities.

Subjects Offered:

1. Mathematics
2. Science
3. English

Lunch Menu

Day	Food
Monday	Pizza
Tuesday	Pasta

Exercises for Practice

Fill in the Blanks:

1. The <____> tag is used to create a hyperlink in HTML.
2. To create an ordered list in HTML, we use the <____> tag.
3. The <____> tag is used to define a paragraph in HTML.
4. The _____ tag is used to create a line break.
5. The _____ attribute in the tag specifies the image source.

Multiple Choice Questions (MCQs):

1. What does HTML stand for?
 - a) HighText Machine Language
 - b) HyperText Markup Language

c) Hyper Transfer Markup Language

d) Home Tool Markup Language

2.Which tag is used to add an image in HTML?

a) <image>

b)

c) <picture>

d) <src>

3.Which tag is used to define a table row in HTML?

a) <tr>

b) <td>

c) <table>

d) <th>

4.What is the extension of an HTML file?

a) .docx

b) .html

c) .exe

d) .css

5.Which tag is used for the largest heading?

a) <h6>

b) <h1>

c) <title>

d) <header>

6.Which tag is used to create a hyperlink?

a) <h1>

b) <a>

c) <p>

d) <table>

7.What is the full form of CSS?

a) Cascading Style Sheets

b) Computer Style System

c) Creative Styling System

d) Cascading Script Sheets

ANSWERS

Fill in the Blanks:

1.<a> 2. 3.<p> 4.
 5. src

Multiple Choice Questions:

1. b 2. b 3. a 4. b 5. b 6. b

7. a

Conclusion

HTML is the building block of websites. It helps create and arrange content using simple tags. Learning HTML makes it easy to design structured web pages and is a great starting point for anyone interested in web development.

Swift Tips for

Windows Shortcuts

 Win	Run start menu
 + 	Open the file menu
 + 	Undo previous action
 + 	Redo previous action
 + 	Select all in a window or file
 + 	Copy the highlighted selection to the clipboard
 + 	Paste selection from clipboard
 + 	Cut the selection (and save it to the clipboard)
 + 	Lock the desktop
 + 	Switch window
 + 	Move backward a page on a web browser
 + 	Move forward a page on a web browser
 +  + 	Interrupt a function; start the task manager

www.SwiftTips.com