

Linux Command Cheat Sheet

This cheat sheet provides a quick reference for the essential Linux commands you'll use throughout your internship, especially in Task 1.

1. File & Directory Commands

These are fundamental for navigating and managing the file system.

- **ls**
 - **Description:** Lists files and directories in the current location.
 - **Common Use:** `ls -l` shows a detailed, long list.
- **cd**
 - **Description:** Changes the current directory.
 - **Common Use:** `cd /var/www/`
- **pwd**
 - **Description:** Prints the current working directory.
 - **Common Use:** `pwd` (tells you where you are).
- **mkdir**
 - **Description:** Creates a new directory.
 - **Common Use:** `mkdir my_folder`
- **rm**
 - **Description:** Removes (deletes) a file or directory.
 - **Common Use:** `rm my_file.txt` or `rm -r my_folder` to remove a directory and its contents.
- **touch**
 - **Description:** Creates a new, empty file.
 - **Common Use:** `touch new_file.txt`

2. Permissions & Ownership

These commands are crucial for managing who can access and modify files.

- **chmod**
 - **Description:** Changes a file's permissions (read, write, and execute).
 - **Common Use:** `chmod +x my_script.sh` (makes a script executable).
- **chown**
 - **Description:** Changes the owner of a file or directory.
 - **Common Use:** `chown newuser my_file.txt`.

3. Networking Commands

These commands help you check network status and test connectivity.

- **ifconfig**
 - **Description:** Displays network interface configurations and IP addresses on a Linux system.
 - **Common Use:** `ifconfig` (to find your IP).
- **ping**
 - **Description:** Tests if a network host is reachable and measures the response time.

- **Common Use:** ping 192.168.56.101.
- netstat
 - **Description:** Displays network connections, routing tables, and interface statistics.
 - **Common Use:** netstat -ano (shows active connections).
- traceroute
 - **Description:** Traces the path that network packets take to a destination.
 - **Common Use:** traceroute google.com.

4. System & Package Management

These commands are used for system administration and software management.

- sudo
 - **Description:** Executes a command with administrative privileges.
 - **Common Use:** sudo apt update.
- apt
 - **Description:** The primary tool for installing, updating, and removing software packages.
 - **Common Use:** sudo apt update and sudo apt install nmap.
- dpkg
 - **Description:** Manages software packages, often used to query or install specific .deb files.
 - **Common Use:** dpkg -l (lists all installed packages).

5. Cryptography & Security Tools

These are the commands for the hands-on security tasks.

- openssl
 - **Description:** A command-line tool for cryptography.
 - **Encrypt:** openssl enc -aes-256-cbc -in <file> -out <output_file>.
 - **Decrypt:** openssl enc -d -aes-256-cbc -in <file> -out <output_file>.
- nmap
 - **Description:** A powerful network scanning tool.
 - **Common Use:** nmap 192.168.56.101 (to scan your target).
- sudo wireshark
 - **Description:** Opens the Wireshark packet analyzer with the necessary administrative permissions.