Linux Developer Onboarding Guide (Cheat Sheet + Practice Tasks)

=== PART 1: Quick Linux CLI Cheat Sheet ===

1. Navigation

- pwd # Show current directory
- ls -l # List files with details
- cd <dir> # Change directory
- mkdir <name> # Create folder
- touch <file> # Create file
- rm <file> # Delete file
- cp src dst # Copy file or folder
- mv old new # Move or rename

2. File Permissions

- chmod +x script.sh # Make executable
- chown user:group file # Change ownership
- ls -l # View permissions

3. Package Management (Ubuntu/Debian)

- sudo apt update
- sudo apt install <pkg>
- sudo apt remove <pkg>

4. File Viewing & Editing

- cat file.txt # Show file contents
- less file.txt # Paginated view
- nano file.txt # Edit in nano
- vi file.txt # Edit in vi

5. Bash Basics

- echo "Hello" # Print to terminal
- history # Show command history

- clear # Clear terminal

- man <cmd> # Manual/help page

6. Redirection & Piping

- ls > file.txt # Write output to file

- cat file.txt | grep "error" # Filter lines

7. Processes

- ps aux # Show all processes

- top / htop # Monitor usage

- kill <PID> # Kill a process

8. Disk Usage

- df -h # Disk space summary

- du -sh folder/ # Folder size

9. Network Tools

- ping google.com

- curl example.com

- ip a # Network interfaces

10. Archive & Compression

- tar -xzvf file.tar.gz

- zip -r file.zip folder/

- unzip file.zip

11. Shell Customization

- nano ~/.bashrc or ~/.zshrc

- alias gs='git status'

- export PATH="$HOME/.local/bin:$PATH"

- source ~/.bashrc # Reload shell config

=== PART 2: Practice Exercises ===

1. File & Directory Navigation

[ ] Create a folder named `practice` in your home directory.

[ ] Inside it, create subfolders: `logs`, `scripts`, `data`

[ ] Use `cd` and `ls` to verify your structure.

2. File Creation and Manipulation

[ ] Create an empty file `log1.txt` inside `logs/`

[ ] Add text using `echo "Log started" > logs/log1.txt`

[ ] Append another line using `>>`

[ ] Copy it to `data/` folder and rename as `copy_log.txt`

3. Permissions

[ ] Create a script file `hello.sh` in `scripts/`

[ ] Add content: echo "Hello Linux!"

[ ] Make it executable: `chmod +x hello.sh`

[ ] Run the script: `./hello.sh`

4. Using Editors

[ ] Use `nano` or `vi` to edit a file named `notes.txt` inside `data/`

[ ] Add at least 3 lines describing what you've learned.

5. Piping and Filtering

[ ] Create a file `sample.txt` with multiple lines of text.

[ ] Use `cat sample.txt | grep "Linux"` to filter lines.

6. Disk and Network

[ ] Check available disk space with `df -h`

[ ] Use `ping -c 3 google.com` and `curl ifconfig.me` to check connectivity

7. Archiving

[ ] Create a `tar.gz` of the `practice` folder

[ ] Extract it into a new location

Practice regularly to build muscle memory. Aim to use the terminal daily!