File and Directory Operations

**Ls**

Lists files and directories in the current directory.

Example: ls -l (lists with detailed information)

**cd**

Changes the current directory.

Example: cd /path/to/directory

**pwd**

Prints the current working directory.

Example: pwd

**mkdir**

Creates a new directory.

Example: mkdir new\_directory

**rmdir**

Removes an empty directory.

Example: rmdir directory\_to\_remove

**rm**

Removes files or directories.

Example: rm file\_to\_remove or rm -r directory\_to\_remove (for recursive removal)

**cp**

Copies files or directories.

Example: cp source\_file destination\_file or cp -r source\_directory destination\_directory (for recursive copy)

**mv**

Moves or renames files or directories.

Example: mv old\_name new\_name or mv file /path/to/destination/

**touch**

Creates an empty file or updates the timestamp of an existing file.

Example: touch new\_file

**File Viewing and Editing**

**cat**

Concatenates and displays file contents.

Example: cat file\_to\_display

**more**

Views file contents one page at a time.

Example: more file\_to\_view

less

Views file contents with backward navigation.

Example: less file\_to\_view

**head**

Displays the first few lines of a file.

Example: head file\_to\_display

**tail**

Displays the last few lines of a file.

Example: tail file\_to\_display

**vi**

Opens a file in the Vim/Vi text editor.

Example: vim file\_to\_edit or vi file\_to\_edit

**Save file**

Press escape==> : wq

File Permissions

**chmod**

Changes file permissions.

Example: chmod 755 file (sets read, write, and execute for owner, and read and execute for others)

**chown**

Changes file owner and/or group.

Example: chown user:group file

**chgrp**

Changes the group ownership of a file.

Example: chgrp group file

**System Information**

**df**

Displays disk space usage.

Example: df -h (human-readable format)

**du**

Displays disk usage of files and directories.

Example: du -sh directory (summarizes and shows human-readable format)

**free**

Displays memory usage.

Example: free -h (human-readable format)

Network Commands

**ping**

Tests connectivity to a network host.

Example: ping google.com

**ifconfig** (deprecated, use ip instead)

Displays or configures network interfaces.

Example: ifconfig

**ip**

Shows/manages IP addresses and routing.

Example: ip addr or ip route

**netstat**

Displays network connections, routing tables, and interface statistics.

Example: netstat -tuln

**wget**

Downloads files from the web.

Example: wget http://example.com/file

Process Management

ps

Displays information about active processes.

Example: ps aux (shows detailed information about all processes)

Kill

Kill the process

EG : kill PID

Find handling commands

Grep : grep is a powerful command-line utility in Linux used for searching text within files or command output

**grep** -i "pattern" file.txt

-i: Ignore case (case-insensitive search).

**EG** : **grep** -i "pattern" file.txt

Grep -r or -R: Recursively search directories

**EG : grep** -r "pattern" /path/to/directory

-l: List filenames that contain the pattern.

**grep** -l "pattern" \*.txt

-c: Count the number of lines that match the pattern.

**EG** : grep -c "pattern" file.txt

Search for a pattern in multiple file

EG : g**rep "text\_to\_find" file1.txt file2.txt :**

Download Any File

1. Download any software using wget:

**wget :** command-line utility used for downloading files from the web.

**EG**

Wget https://downloads.apache.org/tomcat/tomcat-9/v9.0.75/bin/apache-tomcat-9.0.75.tar.gz

Replace 9.0.75 with the latest version you want to install.

Alternatively, using curl:

**curl** -O https://downloads.apache.org/tomcat/tomcat-9/v9.0.75/bin/apache-tomcat-9.0.75.tar.gz

1. Unzip the File

After downloading, extract the archive file:

**tar** xvf apache-tomcat-9.0.75.tar.gz

3. Move Tomcat to a Preferred Directory

You might want to move Tomcat to a more appropriate location, such as /opt:

sudo mv apache-tomcat-9.0.75 /opt/tomcat

4. Set Up Environment Variables

You can set environment variables to simplify running Tomcat commands. You might want to add these to your .bashrc, .bash\_profile, or .profile file:

export CATALINA\_HOME=/opt/tomcat

export PATH=$PATH:$CATALINA\_HOME/bin

After editing, load the environment variables:

source ~/.bashrc

5. Start Tomcat

Navigate to the Tomcat bin directory and start Tomcat:

bash

cd /opt/tomcat/bin

./startup.sh