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🐧 What is Linux?

Linux is a **free, open-source operating system** (OS) based on **Unix**. It powers everything from smartphones to servers, supercomputers, and cloud platforms.

🐧 What is Ubuntu?

Ubuntu is a **free**, **open-source** Linux-based **operating system (OS)** that is designed to be:

- **Easy to use** 🧑‍💻

- **Secure** 🔐

- **Powerful for developers, DevOps, and servers** ⚙️

It's one of the **most popular Linux distributions** in the world — widely used on desktops, laptops, servers, and in the cloud.

◆ 1. File & Directory Navigation

Command	Description
pwd	Show current directory (Print Working Dir)
ls	List files in the directory
ls -la	List all files with details, including hidden
cd foldername/	Change directory
cd ..	Move up one directory
cd /	Go to root directory
cd ~ or cd	Go to home directory

◆ 2. File & Directory Management

Command	Description

`touch file.txt`	Create a new empty file
`mkdir foldername`	Make a new directory
`cp file.txt /path/`	Copy file to another location
`mv oldname.txt newname.txt`	Rename or move a file
`rm file.txt`	Delete a file
`rm -r foldername/`	Delete a folder and its contents

◆ 3. Viewing Files

Command	Description
`cat file.txt`	Show contents of a file
`less file.txt`	View file one page at a time
`head file.txt`	View first 10 lines of a file
`tail file.txt`	View last 10 lines of a file
`tail -f file.txt`	View log files live (auto-scroll)

◆ 4. Searching

Command	Description
`find /path -name "file.txt"`	Find file by name
`grep "text" file.txt`	Search for text in file
`grep -r "text" /folder/`	Search recursively in directory

◆ 5. Permissions

Command	Description

Command	Description
`chmod +x script.sh`	Make a script executable
`chmod 755 file`	Set specific permissions
`chown user:group file`	Change ownership

◆ 6. Package Management (APT)

Command	Description
`sudo apt update`	Update package list
`sudo apt upgrade`	Upgrade installed packages
`sudo apt install packagename`	Install a package
`sudo apt remove packagename`	Remove a package

◆ 7. Process Management

Command	Description
`ps aux`	View all running processes
`top`	Live system resource monitor
`kill PID`	Kill process by ID
`kill -9 PID`	Force kill a process

◆ 8. System Info & Utilities

Command	Description
`df -h`	Show disk usage
`free -h`	Show RAM usage

Command	Description
`uname -a`	System info
`uptime`	How long system has been running
`whoami`	Show your current username

◆ 9. Scheduling & Time

Command	Description
`crontab -e`	Edit crontab to schedule tasks
`date`	Show current date and time
`cal`	Show calendar