

# Assignment-1

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

```
# Create a directory named test_dir
```

```
mkdir test_dir
```

```
# Create an empty file called example.txt inside test_dir
```

```
touch test_dir/example.txt
```

```
# Rename example.txt to renamed_example.txt
```

```
mv test_dir/example.txt test_dir/renamed_example.txt
```

```
tej333@MSI:~/tude/Assignment-1$ mkdir test_dir
tej333@MSI:~/tude/Assignment-1$ ls
test_dir
tej333@MSI:~/tude/Assignment-1$ touch test_dir/example.txt
tej333@MSI:~/tude/Assignment-1$ ls
test_dir
tej333@MSI:~/tude/Assignment-1$ ls test_dir/
example.txt
tej333@MSI:~/tude/Assignment-1$ mv test_dir/example.txt test_dir/renamed_example.txt
tej333@MSI:~/tude/Assignment-1$ ls
test_dir
tej333@MSI:~/tude/Assignment-1$ ls test_dir/
renamed_example.txt
tej333@MSI:~/tude/Assignment-1$
```

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.

```
# Display the entire contents of /etc/passwd
```

```
cat /etc/passwd
```

```
# Display only the first 5 lines of /etc/passwd
```

```
head -n 5 /etc/passwd
```

```
# Display only the last 5 lines of /etc/passwd
```

```
tail -n 5 /etc/passwd
```

```
tej333@MSI:~/tude/Assignment-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:/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
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:102:105::/nonexistent:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
syslog:x:104:111::/home/syslog:/usr/sbin/nologin
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
uuidd:x:106:112::/run/uuidd:/usr/sbin/nologin
tcpdump:x:107:113::/nonexistent:/usr/sbin/nologin
tej333:x:1000:1000:,,,:/home/tej333:/bin/bash
sshd:x:108:65534::/run/sshd:/usr/sbin/nologin
john_doe:x:1001:1002::/home/john_doe:/bin/sh
teja:x:1002:1003::/home/teja:/bin/sh
```

```
tej333@MSI:~/tude/Assignment-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
tej333@MSI:~/tude/Assignment-1$ tail -n 5 /etc/passwd
tcpdump:x:107:113::/nonexistent:/usr/sbin/nologin
tej333:x:1000:1000:,,,:/home/tej333:/bin/bash
sshd:x:108:65534::/run/sshd:/usr/sbin/nologin
john_doe:x:1001:1002::/home/john_doe:/bin/sh
teja:x:1002:1003::/home/teja:/bin/sh
tej333@MSI:~/tude/Assignment-1$ |
```

### 3. Searching for Patterns

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

```
grep "root" /etc/passwd
```

```
tej333@MSI:~/tude/Assignment-1$ grep "root" /etc/passwd
root:x:0:0:root:/root:/bin/bash
tej333@MSI:~/tude/Assignment-1$ |
```

### 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.

```
# Compress the test_dir directory into test_dir.zip
```

```
zip -r test_dir.zip test_dir
```

```
# Unzip test_dir.zip into a new directory named unzipped_dir
```

```
unzip test_dir.zip -d unzipped_dir
```

```
tej333@MSI:~/tude/Assignment-1$ ls
test_dir
tej333@MSI:~/tude/Assignment-1$ zip -r test_dir.zip test_dir
  adding: test_dir/ (stored 0%)
  adding: test_dir/renamed_example.txt (stored 0%)
tej333@MSI:~/tude/Assignment-1$ ls
test_dir  test_dir.zip
tej333@MSI:~/tude/Assignment-1$ rm -rf test_dir
tej333@MSI:~/tude/Assignment-1$ unzip test_dir.zip -d unzipped_dir
Archive: test_dir.zip
  creating: unzipped_dir/test_dir/
 extracting: unzipped_dir/test_dir/renamed_example.txt
tej333@MSI:~/tude/Assignment-1$ ls
test_dir.zip  unzipped_dir
tej333@MSI:~/tude/Assignment-1$ ls unzipped_dir/
test_dir
tej333@MSI:~/tude/Assignment-1$ ls unzipped_dir/test_dir/
renamed_example.txt
tej333@MSI:~/tude/Assignment-1$ |
```

## 5. Downloading Files

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

```
wget https://www.gnu.org/licenses/gpl-3.0.txt
```

```
tej333@MSI:~/tude/Assignment-1$ ls
test_dir.zip  unzipped_dir
tej333@MSI:~/tude/Assignment-1$ wget https://www.gnu.org/licenses/gpl-3.0.txt
--2026-01-16 12:02:31--  https://www.gnu.org/licenses/gpl-3.0.txt
Resolving www.gnu.org (www.gnu.org)... 209.51.188.116, 2001:470:142:5::116
Connecting to www.gnu.org (www.gnu.org)|209.51.188.116|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 35149 (34K) [text/plain]
Saving to: 'gpl-3.0.txt'

gpl-3.0.txt          100%[=====] 34.33K   160KB/s   in 0.2s
2026-01-16 12:02:32 (160 KB/s) - 'gpl-3.0.txt' saved [35149/35149]

tej333@MSI:~/tude/Assignment-1$ ls
gpl-3.0.txt  test_dir.zip  unzipped_dir
tej333@MSI:~/tude/Assignment-1$ |
```

## 6. Changing Permissions

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

```
# Create the file
```

```
touch secure.txt
```

```
# Change permissions to read-only for everyone
```

```
chmod 444 secure.txt
```

```
tej333@MSI:~/tude/Assignment-1$ ls
gpl-3.0.txt test_dir.zip unzipped_dir
tej333@MSI:~/tude/Assignment-1$ touch secure.txt
tej333@MSI:~/tude/Assignment-1$ ls
gpl-3.0.txt secure.txt test_dir.zip unzipped_dir
tej333@MSI:~/tude/Assignment-1$ ll
total 52
drwxr-xr-x 3 tej333 tej333 4096 Jan 16 12:04 .
drwxr-xr-x 3 tej333 tej333 4096 Jan 16 11:52 ../
-rw-r--r-- 1 tej333 tej333 35149 Sep 30 2017 gpl-3.0.txt
-rw-r--r-- 1 tej333 tej333 0 Jan 16 12:04 secure.txt
-rw-r--r-- 1 tej333 tej333 352 Jan 16 11:59 test_dir.zip
drwxr-xr-x 3 tej333 tej333 4096 Jan 16 11:59 unzipped_dir/
tej333@MSI:~/tude/Assignment-1$ chmod 444 secure.txt
tej333@MSI:~/tude/Assignment-1$ ll
total 52
drwxr-xr-x 3 tej333 tej333 4096 Jan 16 12:04 .
drwxr-xr-x 3 tej333 tej333 4096 Jan 16 11:52 ../
-rw-r--r-- 1 tej333 tej333 35149 Sep 30 2017 gpl-3.0.txt
-rw-r--r-- 1 tej333 tej333 0 Jan 16 12:04 secure.txt
-rw-r--r-- 1 tej333 tej333 352 Jan 16 11:59 test_dir.zip
drwxr-xr-x 3 tej333 tej333 4096 Jan 16 11:59 unzipped_dir/
tej333@MSI:~/tude/Assignment-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!"
```

```
echo $MY_VAR
```

```
tej333@MSI:~/tude/Assignment-1$ echo $MY_VAR
tej333@MSI:~/tude/Assignment-1$ export MY_VAR="Hello, Linux!"
tej333@MSI:~/tude/Assignment-1$ echo $MY_VAR
Hello, Linux!
tej333@MSI:~/tude/Assignment-1$ |
```