1. Creating and Renaming Files/Directories Create a directory named test\_dir using mkdir. Inside test\_dir, create an empty file called example.txt. Rename example.txt to renamed\_example.txt using mv

Command:

niraj--code@ABHILASH:~$ mkdir test\_dir

niraj--code@ABHILASH:~$ cd test\_dir

niraj--code@ABHILASH:~/test\_dir$ touchexample.txt

touchexample.txt: command not found

niraj--code@ABHILASH:~/test\_dir$ touch example.txt

niraj--code@ABHILASH:~/test\_dir$ mv example.txt renamed\_example.txt

A screen shot of a computer screen

AI-generated content may be incorrect.

Explanation:

- mkdir creates a directory named test\_dir

- touch creates an empty file

- mv renames the file

**2**. Viewing File Contents Use cat to display the contents of /etc/passwd. Display only the first 5 lines of /etc/passwd using head. Display only the last 5 lines of /etc/passwd using tail.

Command:

niraj--code@ABHILASH:~$ cd test\_dir

niraj--code@ABHILASH:~/test\_dir$ cat /etc/passwd

root:x:0:0:root:/root:/bin/bash

daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin

bin:x:2:2:bin:/bin:/usr/sbin/nologin

sys:x:3:3:sys:/dev:/usr/sbin/nologin

sync:x:4:65534:sync:/bin:/bin/sync

games:x:5:60:games:/usr/games:/usr/sbin/nologin

man:x:6:12:man:/var/cache/man:/usr/sbin/nologin

lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin

mail:x:8:8:mail:/var/mail:/usr/sbin/nologin

news:x:9:9:news:/var/spool/news:/usr/sbin/nologin

uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin

proxy:x:13:13:proxy:/bin:/usr/sbin/nologin

www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin

backup:x:34:34:backup:/var/backups:/usr/sbin/nologin

list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin

irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin

\_apt:x:42:65534::/nonexistent:/usr/sbin/nologin

nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin

systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin

systemd-timesync:x:996:996:systemd Time Synchronization:/:/usr/sbin/nologin

dhcpcd:x:100:65534:DHCP Client Daemon,,,:/usr/lib/dhcpcd:/bin/false

messagebus:x:101:101::/nonexistent:/usr/sbin/nologin

syslog:x:102:102::/nonexistent:/usr/sbin/nologin

systemd-resolve:x:991:991:systemd Resolver:/:/usr/sbin/nologin

uuidd:x:103:103::/run/uuidd:/usr/sbin/nologin

landscape:x:104:105::/var/lib/landscape:/usr/sbin/nologin

polkitd:x:990:990:User for polkitd:/:/usr/sbin/nologin

niraj--code:x:1000:1000:,,,:/home/niraj--code:/bin/bash

niraj--code@ABHILASH:~/test\_dir$ head -n 5 /etc/passwd

root:x:0:0:root:/root:/bin/bash

daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin

bin:x:2:2:bin:/bin:/usr/sbin/nologin

sys:x:3:3:sys:/dev:/usr/sbin/nologin

sync:x:4:65534:sync:/bin:/bin/sync

niraj--code@ABHILASH:~/test\_dir$ tail -n 5 /etc/passwd

systemd-resolve:x:991:991:systemd Resolver:/:/usr/sbin/nologin

uuidd:x:103:103::/run/uuidd:/usr/sbin/nologin

landscape:x:104:105::/var/lib/landscape:/usr/sbin/nologin

polkitd:x:990:990:User for polkitd:/:/usr/sbin/nologin

niraj--code:x:1000:1000:,,,:/home/niraj--code:/bin/bashA computer screen shot of a program

AI-generated content may be incorrect.

Explanation:

 /etc/passwd holds **user account information**.

 cat shows the entire file.

 head shows the beginning.

 tail shows the end

**3** . Searching for Patterns Use grep to find all lines containing the word "root" in /etc/passwd.

Command:

niraj--code@ABHILASH:~/test\_dir$ grep "root" /etc/passwd

root:x:0:0:root:/root:/bin/bash

niraj--code@ABHILASH:~/test\_dir$ grep "root"/etc/passwd

^Z

[1]+ Stopped grep --color=auto "root"/etc/passwdA screen shot of a computer code

AI-generated content may be incorrect.

**4**. Zipping and Unzipping Compress the test\_dir directory into a file named test\_dir.zip using zip. Unzip test\_dir.zip into a new directory named unzipped\_dir.

Command:

niraj--code@ABHILASH:~/test\_dir$ zip -r test\_dir.zip test\_dir

Command 'zip' not found, but can be installed with:

sudo apt install zip

niraj--code@ABHILASH:~/test\_dir$ sudo apt install zip

[sudo] password for niraj--code:

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

The following additional packages will be installed:

unzip

The following NEW packages will be installed:

unzip zip

0 upgraded, 2 newly installed, 0 to remove and 185 not upgraded.

Need to get 350 kB of archives.

After this operation, 933 kB of additional disk space will be used.

Do you want to continue? [Y/n] y

Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 unzip amd64 6.0-28ubuntu4.1 [174 kB]

Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 zip amd64 3.0-13ubuntu0.2 [176 kB]

Fetched 350 kB in 3s (132 kB/s)

Selecting previously unselected package unzip.

(Reading database ... 40794 files and directories currently installed.)

Preparing to unpack .../unzip\_6.0-28ubuntu4.1\_amd64.deb ...

Unpacking unzip (6.0-28ubuntu4.1) ...

Selecting previously unselected package zip.

Preparing to unpack .../zip\_3.0-13ubuntu0.2\_amd64.deb ...

Unpacking zip (3.0-13ubuntu0.2) ...

Setting up unzip (6.0-28ubuntu4.1) ...

Setting up zip (3.0-13ubuntu0.2) ...

Processing triggers for man-db (2.12.0-4build2) ...

niraj--code@ABHILASH:~/test\_dir$ sudo apt install zip

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

zip is already the newest version (3.0-13ubuntu0.2).

0 upgraded, 0 newly installed, 0 to remove and 185 not upgraded.

niraj--code@ABHILASH:~/test\_dir$ mkdir unzipped\_dir

niraj--code@ABHILASH:~/test\_dir$ unzip test\_dir.zip -d unzipped\_dir

unzip: cannot find or open test\_dir.zip, test\_dir.zip.zip or test\_dir.zip.ZIP. A computer screen shot of a program

AI-generated content may be incorrect.

**5**. Downloading Files Use wget to download a file from a URL (e.g., <https://example.com/sample.txt>).

Command:

niraj--code@ABHILASH:~/test\_dir$ wget https://example.com/sample.txt

--2025-09-13 10:58:08-- https://example.com/sample.txt

Resolving example.com (example.com)... 23.192.228.84, 23.215.0.136, 23.215.0.138, ...

Connecting to example.com (example.com)|23.192.228.84|:443... connectedA computer code with numbers and letters

AI-generated content may be incorrect.

**6**. Changing Permissions Create a file named secure.txt and change its permissions to read-only for everyone using chmod

Command:

niraj--code@ABHILASH:~/test\_dir$ touch secure.txt

niraj--code@ABHILASH:~/test\_dir$ chmod 444 secure.txt

**7**. Working with Environment Variables Use export to set a new environment variable called MY\_VAR with the value "Hello, Linux!".

Command:

niraj--code@:~/test\_dir$ export MY\_VAR="Hello Linux!"

niraj--code@ABHILASH:~/test\_dir$ echo $MY\_VAR

Hello Linux!

A black background with white text

AI-generated content may be incorrect.