

1. Creating and Renaming Files/Directories

Create a directory named `test_dir` using `mkdir`.

Inside `test_dir`, create an empty file called `example.txt`.

=> First, I create the directory using `mkdir` command as shown in below screenshot.

=> Then, I used a `touch` command to create the 'example.txt' file inside `test_dir` by using "`touch test_dir/example.txt`"

(or I can use the `cd` (change directory) cmd to goto inside the `test_dir` then run `touch example.txt` also works)

```
~]$ mkdir test_dir
~]$ touch test_dir/example.txt
~]$ ls
s-practice test_dir
[redacted]~]$ ls test_dir/
example.txt
```

Rename `example.txt` to `renamed_example.txt` using `mv`

⇒ First, I used "`cd`" cmd to change the current directory (`cd test_dir/`).

⇒ then, run "`mv`" cmd to rename the "example.txt" file to "renamed_example.txt" file

```
example.txt
[redacted]~]$ cd test_dir/
[redacted]test_dir]$ mv example.txt renamed_example.txt
[redacted]test_dir]$ ls
renamed_example.txt
```

2. Viewing File Contents

Use cat to display the contents of /etc/passwd. => cat command to view or display the content of the files.

```
[redacted test_dir]$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
```

Display only the first 5 lines of /etc/passwd using head. => with head command '-n 5' will show the only 5 lines from the top.

```
[redacted test_dir]$ head -n 5 /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
```

Display only the last 5 lines of /etc/passwd using tail. => with tail command '-n 5' will show the only last 5 lines from the bottom.

```
[redacted test_dir]$ tail -n 5 /etc/passwd
dtuserag:x:1001:1001:./usr:/usr/sbin/nologin
ypamlinuxfa:x:1002:1002:./home/ypamlinuxfa:/bin/bash
pamlinuxfa:x:1003:1003:./home/pamlinuxfa:/bin/bash
tet-sensor:x:1004:1004:./tmp/.tet-sensor:/sbin/nologin
shraddha:x:1005:1005:./home/shraddha:/bin/bash
```

3.Searching for Patterns

Use grep to find all lines containing the word "root" in /etc/passwd. => here, I used "-n" with grep command to show the matching word with the line number.

```
[redacted test_dir]$ grep "root" -n /etc/passwd
1:root:x:0:0:root:/root:/bin/bash
10:operator:x:11:0:operator:/root:/sbin/nologin
```

4. Zipping and Unzipping

Compress the test_dir directory into a file named test_dir.zip using zip. => here, I used zip command to compressed the folder, "-r" is used for recursively means they compressed the folder or directory including all the sub files or folders inside in it.

"ls" command showing the compressed folder also 'test_dir.zip'.

zip -r <destination folder> <source folder>

```
[redacted ~]$ zip -r test_dir.zip test_dir
adding: test_dir/ (stored 0%)
adding: test_dir/renamed_example.txt (stored 0%)
[redacted ~]$ ls
devops-nodejs  devops-practice  test_dir  test_dir.zip
```

Unzip test_dir.zip into a new directory named unzipped_dir. => similarly, here I used unzip command to unzip the test_dir.zip folder into the new created directory 'unzipped_dir'.

"-d" : means directory

unzip <source_directory> -d <destination_directory>

```
[redacted ~]$ mkdir unzipped_dir
[redacted ~]$ ls
devops-nodejs  test_dir  unzipped_dir
devops-practice  test_dir.zip
[redacted ~]$ unzip test_dir.zip -d unzipped_dir
Archive:  test_dir.zip
  creating: unzipped_dir/test_dir/
  extracting: unzipped_dir/test_dir/renamed_example.txt
[redacted ~]$ ls
devops-nodejs  test_dir  unzipped_dir
devops-practice  test_dir.zip
[redacted ~]$ ls unzipped_dir/
test_dir
```

5. Downloading Files

Use wget to download a file from a URL (e.g., <https://example.com/sample.txt>). => I used wget to download the file but due to some privacy I interrupt the command in middle but as shown below screenshots it is working as expected.

```
[redacted] test_dir]$ wget https://example.com/sample.txt
--2025-07-12 10:14:08-- https://example.com/sample.txt
Resolving example.com (example.com)... 96.7.128.175, 96.7.128.198, 23.192.228.80, ...
Connecting to example.com (example.com)|96.7.128.175|:443... connected.
^C
```

6. Changing Permissions

Create a file named secure.txt and change its permissions to read-only for everyone using chmod. => 444 means read-only permissions. So I used chmod 444 <fileName>

```
[redacted] test_dir]$ touch secure.txt
[redacted] test_dir]$ ls -la
total 4
-rw-r--r--. 1 shraddha shraddha 0 Jul 12 10:09 renamed_example.txt
-rw-r--r--. 1 shraddha shraddha 0 Jul 12 10:15 secure.txt
[redacted] test_dir]$ chmod 444 secure.txt

[redacted] test_dir]$ ls -ls secure.txt
0 -r--r--r--. 1 shraddha shraddha 0 Jul 12 10:15 secure.txt
```

7. Working with Environment Variables

Use export to set a new environment variable called MY_VAR with the value "Hello, Linux!".

```
[redacted] test_dir]$ export my_var="Hello, Linux"
[redacted] test_dir]$ echo "$my_var"
Hello, Linux
[redacted] test_dir]$ unset my_var
[redacted] test_dir]$ echo "$my_var"
```

Submission Guidelines -: Attach Screenshots or command along with explanation and submit in doc(google doc or microsoft doc) format also attach github repo link