1. Creating and Renaming Files/Directories

- ➢ Create a directory named test_dir using mkdir.
  - o mkdir test_dir

```
zubair@Zubair:~/practice-1$ mkdir test_dir
zubair@Zubair:~/practice-1$ ls
test_dir
zubair@Zubair:~/practice-1$
```

- ➢ Inside test_dir, create an empty file called example.txt.
  - o cd mkdir; touch example.txt

```
zubair@Zubair:~/practice-1$ cd test_dir
zubair@Zubair:~/practice-1/test_dir$ touch example.txt
zubair@Zubair:~/practice-1/test_dir$ ls
example.txt
zubair@Zubair:~/practice-1/test_dir$
```

- ➢ Rename example.txt to renamed_example.txt using mv
  - o mv example.txt renamed_example.txt

```
zubair@Zubair:~/practice-1/test_dir$ mv example.txt renamed_example.txt
zubair@Zubair:~/practice-1/test_dir$ ls
renamed_example.txt
zubair@Zubair:~/practice-1/test_dir$
```

2. Viewing File Contents

- ➢ Use cat to display the contents of /etc/passwd.
  - o cat /etc/passwd

```
zubair@Zubair:~/practice-1$ 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
zubair:x:1000:1000:,,,:/home/zubair:/bin/bash
zubair@Zubair:~/practice-1$
```

- ➢ Display only the first 5 lines of /etc/passwd using head.
  - o head -n 5 /etc/passwd

```
zubair@Zubair:~/practice-1$ 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
zubair@Zubair:~/practice-1$
```

- ➢ Display only the last 5 lines of /etc/passwd using tail.
  - o tail -n 5 /etc/passwd

```
zubair@Zubair:~/practice-1$ 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
zubair:x:1000:1000:,,,:/home/zubair:/bin/bash
zubair@Zubair:~/practice-1$
```

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

  ```
  zubair@Zubair:~/practice-1$ grep root /etc/passwd
  root:x:0:0:root:/root:/bin/bash
  zubair@Zubair:~/practice-1$
  ```

4. Zipping and Unzipping
- ➢ Compress the test_dir directory into a file named test_dir.zip using zip.
  - ○ zip test_dir.zip test_dir

  ```
  zubair@Zubair:~/practice-1$ zip test_dir.zip test_dir
    adding: test_dir/ (stored 0%)
  zubair@Zubair:~/practice-1$ ls
  test_dir  test_dir.zip
  zubair@Zubair:~/practice-1$
  ```
- ➢ Unzip test_dir.zip into a new directory named unzipped_dir.
  - ○ unzip test_dir.zip

  ```
  zubair@Zubair:~/practice-1$ ls
  test_dir  test_dir.zip
  zubair@Zubair:~/practice-1$ rm -r test_dir
  zubair@Zubair:~/practice-1$ ls
  test_dir.zip
  zubair@Zubair:~/practice-1$ unzip test_dir.zip
  Archive:  test_dir.zip
     creating: test_dir/
  zubair@Zubair:~/practice-1$ ls
  test_dir   test_dir.zip
  zubair@Zubair:~/practice-1$
  ```

5. Downloading Files
- ➢ Use wget to download a file from a URL (e.g., https://example.com/sample.txt).
  - ○ wget https://txt2html.sourceforge.net/sample.txt

  ```
  zubair@Zubair:~/practice-1$ wget https://txt2html.sourceforge.net/sample.txt
  --2025-06-18 19:17:34--  https://txt2html.sourceforge.net/sample.txt
  Resolving txt2html.sourceforge.net (txt2html.sourceforge.net)... 104.18.13.149, 104.18.12.149, 2606:4700::6812:c95, ...
  Connecting to txt2html.sourceforge.net (txt2html.sourceforge.net)|104.18.13.149|:443... connected.
  HTTP request sent, awaiting response... 200 OK
  Length: unspecified [text/plain]
  Saving to: 'sample.txt'

  sample.txt                        [ <=>                                                    ]   9.16K  --.-KB/s    in 0.001s

  2025-06-18 19:17:34 (10.7 MB/s) - 'sample.txt' saved [9384]

  zubair@Zubair:~/practice-1$ ls
  sample.txt  test_dir  test_dir.zip
  zubair@Zubair:~/practice-1$
  ```

6. Changing Permissions
- ➢ Create a file named secure.txt and change its permissions to read-only for everyone using chmod.
  - ○ touch secure.txt
  - ○ chmod 444 secure.txt

  ```
  zubair@Zubair:~/practice-1$ touch secure.txt
  zubair@Zubair:~/practice-1$ chmod 444 secure.txt
  zubair@Zubair:~/practice-1$ ls -l
  total 20
  -rw-r--r-- 1 zubair zubair 9384 May 11  2012 sample.txt
  -r--r--r-- 1 zubair zubair    0 Jun 18 19:18 secure.txt
  drwxr-xr-x 2 zubair zubair 4096 Jun 18 19:14 test_dir
  -rw-r--r-- 1 zubair zubair  168 Jun 18 19:14 test_dir.zip
  zubair@Zubair:~/practice-1$
  ```

7. Working with Environment Variables
- ➢ Use export to set a new environment variable called MY_VAR with the value "Hello, Linux!".
    - ○ export MY_VAR="Hello Linux!"

```
zubair@Zubair:~/practice-1$ export MY_VAR="Hello Linux!"
zubair@Zubair:~/practice-1$ echo $MY_VAR
Hello Linux!
zubair@Zubair:~/practice-1$
```

Github Link: https://github.com/zubairf10/TD_DevOps

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