**Linux commands**

**1. File and Directory Management Commands**

**ls**

* ls lists files in the current directory.

**ls -l**

* -l shows detailed information like permissions, ownership, and file size.

**cd /home/user**

* cd changes the current directory.

**cd ..**

* cd .. moves up one directory.

**pwd**

* Displays the full path of the current directory.

**mkdir <new\_folder\_name>**

* It create a new directory

**mkdir -p /path/to/multiple/directories**

* -p creates parent directories as needed.

**touch**

* This Command by default creates an empty file.

**cp – Copy command**

**cp <source\_file> <destination\_file>**

* It copies the source file content to destination file

**cp -r /path/to/source/ /path/to/destination/**

* -r recursively copies directories.

**mv – Move or rename command**

**mv <oldfile\_name> <newfile\_name>**

* It moves the content from one file to another file

**mv <file.txt> </path/to/new/location/>**

* Renames or moves files and directories.

**rm – Remove command**

**rm –f <file\_name>**

* It removes or deletes the files

**rm -rf <directory\_name>**

* force remove the files & folders of directory recursively (-f force).

**rmdir <empty\_folder>**

* Removes empty directories.

**2. File Viewing and Editing**

**cat <file\_name>**

* Displays the contents of a file.

**tac <file\_name>**

* Display file content in reverse order

**less <file\_name>**

* View file content one screen at a time
* Use arrow keys to scroll, q to quit.

**head <file\_name>**

* View the first 10 lines of a file

**head -n 5 <file\_name>**

* -n specifies the number of lines to display.

**tail <file\_name>**

* View the last 10 lines of a file

**tail -n 5 <file\_name>**

* -n specifies the number of lines to display.

**3. File Permissions and Ownership**

**Change file permissions**

**chmod 755 <file\_name>**

* 755 grants read, write, execute for the owner, and read/execute for group and others.

**chmod u+x <file\_name>**

* u+x adds execute permission for the owner.

**chown user:group <file\_name>**

* Changes the owner and group of a file.

**chgrp group\_name <file\_name>**

* Changes the group ownership which is associated with a file.

**4. Disk Usage and Storage**

**df -h**

* Display disk space usage
* -h shows human-readable sizes (KB, MB, GB).

**du -sh /path/to/directory/**

* Estimate file space usage
* -s provides a summary, and -h shows human-readable sizes.

**5. Process Management**

**ps**

* shows the currently running process.

**ps -ef**

* Displays all processes running on the system.

**top**

* Shows the real-time, dynamic view of the running processes of a system.

**kill <pid>**

* Terminate a process PID

**kill -9 <pid>**

* -9 forces termination.

**6. Networking Commands**

**ifconfig**

* Displays the network interface information.

**ping <hostname>**

* Test network connection. It tests the reachability & responsiveness of the remote host.

**netstat -lntp**

* Displays all listening ports and connections.

**ssh user@<remote\_host\_address>**

* Securely connect to a remote machine
* Connects to a remote system via SSH.

**wget <url>**

* Download files from the web

**curl <url>**

* Downloads the content <url> and displays it in the terminal.

**7. System Information**

**uname**

* Displays kernel and system information.

**hostname**

* Shows the name of the system host.

**hostid**

* shows the host id of the system assigned by the OS

**uptime**

* Shows the elapsed time duration since the machine logged in.

**whoami**

* Shows the currently logged-in username of the terminal.

**last**

* Displays a list of recent logins.

**date**

* Shows the current date and time in UTC format.

**history**

* lists all the commands executed until now

**8. Package Management**

**Package management for RedHat**

**sudo dnf update**

* Refresh the list of available packages.
* Check for newer versions of installed software.

**sudo dnf install <package\_name>**

* Installing the packages

**sudo dnf remove <package\_name>**

* removing the package

**9. Service Management**

**sudo systemctl start <service name>**

* **To start the service**

**sudo systemctl enable <service name>**

* **To enable the service**

**sudo systemctl disable <service name>**

* **To disable the service**

**sudo systemctl status <service name>**

* check the status of the service

**sudo systemctl restart <service name>**

* To restart a service