

Basics/Features of Windows



What is Windows?

Windows is an **Operating System (OS)** developed by Microsoft Corporation. Think of it as the manager of the computer — it handles all the background work so that you can simply use apps, browse the internet, create documents, and listen to music without worrying about how the hardware works underneath.

The name "Windows" comes from the idea of opening separate rectangular "windows" on screen for each program. It is a **Graphical User Interface (GUI)**-based OS, which means you interact with pictures, icons, and menus rather than typing commands.

Simple analogy: If a computer is like a restaurant, the Operating System is the manager — it takes your order (your click), tells the kitchen (hardware) what to do, and brings back the food (result) on your plate (screen).

Popular versions include Windows XP, Windows 7, Windows 10, and Windows 11. In labs and offices across India, Windows 10 is still the most widely used version today.



The Desktop and its parts

When you switch on your computer and log in, the first thing you see is the **Desktop**. It is your main working area — just like a real desk where you keep your books and pens, the desktop is where you keep shortcuts, files, and open programs.

Desktop: The main screen background area where icons are placed. You can right-click here to change wallpaper or create new folders.

Icons: Small pictures that represent files, folders, or programs. Double-click to open them.

Wallpaper: The background image on the desktop.

Recycle Bin: Deleted files are kept here temporarily. You can restore them or permanently delete them from here.

Shortcut: A quick-access link to a file or program. You can identify a shortcut by the small arrow on its icon.

Taskbar: The horizontal bar at the bottom of the screen. All open programs appear here.

Exam tip: Students often confuse a shortcut with the actual file. Remember — deleting a shortcut does NOT delete the original file. But deleting the original file will make the shortcut useless (it will show a broken link).



Files, Folders & Extensions

A **file** is any piece of stored data — it could be a document, an image, a song, or a program. A **folder** (also called a directory) is a container used to organise files, just like a physical folder keeps papers together.

Every file has a **file extension** — a short suffix after a dot (.) that tells Windows what type of file it is. Windows uses this to decide which program should open the file.

.txt Plain text file. Opens in Notepad.	.docx Microsoft Word document.	.xlsx Microsoft Excel spreadsheet.
.pptx Microsoft PowerPoint presentation.	.jpg / .png Image files. Opens in Photos app.	.mp3 Audio file. Opens in Media Player.
.exe Executable / program file. Runs directly.	.pdf Portable Document Format. Read-only document.	

Important: Windows hides file extensions by default. To see them, open File Explorer → View → check "File name extensions". This is very helpful when working with files.

Taskbar and Start Menu



The **Taskbar** runs along the bottom of the screen and has three main areas:

Start button (Windows logo)

Opens the Start Menu from which you can launch any installed application.

Search bar

Type any app name, file name, or setting and Windows will find it instantly.

Pinned programs

Frequently used apps can be "pinned" to the taskbar for one-click access.

Open program buttons

Every running program shows a button on the taskbar. Click to switch between them.

System tray (Notification Area)

Bottom-right area showing clock, Wi-Fi, volume, battery, and background app icons.

Show Desktop button


Extreme right corner — click it to minimise all windows and see the desktop.

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Windows File Explorer

File Explorer (earlier called Windows Explorer) is the built-in file manager. It lets you browse, open, copy, move, rename, and delete files and folders. Open it using  **Win + E** or by clicking the folder icon on the taskbar.

Key areas inside File Explorer:

Navigation pane (left side)

Shows Quick Access, This PC, Desktop, Downloads, Documents, drives (C:, D:), Network, etc.

Content area (right side)

Shows the files and folders inside the selected location.

Address bar

Shows the path of the current folder (e.g., C:\Users\Name\Documents). You can type a path directly here.

Search box

Search for files within the current folder and all its subfolders.

Ribbon / Toolbar

Contains buttons for New Folder, Copy, Paste, Rename, Delete, View options, etc.

Status bar

Bottom strip showing number of items and selected item details.

Drives in Windows: The main hard disk is labelled **C:** (the "C drive") by convention. Additional drives or partitions are D:, E:, and so on. USB flash drives also appear here with a letter when plugged in.



Basic operations on files and folders

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Here are the most common operations you will use every day:

Creating a new folder

1. Open File Explorer and go to the location where you want the folder.
2. Right-click on an empty area → New → Folder. OR press **Ctrl + Shift + N**.
3. Type the folder name and press **Enter**.

Copying and moving files

1. Select the file(s) you want. (Hold **Ctrl** to select multiple.)
2. To copy: press **Ctrl + C**. To cut (move): press **Ctrl + X**.
3. Go to the destination folder and press **Ctrl + V** to paste.

Renaming a file or folder

1. Right-click the file or folder → Rename. OR select it and press **F2**.
2. Type the new name and press **Enter**.

Deleting a file

1. Select the file and press **Delete** key. It goes to the Recycle Bin.
2. To permanently delete (skip Recycle Bin): press **Shift + Delete**. Be careful — this cannot be undone!

Undo anything: Made a mistake? Press **Ctrl + Z** to undo the last action. This works in File Explorer too!



Control Panel and Settings

The **Control Panel** is the central place to customise and configure your Windows system. In Windows 10/11, many settings have moved to the modern **Settings app** (press **Win + I** to open it), but the Control Panel still exists for advanced options.

System

View computer name, RAM, processor details, and Windows version.

Sound

Set volume levels, choose playback/recording devices, set system sounds.

Date and Time

Set the correct date, time, and time zone.

Display / Personalization

Change wallpaper, screen resolution, text size, theme, and screensaver.

Programs and Features

View all installed software and uninstall unwanted programs.

Network & Internet


Connect to Wi-Fi, set up hotspot, view IP address, manage connections.

Mouse

Adjust pointer speed, swap left-right buttons, change pointer appearance.

User Accounts





Create, delete, or change passwords for user accounts on the computer.

Quick access: Press  Win + I to open Settings directly. From there, type what you want to change in the search bar — much faster than navigating menus!



Essential keyboard shortcuts

Shortcuts save a lot of time. Learn these — they work across almost all Windows applications:

Shortcut	What it does
Ctrl + C	Copy selected item
Ctrl + X	Cut selected item
Ctrl + V	Paste
Ctrl + Z	Undo last action
Ctrl + A	Select all
Ctrl + S	Save the current file
Ctrl + P	Print
Ctrl + F	Find / Search in a document or browser
Alt + F4	Close the active window
Alt + Tab	Switch between open windows
 Win + D	Show/hide desktop
 Win + E	Open File Explorer
 Win + L	Lock the computer
 Win + I	Open Settings

Shortcut	What it does
PrtSc	Take a screenshot (saves to clipboard)
⊞ Win + Shift + S	Open Snipping Tool for partial screenshot
F2	Rename selected file or folder
Delete	Send file to Recycle Bin
Shift + Delete	Permanently delete (skips Recycle Bin)
Ctrl + Shift + N	Create a new folder in File Explorer



Windows Accessories

Windows comes with a collection of small, built-in programs called **Accessories** (also called Windows Tools or Windows Utilities). These are lightweight programs that do not need to be separately installed — they are already there when Windows is installed. You can find them by going to Start Menu → All Apps → Windows Accessories (or by searching the app name in the search bar).

These tools are especially useful for students who are just learning computers, as they are simple and safe to experiment with. They cover basic text editing, drawing, calculations, and more.

Notepad

A simple plain text editor. Used for quick notes, writing code, and viewing config files.

WordPad

A slightly advanced word processor. Supports basic formatting, images, and rich text (RTF).

Paint

A basic drawing and image-editing program. Create or edit simple images and diagrams.

Calculator

Standard, scientific, programmer, and unit-conversion calculator. Search "calc" to open.

Snipping Tool

Capture screenshots of any area of the screen. Supports freeform, rectangular, window, and full-screen snips.

Character Map

Find and copy special characters and symbols not available on the keyboard (e.g., ©, ™, ₹, é).

Sticky Notes

Digital Post-it notes that sit on your desktop as reminders.

Steps Recorder

Records your actions on screen step-by-step. Useful for creating help guides or reporting problems.

Task Manager

Shows all running programs and their CPU/RAM usage. Use it to force-close a frozen program. Open with Ctrl+Shift+Esc.

Command Prompt

Text-based interface to Windows. Allows advanced commands like ping, ipconfig, dir, etc.

Disk Cleanup

Frees up storage space by deleting temporary files, Recycle Bin contents, and unused system files.

Windows Media Player

Plays audio (MP3, WAV) and video (MP4, AVI) files. Also manages a music/video library.



How to open any accessory quickly: Press  Win, type the name of the tool (e.g., "notepad", "paint", "calc"), and press Enter. Much faster than navigating menus!



Notepad — the plain text editor

A simple, lightweight plain text editor. No formatting, no fonts — just raw text.

Start → All Apps → Windows Accessories → Notepad

Notepad is the most basic text editor in Windows. It saves files in **.txt format** (plain text), which means there is no bold, italic, font colour, or any other formatting —

just the letters you type. This makes it perfect for quick notes, writing simple code, and opening system configuration files.

What Notepad can do

Write and save text

Create .txt files. Use File → Save (Ctrl+S) or File → Save As to choose a location.

Open any text file

Can open .txt, .bat, .csv, .html, .css, .js, .py and other plain text formats.

Find and Replace

Use Ctrl+H to find a word and replace it with another across the whole file.

Word wrap

Format → Word Wrap makes long lines wrap to fit the screen instead of scrolling sideways.

Time/Date stamp

Press F5 to insert the current date and time at the cursor position. Useful for logs.

Go to line

Use Ctrl+G to jump to a specific line number — helpful when editing code.

Common Notepad keyboard shortcuts

Shortcut	Action
Ctrl + N	New file
Ctrl + O	Open an existing file
Ctrl + S	Save the current file
Ctrl + Shift + S	Save As (choose new name/location)
Ctrl + F	Find a word
Ctrl + H	Find and Replace
F5	Insert date and time
Ctrl + G	Go to specific line number

Important limitation: Notepad does NOT support formatting. If you need bold, italic, tables, or images in your document, use WordPad or Microsoft Word instead. Notepad's simplicity is also its strength — files are tiny in size and open almost instantly.

Remember: Notepad does not auto-save. If the power goes off or the program crashes before you save, your work is lost. Always press **Ctrl + S** frequently!



Paint — the drawing program

A basic raster graphics editor for drawing, colouring, and editing images.

[Start](#) → [All Apps](#) → [Windows Accessories](#) → [Paint](#)

Paint is a simple drawing application that has been part of Windows since 1985! It works with **raster graphics** — this means images are made of tiny dots called pixels. You can draw shapes, colour pictures, add text to images, crop screenshots, and do basic photo editing. Paint saves images mainly as **.png**, **.jpg**, **.bmp**, or **.gif** formats. Windows 11 also comes with **Paint 3D**, which adds 3D drawing capabilities, but classic Paint is still available.



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Tools available in Paint

Pencil

Draws freehand lines, one pixel wide.

Brushes

Draw thick freehand strokes in different brush styles (oil, watercolour, etc.).

Eraser

Erases parts of your drawing, replacing them with the background colour.

Fill (paint bucket)

Fills a closed area with the selected colour — like pouring colour into a shape.

Text tool (A)

Adds text to the image. Choose font, size, and style from the top bar.

Shapes

Draw rectangles, circles, triangles, arrows, stars, and other shapes with one click.

Select tool

Select a rectangular or freeform area to copy, cut, move, or resize.

Colour Picker (eyedropper)

Picks a colour from anywhere on the canvas and sets it as the active colour.

Magnifier / Zoom

Zooms in or out on the canvas for detailed editing.

Resize/Skew

Change the size of the image (in pixels or percentage) or tilt it at an angle.



Quick tip: Take a screenshot using **Prt Sc**, then open Paint and press **Ctrl + V** to paste it. Now you can crop, annotate, and save it as an image file — very useful for lab reports and assignments.

Limitation: Paint is a raster editor — if you enlarge a Paint image too much, it becomes blurry and pixelated. For professional graphics, tools like Adobe Photoshop or even free tools like GIMP are used. But for basic academic work, Paint is perfectly sufficient.



WordPad — basic word processor

A mid-level word processor — more than Notepad, lighter than Microsoft Word.

[Start](#) → [All Apps](#) → [Windows Accessories](#) → [WordPad](#)

WordPad sits between Notepad and Microsoft Word. It supports **rich text formatting** — meaning you can bold, italicise, change font size and colour, align text, insert images, and create bullet lists. It saves documents in **.rtf (Rich Text Format)** by default but can also save as **.docx** and **.txt**.

Comparing the three text tools

Feature	Notepad	WordPad	MS Word
Bold / Italic / Underline	X No	✓ Yes	✓ Yes
Font size & colour	X No	✓ Yes	✓ Yes
Insert images	X No	✓ Yes	✓ Yes
Tables	X No	X No	✓ Yes
Spell check	X No	X No	✓ Yes
Headers / Footers	X No	X No	✓ Yes
File size	Very small (.txt)	Small (.rtf)	Medium (.docx)
Cost	Free (built-in)	Free (built-in)	Paid (MS Office)
Best for	Quick notes, code	Simple formatted docs	Professional documents

Key features of WordPad

Font formatting

Change font, size, colour, bold, italic, underline, strikethrough, and subscript/superscript.

Insert picture

Embed images (JPG, PNG, BMP) directly into the document.

Open .docx files

Can open Word documents, though some complex formatting may not display correctly.

Paragraph alignment

Left, Centre, Right, and Justify alignment. Adjust line spacing.

Insert date/time

Insert → Date and Time to add the current date in your chosen format.

Ruler

Visible ruler for setting margins and indentation — like MS Word but simpler.

Bullet lists

Create simple unordered (bullet) lists — but not numbered lists.

Print preview

See how the document will look before printing. Access from File menu.

When to use WordPad: If a computer does not have Microsoft Word installed, WordPad is your best alternative for writing a formatted letter, report cover page, or notice. It handles basic formatting well and is completely free.



Printing in Windows

Printing is one of the most common tasks in any office or college lab. Windows makes it easy to connect to printers and print any document, image, or webpage. Before you can print, a **printer driver** must be installed — this is software that tells Windows how to communicate with your specific printer model.

Adding a printer

1. Go to **Settings** → **Bluetooth & Devices** → **Printers & Scanners**.
2. Click "**Add a printer or scanner**". Windows will search for available printers automatically.
3. If your printer is connected via USB and not found, click "The printer that I want isn't listed" and follow the manual setup wizard.
4. Install the printer driver from the CD that came with the printer, or download it from the manufacturer's website.

Printing a document

1. Open the document, image, or webpage you want to print.
2. Press **Ctrl + P** to open the Print dialog box.
3. Select the printer you want to use from the list.
4. Set the number of copies, page range (All, Current Page, or specific pages like 1-3, 5).
5. Choose orientation: Portrait (vertical) or Landscape (horizontal).

6. Click **Print**.

Print Dialog box — key options explained

Printer name

Select which printer to use — useful if multiple printers are installed (e.g., a lab printer and a PDF printer).

Page range

"All" prints every page. "Current page" prints only the page you are on. "Pages" lets you type specific page numbers (e.g., 2-5, 8).

Number of copies

How many copies you need. Enable "Collate" to print one full set at a time instead of all page-1s, then all page-2s.

Orientation

Portrait = tall (for documents).
Landscape = wide (for tables, spreadsheets, photos).

Paper size

A4 is the standard paper size used in India. Letter (8.5×11") is the US standard.

Print to PDF

"Microsoft Print to PDF" is a virtual printer that saves the output as a .pdf file instead of printing on paper. Very useful!

Print preview

Shows how the printout will look. Always check this to avoid wasting paper on mistakes.

Print quality

Higher DPI (dots per inch) = sharper print but more ink used.
Draft quality = faster and uses less ink.

Managing the print queue

When you send a document to print, it enters the **print queue** — a waiting list of jobs. To manage print jobs: go to **Settings → Printers & Scanners** → click your printer → "Open print queue". From here you can pause, resume, restart, or cancel any print job.

Shortcut: Press **Ctrl + P** from anywhere — a document, browser, or image viewer — to open the Print dialog. Use "Print to PDF" to save a soft copy instead of wasting paper.



Networking Basics in Windows

A **computer network** is a group of two or more computers connected together to share resources like files, printers, and an internet connection. Understanding basic

networking is important because nearly every computer today is connected to a network.

Key networking terms

Network

A group of interconnected computers and devices that can communicate and share data.

LAN (Local Area Network)

A network within a limited area — like a classroom, office, or home. Computers are close to each other.

WAN (Wide Area Network)

A large network spread across cities, countries, or the world. The Internet is the largest WAN.

Wi-Fi

Wireless network connection. Uses radio waves to connect devices without cables.

Router

A device that connects your local network to the Internet and directs data between devices.

IP Address

A unique number assigned to each device on a network — like a postal address for your computer (e.g., 192.168.1.5).

MAC Address

A unique hardware address permanently built into the network card of every device. Cannot be changed (usually).

DNS (Domain Name System)

Translates website names (like google.com) into IP addresses so your computer can find them.

DHCP

Automatically assigns an IP address to your computer when it connects to a network — you don't need to set it manually.

Ethernet

Wired network connection using a cable (RJ-45). Faster and more stable than Wi-Fi.

Bandwidth

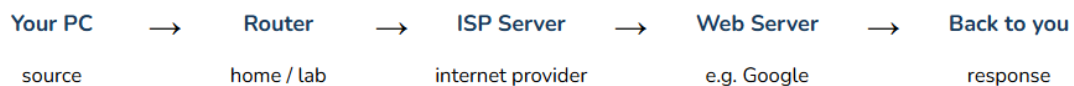
The maximum amount of data that can be transferred per second over a network. Measured in Mbps or Gbps.

Firewall

Security software/hardware that blocks unauthorised access to your network while allowing legitimate traffic.

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How data travels — a simple path



Connecting to Wi-Fi in Windows

1. Click the Wi-Fi icon in the System Tray (bottom-right of the taskbar).
2. A list of available networks appears. Click the name of your network (SSID).
3. Click **Connect**. If it is a secured network, enter the Wi-Fi password.
4. Check "Connect automatically" to avoid entering the password again next time.

Types of networks by size

Type	Full form	Coverage area	Example
PAN	Personal Network	Area Within 10 metres	Bluetooth headphones, phone to laptop
LAN	Local Network	Area One building / campus	College computer lab, office network
MAN	Metropolitan Network	Area One city	City-wide cable TV network, university campus across multiple buildings
WAN	Wide Network	Area Country / World	The Internet, bank ATM networks

Network sharing in Windows: You can share files and folders across a LAN. Right-click any folder → Give access to → Specific people. Enter the username of the other computer and set Read or Read/Write permission. The shared folder appears in File Explorer under Network.

