Ubuntu Learning Roadmap for Toan

1. Introduction to Ubuntu & Linux
Goal: Help him understand what Ubuntu is and why people use it.
- Explain:
• What Linux is and how Ubuntu fits into the Linux ecosystem.
• Differences between Windows, macOS, and Linux.
• Open-source software and why it's powerful.
- Hands-on:
• Show the Ubuntu desktop.
• Explore file manager and settings.
• Teach shutdown, restart, lock.

2. Understanding the Filesystem
Goal: Teach him how Ubuntu organizes files and folders.
- Topics:
• Linux filesystem hierarchy: /, /home, /etc, /bin, /var, /tmp, /dev
• Home directory: /home/toan
• Hidden files and "." prefix.
- Hands-on:
• Navigate folders via file explorer.
• Show hidden files (Ctrl+H).
• Create folders like /home/toan/projects.

3. The Terminal (Command Line Basics)
Goal: Make him comfortable using terminal.
- Essential commands:
pwd, ls, cd, mkdir, touch, cp, mv, rm, cat, less
- Hands-on:
• Create "learn-ubuntu" folder.
• Create and edit files.
• Move, rename, delete files.

4. Users & Permissions
Goal: Teach Ubuntu's security model.
- Topics:
• Difference between root and normal users.
• Using sudo for admin commands.
• File permissions: r, w, x and ownership (ls -l).
• chmod, chown basics.
- Hands-on:
• Create a private folder.
• Test with another user.

5. Package Management

Goal: Teach software installation and updates.
- Topics:
• APT basics.
• Installing, updating, removing packages.
- Commands:
sudo apt update
sudo apt upgrade
sudo apt install
sudo apt remove
- Hands-on:
• Install fun apps like cowsay, fortune.
• Update the system.

6. Processes & System Monitoring
Goal: Teach managing running apps.
- Topics:
• ps, top, htop.
• Kill processes with kill.
• CPU, RAM usage.
- Hands-on:
• Use htop to explain CPU and memory.

7. Networking Basics
Goal: Introduce networking on Ubuntu.
- Topics:
• Check IP: ip a
• Connectivity: ping google.com
• Open ports: netstat / ss
- Hands-on:
• Connect Wi-Fi.
• Test ping.

8. Shell Scripting Basics
Goal: Automate tasks.
- Topics:
• What shell scripts are.
• Writing simple .sh files.
• chmod +x for executables.
- Hands-on:
• Create hello script:
echo "Hello, Toan! Welcome to Ubuntu!"
• Run the script.

9. System Logs & Troubleshooting
Goal: Learn debugging basics.
- Topics:

- Logs in /var/log/
- Use less, tail, journalctl.
- Hands-on:
- Explore syslog.
- Check failed logins.

10. Fun Projects to Motivate
- Customize Ubuntu terminal prompt.
- Set up Minecraft or web server.
- Use GIMP/Inkscape creatively.
- Make small Python project.
- Set aliases:
alias hello="echo 'Hi Toan, you are awesome!'"

Teaching Tips
- Make it fun with colors, ASCII art, games.
- Go step by step; avoid overwhelming him.
- Encourage curiosity and experimentation.
- Create a safe sandbox user account.