

## 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

Ans : -

```
ansi@DESKTOP-JT8V6B9: ~
ansi@DESKTOP-JT8V6B9:~$ mkdir test_dir
ansi@DESKTOP-JT8V6B9:~$ ls
ansi-1 ansi-1.tar compressed-folder.tar folder-1 test_dir
ansi@DESKTOP-JT8V6B9:~$ _
```

Creating New directory : - the command is used to Make directly as ‘mkdir’.  
The directory has been created and the name has test\_dir ..

```
ansi@DESKTOP-JT8V6B9:~/test_dir
ansi@DESKTOP-JT8V6B9:~$ mkdir test_dir
ansi@DESKTOP-JT8V6B9:~$ ls
ansi-1 ansi-1.tar compressed-folder.tar folder-1 test_dir
ansi@DESKTOP-JT8V6B9:~$ cd test_dir
ansi@DESKTOP-JT8V6B9:~/test_dir$ touch example.txt
ansi@DESKTOP-JT8V6B9:~/test_dir$ ls
example.txt
ansi@DESKTOP-JT8V6B9:~/test_dir$ _
```

Inside That directory creating New empty & blank file so use That Touch & Name Of the File.

```
Q anshutamrakar@DESKTOP-JT8V6B9: ~/test_dir
anshutamrakar@DESKTOP-JT8V6B9:~$ mkdir test_dir
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
anshu-1 anshu-1.tar compressed-folder.tar folder-1 test_dir
anshutamrakar@DESKTOP-JT8V6B9:~$ cd test_dir
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ touch example.txt
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ ls
example.txt
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ ^C
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ mv exmaple.txt renamed_example.txt
mv: cannot stat 'exmaple.txt': No such file or directory
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ mv example.txt renamed_example.txt
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ ls
renamed_example.txt
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$
```

Using mv we can remove & rename The file name so the Command Is Mv my Oldfile Newfile.

## 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.**

**Ans :**

```
anshutamrakar@DESKTOP-JT8V6B9:~/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
dhpcd:x:100:65534:DHCP Client Daemon,,,,:/usr/lib/dhpcd:/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
anshutamrakar:x:1000:1000,,,,:/home/anshutamrakar:/bin/bash
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$
```

By using cat we can Display The File Content .

Like above

Now If we Wanted to see First 5 using Head

Now If we Wanted To see The Last 5 using Tail

```
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ head -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
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ ^C
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ tail -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
anshutamrakar:x:1000:1000,,,,:/home/anshutamrakar:/bin/bash
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ .
```

### 3.Searching for Patterns

Use grep to find all lines containing the word "root" in /etc/passwd.

**So we can use here cat & file name with pipe Symbol then grep the content which we have to find on that specific file & also we wanted to see the line no then we can use - n in the last.**

```
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ cat /etc/passwd | grep root
root:x:0:0:root:/root:/bin/bash
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ cat /etc/passwd | grep root -n
1:root:x:0:0:root:/root:/bin/bash
anshutamrakar@DESKTOP-JT8V6B9:~/test_dir$ -
```

#### 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.**

Using tar we have compressed the file.

Tar -cvf test\_dir.zip here am using-cvf for zip the file & in that am using gz bcz gzip compression.

```
tar_cvf: command not found
anshutamrakar@DESKTOP-JT8V6B9:~$ tar -cvf test_dir.tar.gz test_dir
test_dir/
test_dir/test_dir.tar
test_dir/renamed_example.txt
anshutamrakar@DESKTOP-JT8V6B9:~$ -
```

For unzip that file using So I have Created Here New directly using mkdir Then unzipped the file -c Create .

```
anshutamrakar@DESKTOP-JT8V6B9:~$ mkdir test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
anshu-1.tar  compressed-folder.tar  folder-1  test_dir  test_dir.tar  test_dir.tar.gz  test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$ tar -xvf test_dir.tar.gz -C test_dir2
test_dir/
test_dir/test_dir.tar
test_dir/renamed_example.txt
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
anshu-1  anshu-1.tar  compressed-folder.tar  folder-1  test_dir  test_dir.tar  test_dir.tar.gz  test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$
```

Instead of Using Tar we Can also do the Same using Zip 7 Unzip .

## 5. Downloading Files

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

Here I am just using normal png txt like this. We can download any txt file as well any files .

```
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
anshu-1 anshu-1.tar compressed-folder.tar folder-1 test_dir test_dir.tar test_dir.tar.gz test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$ wget https://www.w3.org/TR/PNG.txt
--2026-01-12 19:27:42-- https://www.w3.org/TR/PNG.txt
Resolving www.w3.org (www.w3.org)... 104.18.23.19, 104.18.22.19, 2606:4700::6812:1613, ...
Connecting to www.w3.org (www.w3.org)|104.18.23.19|:443... connected.
HTTP request sent, awaiting response... 300 Multiple Choices
Length: unspecified [text/html]
Saving to: 'PNG.txt'

[<=>]      562  --.-K
2026-01-12 19:27:43 (2.27 MB/s) - 'PNG.txt' saved [562]

anshutamrakar@DESKTOP-JT8V6B9:~$ ls
PNG.txt anshu-1 anshu-1.tar compressed-folder.tar folder-1 test_dir test_dir.tar test_dir.tar.gz test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$
```



## 6. Changing Permissions

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

Here am Just using chmod command to no one can modify just read it .

```

anshutamrakar@DESKTOP-JT8V6B9: ~
anshutamrakar@DESKTOP-JT8V6B9:~$ touch secure.txt
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
PNG.txt anshu-1 anshu-1.tar compressed-folder.tar folder-1 secure.txt test_dir test_dir.tar test_dir.tar.gz test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$ chmod 444 secure.txt
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
PNG.txt anshu-1 anshu-1.tar compressed-folder.tar folder-1 secure.txt test_dir test_dir.tar test_dir.tar.gz test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$ ls -al
total 304
drwxr-x--- 7 anshutamrakar anshutamrakar 4096 Jan 12 19:30 .
drwxr-xr-x 3 root root 4096 Jan 11 18:49 ..
-rw-r--r-- 1 anshutamrakar anshutamrakar 220 Jan 11 18:49 .bash_logout
-rw-r--r-- 1 anshutamrakar anshutamrakar 3771 Jan 11 18:49 .bashrc
drwx----- 2 anshutamrakar anshutamrakar 4096 Jan 11 18:49 .cache
drwxr-xr-x 2 anshutamrakar anshutamrakar 4096 Jan 12 17:11 .landscape
-rw----- 1 anshutamrakar anshutamrakar 20 Jan 12 16:51 .lessshst
-rw-r--r-- 1 anshutamrakar anshutamrakar 0 Jan 12 17:11 .motd_shown
-rwxr-xr-x 1 anshutamrakar anshutamrakar 807 Jan 11 18:49 .profile
-rw-r--r-- 1 anshutamrakar anshutamrakar 165 Jan 12 19:27 .wget-hsts
-rw-r--r-- 1 anshutamrakar anshutamrakar 562 Jan 12 19:27 PNG.txt
drwxr-xr-x 2 anshutamrakar anshutamrakar 4096 Jan 12 17:01 anshu-1
-rw-r--r-- 1 anshutamrakar anshutamrakar 40960 Jan 12 17:01 anshu-1.tar
-rw-r--r-- 1 anshutamrakar anshutamrakar 40960 Jan 12 17:01 compressed-folder.tar
-rw-r--r-- 1 anshutamrakar anshutamrakar 0 Jan 11 19:29 folder-1
-rw-r--r-- 1 anshutamrakar anshutamrakar 0 Jan 12 19:30 secure.txt
drwxr-xr-x 2 anshutamrakar anshutamrakar 4096 Jan 12 18:40 test_dir
-rw-r--r-- 1 anshutamrakar anshutamrakar 153600 Jan 12 18:46 test_dir.tar
-rw-r--r-- 1 anshutamrakar anshutamrakar 20480 Jan 12 18:50 test_dir.tar.gz
drwxr-xr-x 3 anshutamrakar anshutamrakar 4096 Jan 12 18:55 test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$
```

## 7. Working with Environment Variables

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

```

anshutamrakar@DESKTOP-JT8V6B9:~$ 
anshutamrakar@DESKTOP-JT8V6B9:~$ export MY_VAR="Hello, Linux"
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
PNG.txt anshu-1 anshu-1.tar compressed-folder.tar folder-1 secure.txt test_dir test_dir.tar test_dir.tar.gz test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$ echo
anshutamrakar@DESKTOP-JT8V6B9:~$ echo $MY_VAR
Hello, Linux
anshutamrakar@DESKTOP-JT8V6B9:~$ ls
PNG.txt anshu-1 anshu-1.tar compressed-folder.tar folder-1 secure.txt test_dir test_dir.tar test_dir.tar.gz test_dir2
anshutamrakar@DESKTOP-JT8V6B9:~$
```

Setting the New Env Use Export env Varibale And to see them use echo \$The Name Of variable .