

Assignment No 1

Problem 1:

a)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~$ mkdir LinuxAssignment
cdac@DESKTOP-5H50501:~$ cd
cdac@DESKTOP-5H50501:~$ ls
LinuxAssignment
cdac@DESKTOP-5H50501:~$ cd LinuxAssignment
cdac@DESKTOP-5H50501:~/LinuxAssignment$ pwd
/home/cdac/LinuxAssignment
cdac@DESKTOP-5H50501:~/LinuxAssignment$ |
```

b)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ touch file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ nano file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat file1.txt
India
Bangladesh
Sri lanka
South Africa
Austrilia
New Zeland
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

c)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ mkdir docs
cdac@DESKTOP-5H50501:~/LinuxAssignment$ ls
docs file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

d)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cp file1.txt docs/
cdac@DESKTOP-5H50501:~/LinuxAssignment$ ls docs/
file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ mv file1.txt file2.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ ls docs/
file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ ls
bin dev docs etc file2.txt home lib lib64
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

e)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ chmod 744 file2.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ chown $(whoami) file2.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ ls -l file2.txt
-rwxr--r-- 1 cdac cdac 6 Feb 27 15:56 file2.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

f)

```
cdac@DESKTOP-5H50501: ~ × + v
cdac@DESKTOP-5H50501:~$ ls LinuxAssignment
bin dev docs.zip etc "file1.txt " fruits.txt input.txt lib64 new_directory output.txt
data.txt docs duplicate.txt file1.txt file2.txt home lib lib newDirectory numbers.txt
cdac@DESKTOP-5H50501:~$
```

g) a)

```
cdac@DESKTOP-5H50501: ~$ find . -type f -name "*.txt"
./Assignment/docs/file1.txt
./Assignment/file1.txt
./LinuxAssignment/duplicate.txt
./LinuxAssignment/fruits.txt
./LinuxAssignment/data.txt
./LinuxAssignment/docs/file1.txt
./LinuxAssignment/numbers.txt
./LinuxAssignment/new_directory/docs/file1.txt
./LinuxAssignment/file1.txt
./LinuxAssignment/file2.txt
./LinuxAssignment/output.txt
./LinuxAssignment/input.txt
cdac@DESKTOP-5H50501:~$
```

b)

```
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat fruits.txt
Apple
Mango
Banana
Chikoo
Strawberry
Apple
Strawberry
Apple
Banana
Apple
cdac@DESKTOP-5H50501:~/LinuxAssignment$ grep "apple" file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ grep -i "apple" fruits.txt
Apple
Apple
Apple
Apple
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

h)

```
cdac@DESKTOP-5H50501: ~  
cdac@DESKTOP-5H50501:~$ date  
Thu Feb 27 16:18:59 UTC 2025  
cdac@DESKTOP-5H50501:~$
```

i) A)

```
cdac@DESKTOP-5H50501:~$ ip addr show  
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000  
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00  
    inet 127.0.0.1/8 scope host lo  
        valid_lft forever preferred_lft forever  
    inet6 ::1/128 scope host  
        valid_lft forever preferred_lft forever  
2: bond0: <BROADCAST,MULTICAST,MASTER> mtu 1500 qdisc noop state DOWN group default qlen 1000  
    link/ether 4a:59:b8:c9:2a:e6 brd ff:ff:ff:ff:ff:ff  
3: dummy0: <BROADCAST,NOARP> mtu 1500 qdisc noop state DOWN group default qlen 1000  
    link/ether ae:bc:7b:a0:3b:9b brd ff:ff:ff:ff:ff:ff  
4: tunl0@NONE: <NOARP> mtu 1480 qdisc noop state DOWN group default qlen 1000  
    link/ipip 0.0.0.0 brd 0.0.0.0  
5: sit0@NONE: <NOARP> mtu 1480 qdisc noop state DOWN group default qlen 1000  
    link/sit 0.0.0.0 brd 0.0.0.0  
6: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000  
    link/ether 00:15:5d:f0:d7:4e brd ff:ff:ff:ff:ff:ff  
    inet 172.18.90.47/20 brd 172.18.95.255 scope global eth0  
        valid_lft forever preferred_lft forever  
    inet6 fe80::215:5dff:fef0:d74e/64 scope link  
        valid_lft forever preferred_lft forever  
cdac@DESKTOP-5H50501:~$
```

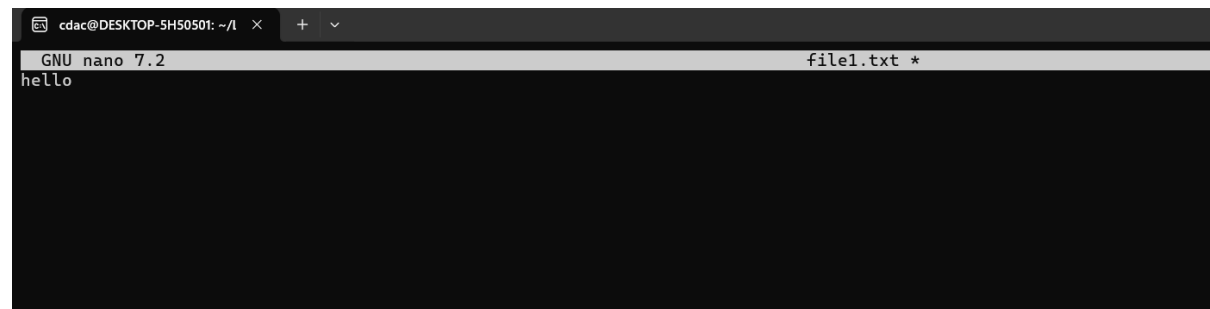
b)

```
cdac@DESKTOP-5H50501: ~  
cdac@DESKTOP-5H50501:~$ ping google.com  
PING google.com (142.250.183.110) 56(84) bytes of data.  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=1 ttl=119 time=8.85 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=2 ttl=119 time=9.02 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=3 ttl=119 time=7.48 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=4 ttl=119 time=7.57 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=5 ttl=119 time=7.74 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=6 ttl=119 time=8.50 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=7 ttl=119 time=11.1 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=8 ttl=119 time=8.26 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=9 ttl=119 time=9.70 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=10 ttl=119 time=9.51 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=11 ttl=119 time=7.90 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=12 ttl=119 time=12.4 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=13 ttl=119 time=15.6 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=14 ttl=119 time=9.61 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=15 ttl=119 time=9.65 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=16 ttl=119 time=30.6 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=17 ttl=119 time=52.5 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=18 ttl=119 time=23.4 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=19 ttl=119 time=11.4 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=20 ttl=119 time=10.5 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=21 ttl=119 time=9.28 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=22 ttl=119 time=70.5 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=23 ttl=119 time=109 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=24 ttl=119 time=11.4 ms  
64 bytes from bom12s13-in-f14.1e100.net (142.250.183.110): icmp_seq=25 ttl=119 time=7.73 ms  
  
--- google.com ping statistics ---  
^C25 packets transmitted, 25 received, 0% packet loss, time 24038ms  
rtt min/avg/max/mdev = 7.482/19.170/108.919/23.528 ms  
cdac@DESKTOP-5H50501:~$
```

j)

```
cdac@DESKTOP-5H50501:~/LinuxAssignment$ sudo apt install zip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  unzip
The following NEW packages will be installed:
  unzip zip
0 upgraded, 2 newly installed, 0 to remove and 119 not upgraded.
Need to get 176 kB/350 kB of archives.
After this operation, 933 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 zip amd64 3.0-13ubuntu0.2 [176 kB]
Fetched 176 kB in 1s (119 kB/s)
Selecting previously unselected package unzip.
(Reading database ... 40794 files and directories currently installed.)
Preparing to unpack .../unzip_6.0-28ubuntu4.1_amd64.deb ...
Unpacking unzip (6.0-28ubuntu4.1) ...
Selecting previously unselected package zip.
Preparing to unpack .../zip_3.0-13ubuntu0.2_amd64.deb ...
Unpacking zip (3.0-13ubuntu0.2) ...
Setting up unzip (6.0-28ubuntu4.1) ...
Setting up zip (3.0-13ubuntu0.2) ...
Processing triggers for man-db (2.12.0-4build2) ...
cdac@DESKTOP-5H50501:~/LinuxAssignment$ zip -r docs.zip docs
  adding: docs/ (stored 0%)
  adding: docs/file1.txt (stored 0%)
cdac@DESKTOP-5H50501:~/LinuxAssignment$ mkdir newDirectory
cdac@DESKTOP-5H50501:~/LinuxAssignment$ unzip zipfile.zip -d new_directory
unzip: cannot find or open zipfile.zip, zipfile.zip.zip or zipfile.zip.ZIP.
cdac@DESKTOP-5H50501:~/LinuxAssignment$ unzip docs.zip -d new_directory
Archive:  docs.zip
  creating: new_directory/docs/
  extracting: new_directory/docs/file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

k) a)



```
cdac@DESKTOP-5H50501: ~/LinuxAssignment
GNU nano 7.2 file1.txt *
hello
```

b)

```
cdac@DESKTOP-5H50501: ~/LinuxAssignment$ nano file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat file1.txt
Apple is my favorite fruit.
I like Apple pie.
Apple juice is refreshing.
cdac@DESKTOP-5H50501:~/LinuxAssignment$ sed -i 's/Apple/Banana/g' file1.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat file1.txt
Banana is my favorite fruit.
I like Banana pie.
Banana juice is refreshing.
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

Problem 2:

a)

```
cdac@DESKTOP-5H50501: ~/LinuxAssignment$ head -10 data.txt
These
are
the
first
ten
lines
to be
displayed
on the
screen
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

b)

```
cdac@DESKTOP-5H50501:~/LinuxAssignment$ tail -10 data.txt
these
are
the
last
lines
to be
displayed
on
the
screen
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

c)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat --number numbers.txt
 1 India
 2 Pakistan
 3 Austrilia
 4 Bangaldesh
 5 America
 6 USA
 7 Dubai
 8 New Zeland
 9 South Africa
10 Afganitshan
11 Sri lanka
12 China
13 Japan
14 Russia
15 Europe
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```


d)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ tail -3 numbers.txt
13.Japan
14.Russia
15.Europe
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

e)

```
cdac@DESKTOP-5H50501:~/LinuxAssignment$ touch input.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ nano input.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat input.txt
india
won
the match

cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat input.txt | tr '[:lower:]' '[:upper:]' > output.txt
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat output.txt
INDIA
WON
THE MATCH

cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

g)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat duplicate.txt
India
Pakistan
Afghanistan
Sri lanka
Pakistan
India
Afghanistan
cdac@DESKTOP-5H50501:~/LinuxAssignment$ cat duplicate.txt | sort | uniq
Afghanistan
India
Pakistan
Sri lanka
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```

h)

```
cdac@DESKTOP-5H50501: ~/l × + v
cdac@DESKTOP-5H50501:~/LinuxAssignment$ sort fruits.txt | uniq -c
  1 Apple
  1 Banana
  1 Chikoo
  1 Mango
  3 Apple
  1 Banana
  2 Strawberry
cdac@DESKTOP-5H50501:~/LinuxAssignment$
```