GitHub Repository Link:-

1. Creating and Renaming Files/Directories

mkdir test_dir   # Creates a directory named test_dir

cd test_dir   # Move into the directory

touch example.txt   # Create an empty file named example.txt

mv example.txt renamed_example.txt   # Rename the file to renamed_example.txt

```
[root@ip-10-0-140-20 ~]# mkdir test_dir
[root@ip-10-0-140-20 ~]#
[root@ip-10-0-140-20 ~]# ls
test_dir
[root@ip-10-0-140-20 ~]# cd test_dir
[root@ip-10-0-140-20 test_dir]# touch example.txt
[root@ip-10-0-140-20 test_dir]# ls
example.txt
[root@ip-10-0-140-20 test_dir]# mv example.txt renamed_example.txt
[root@ip-10-0-140-20 test_dir]# ls
renamed_example.txt
[root@ip-10-0-140-20 test_dir]#
```


2. Viewing File Contents

cat /etc/passwd   # Display contents of the file

```
[root@ip-10-0-140-20 test]# cat /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
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
systemd-network:x:192:192:systemd Network Management:/:/usr/sbin/nologin
systemd-oom:x:999:999:systemd Userspace OOM Killer:/:/usr/sbin/nologin
systemd-resolve:x:193:193:systemd Resolver:/:/usr/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/usr/share/empty.sshd:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
libstoragemgmt:x:997:997:daemon account for libstoragemgmt:/:/usr/sbin/nologin
systemd-coredump:x:996:996:systemd Core Dumper:/:/usr/sbin/nologin
systemd-timesync:x:995:995:systemd Time Synchronization:/:/usr/sbin/nologin
chrony:x:994:994:chrony system user:/var/lib/chrony:/sbin/nologin
ec2-instance-connect:x:993:993::/home/ec2-instance-connect:/sbin/nologin
stapunpriv:x:159:159:systemtap unprivileged user:/var/lib/stapunpriv:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
tcpdump:x:72:72::/:/sbin/nologin
ec2-user:x:1000:1000:EC2 Default User:/home/ec2-user:/bin/bash
shivay:x:1001:1001::/home/shivay:/bin/bash
```

head -n 5 /etc/passwd   # Show the first 5 lines

```
[root@ip-10-0-140-20 test]# 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
```

tail -n 5 /etc/passwd   # Show the last 5 lines

```
[root@ip-10-0-140-20 test]# tail -n 5 /etc/passwd
stapunpriv:x:159:159:systemtap unprivileged user:/var/lib/stapunpriv:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
tcpdump:x:72:72::/:/sbin/nologin
ec2-user:x:1000:1000:EC2 Default User:/home/ec2-user:/bin/bash
shivay:x:1001:1001::/home/shivay:/bin/bash
```

3. Searching for Patterns

grep "root" /etc/passwd   #search "root" word inside "/etc/passwd"

```
[root@ip-10-0-140-20 test]# grep "root" /etc/passwd
root:x:0:0:root:/root:/bin/bash
operator:x:11:0:operator:/root:/sbin/nologin
```

4. Zipping and Unzipping

zip -r test_dir.zip test_dir   # Compress test_dir into a zip file

```
[root@ip-10-0-140-20 ~]# zip -r test_dir.zip test_dir
  adding: test_dir/ (stored 0%)
  adding: test_dir/renamed_example.txt (stored 0%)
```

unzip test_dir.zip -d unzipped_dir   # Extract into unzipped_dir

```
[root@ip-10-0-140-20 ~]# ls
test_dir  test_dir.zip
[root@ip-10-0-140-20 ~]# unzip test_dir.zip -d unzipped_dir
Archive:  test_dir.zip
   creating: unzipped_dir/test_dir/
 extracting: unzipped_dir/test_dir/renamed_example.txt
[root@ip-10-0-140-20 ~]# ls
test_dir  test_dir.zip  unzipped_dir
[root@ip-10-0-140-20 ~]#
```

5. Downloading Files

wget https://example.com/sample.txt   #download files from the internet via a URL.

```
[root@ip-10-0-140-20 ~]# wget https://example.com/sample.txt
--2025-06-28 10:14:26--  https://example.com/sample.txt
Resolving example.com (example.com)... 23.215.0.138, 96.7.128.175, 96.7.128.198, ...
Connecting to example.com (example.com)|23.215.0.138|:443... connected.
HTTP request sent, awaiting response... 404 Not Found
2025-06-28 10:14:27 ERROR 404: Not Found.
```

6. Changing Permissions

touch secure.txt   # Create an empty file named secure.txt

```
[root@ip-10-0-140-20 ~]# ls -l
total 4
-rw-r--r--. 1 root root   0 Jun 28 10:15 secure.txt
drwxr-xr-x. 2 root root  33 Jun 28 09:59 test_dir
-rw-r--r--. 1 root root 352 Jun 28 10:00 test_dir.zip
drwxr-xr-x. 3 root root  22 Jun 28 10:07 unzipped_dir
```

chmod 444 secure.txt   # chmod 444 sets the file permission to read-only for all users (owner, group, others).

```
[root@ip-10-0-140-20 ~]# ls -l
total 4
-r--r--r--. 1 root root   0 Jun 28 10:15 secure.txt
drwxr-xr-x. 2 root root  33 Jun 28 09:59 test_dir
-rw-r--r--. 1 root root 352 Jun 28 10:00 test_dir.zip
drwxr-xr-x. 3 root root  22 Jun 28 10:07 unzipped_dir
```

7. Working with Environment Variables

export MY_VAR="Hello, Linux!"   # export sets an environment variable in the current shell session.

```
[root@ip-10-0-140-20 ~]# export MY_VAR="Hello, Linux!"
[root@ip-10-0-140-20 ~]# echo $MY_VAR
Hello, Linux!
```