What is a Shell?

- A shell is a user interface to access the operating system's services.

- Interprets user commands and scripts.

- Common in both Windows and Linux environments.

Shells in Microsoft (Windows)

- CMD (Command Prompt): Legacy shell with basic capabilities.
- PowerShell: Modern shell using .NET, passes objects, powerful for automation.

Shells in Linux

- Bash (Bourne Again Shell): Default in most distros, scripting-friendly.
- Zsh: Extended shell with customization and plugins (e.g., Oh My Zsh).

Shell Comparison Table

Feature	CMD	PowerShell	Bash	Zsh
Platform	Windows	Cross-platform	Linux/macOS/ WSL	Linux/macOS
Default For	Older Windows	Windows 10+	Most Linux distros	macOS/Linux users
Syntax	Simple	Object-oriented	Unix-style	Enhanced Bash
Script Extension	.bat/.cmd	.ps1	.sh	.zsh
Scripting Power	Basic	Very High	High	Very High
Object Handling	Strings	Objects	Text	Text
Customization	Low	Moderate	High	Very High
Tab Completion	Limited	Advanced	Yes	Advanced
Learning Curve	Low	Moderate	Moderate	Moderate