

Linux Commands Assignment

Task 1: Creating and Renaming Files

Commands:

```
mkdir test_dir
```

```
cd test_dir
```

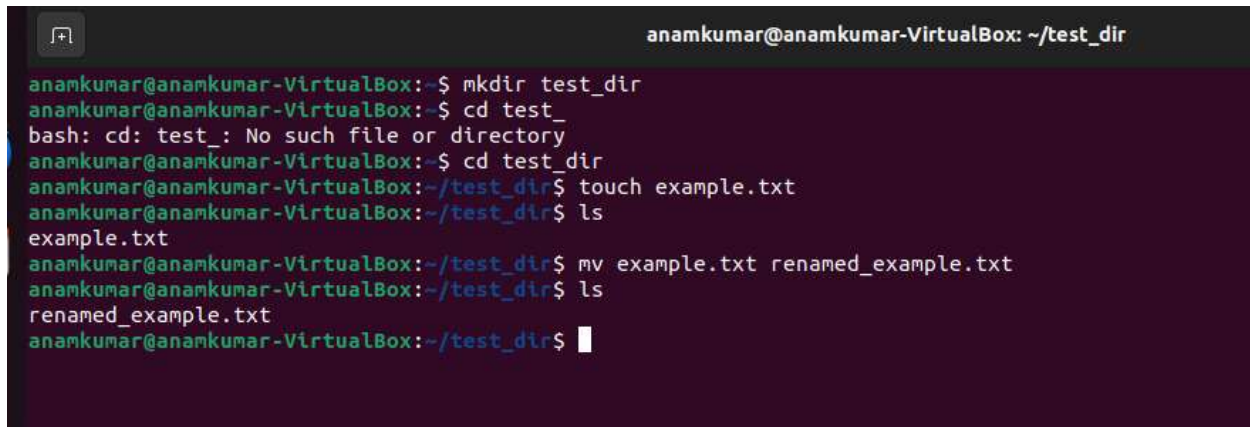
```
touch example.txt
```

```
mv example.txt renamed_example.txt
```

Explanation:

Created a directory, made a file, then renamed it.

Screenshot:



```
anamkumar@anamkumar-VirtualBox: ~/test_dir
anamkumar@anamkumar-VirtualBox:~$ mkdir test_dir
anamkumar@anamkumar-VirtualBox:~$ cd test_
bash: cd: test_: No such file or directory
anamkumar@anamkumar-VirtualBox:~$ cd test_dir
anamkumar@anamkumar-VirtualBox:~/test_dir$ touch example.txt
anamkumar@anamkumar-VirtualBox:~/test_dir$ ls
example.txt
anamkumar@anamkumar-VirtualBox:~/test_dir$ mv example.txt renamed_example.txt
anamkumar@anamkumar-VirtualBox:~/test_dir$ ls
renamed_example.txt
anamkumar@anamkumar-VirtualBox:~/test_dir$
```

Task 2: Viewing File Contents

Commands:

```
cat /etc/passwd
```

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

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

Explanation:

Displayed full, first 5, and last 5 lines of /etc/passwd.

Screenshot:

```
anamkumar@anamkumar-VirtualBox:~/test_dir$ 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
anamkumar@anamkumar-VirtualBox:~/test_dir$ tail -n 5 /etc/passwd
pulse:x:125:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:126:65534:./run/gnome-initial-setup:/bin/false
hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
anamkumar:x:1000:1000:Anamkumar,,,:/home/anamkumar:/bin/bash
```

Task 3: Searching for Patterns

Command:

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

Explanation:

Searched for the word *root* in */etc/passwd*.

Screenshot:

```
anamkumar@anamkumar-VirtualBox:~/test_dir$ head -n 5
^[A^C
anamkumar@anamkumar-VirtualBox:~/test_dir$ 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
anamkumar@anamkumar-VirtualBox:~/test_dir$ tail -n 5 /etc/passwd
pulse:x:125:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:126:65534:./run/gnome-initial-setup:/bin/false
hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
anamkumar:x:1000:1000:Anamkumar,,,:/home/anamkumar:/bin/bash
anamkumar@anamkumar-VirtualBox:~/test_dir$ grep 'root' /etc/passwd
root:x:0:0:root:/root:/bin/bash
nm-openvpn:x:121:127:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot
anamkumar@anamkumar-VirtualBox:~/test_dir$
```

Task 4: Zipping and Unzipping

Commands:

```
cd ..
```

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

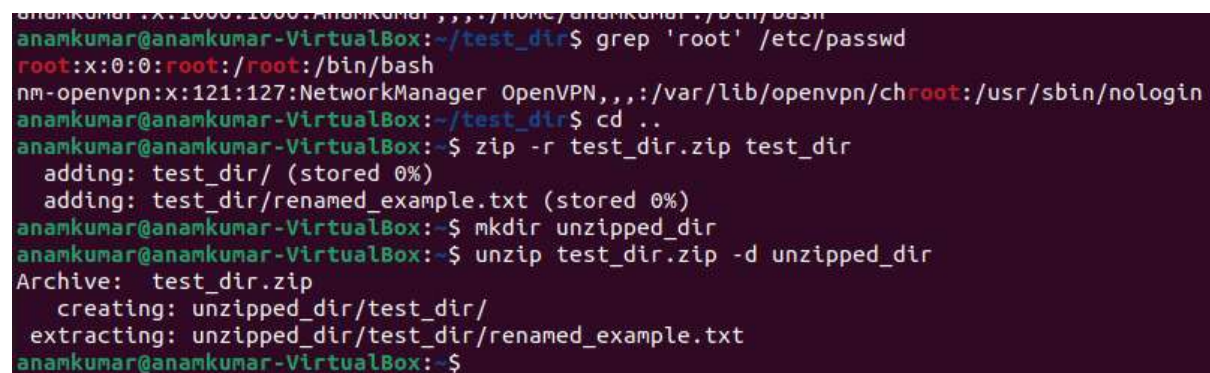
```
mkdir unzipped_dir
```

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

Explanation:

Compressed and extracted directory.

Screenshot:



```
anamkumar@anamkumar-VirtualBox:~$ grep 'root' /etc/passwd
root:x:0:0:root:/root:/bin/bash
nm-openvpn:x:121:127:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
anamkumar@anamkumar-VirtualBox:~$ cd ..
anamkumar@anamkumar-VirtualBox:~$ zip -r test_dir.zip test_dir
  adding: test_dir/ (stored 0%)
  adding: test_dir/renamed_example.txt (stored 0%)
anamkumar@anamkumar-VirtualBox:~$ mkdir unzipped_dir
anamkumar@anamkumar-VirtualBox:~$ unzip test_dir.zip -d unzipped_dir
Archive:  test_dir.zip
   creating: unzipped_dir/test_dir/
  extracting: unzipped_dir/test_dir/renamed_example.txt
anamkumar@anamkumar-VirtualBox:~$
```

Task 5: Downloading Files

Command:

```
wget https://www.learningcontainer.com/wp-content/uploads/2020/04/sample-text-file.txt
```

Explanation:

Downloaded a sample text file from the internet.

Screenshot:

```
See 'snap info <snapname>' for additional versions.  
anankumar@anankumar-VirtualBox:~$ curl -I https://example.com/sample.txt  
HTTP/2 404  
accept-ranges: bytes  
content-length: 1256  
content-type: text/html  
etag: "84238dfc8092e5d9c0dac8ef93371a07:1736799080.121134"  
last-modified: Mon, 13 Jan 2025 20:11:20 GMT  
server: AkamaiNetStorage  
expires: Mon, 08 Sep 2025 13:59:49 GMT  
cache-control: max-age=0, no-cache, no-store  
pragma: no-cache  
date: Mon, 08 Sep 2025 13:59:49 GMT  
alt-svc: h3=":443"; ma=93600,h3-29=":443"; ma=93600
```

Task 6: Changing Permissions

Commands:

touch secure.txt

chmod 444 secure.txt

ls -l secure.txt

Explanation:

Made file read-only for everyone.

Screenshot:

```
anankumar@anankumar-VirtualBox:~$ ~touch secure.txt  
Command '~touch' not found, did you mean:  
  command 'touch' from deb coreutils (8.32-4.1ubuntu1.2)  
  command 'ktouch' from deb ktouch (4:21.12.3-1ubuntu1)  
Try: sudo apt install <deb name>  
anankumar@anankumar-VirtualBox:~$ touch secure.txt  
anankumar@anankumar-VirtualBox:~$ chmod 444 secure.txt  
anankumar@anankumar-VirtualBox:~$ ls -l secure.txt  
-r--r--r-- 1 anankumar anankumar 0 Sep  8 19:31 secure.txt  
anankumar@anankumar-VirtualBox:~$
```

Task 7: Working with Environment Variables

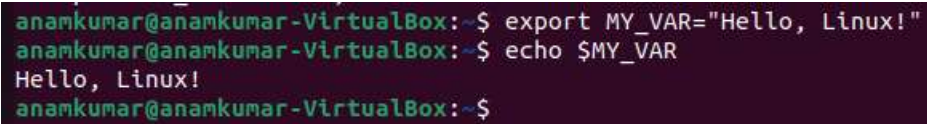
Commands:

export MY_VAR="Hello, Linux!"

```
echo $MY_VAR
```

Explanation:

Created an environment variable and verified it.

Screenshot:A terminal window with a dark purple background and green text. It shows three lines of command execution: first, 'export MY_VAR="Hello, Linux!";' followed by a prompt; second, 'echo \$MY_VAR' followed by the output 'Hello, Linux!'; and third, another prompt.

```
anankumar@anankumar-VirtualBox:~$ export MY_VAR="Hello, Linux!"
anankumar@anankumar-VirtualBox:~$ echo $MY_VAR
Hello, Linux!
anankumar@anankumar-VirtualBox:~$
```