Ex 1   **ADVANCED LINUX COMMANDS**

Date: 27.08.20

Aim:

To study and implement the Linux commands

Description:

Sl. No.	Command Name	Meaning	options
1.	**ls**	List files and/or directories.	-a, --all do not ignore entries starting with. -A, --almost-all do not list implied. and. --author with -l, print the author of each file -b, --escape print C-style escapes for nongraphic characters --block-size=SIZE
2.	**Who am i**	This command reveals the user who is currently logged in.	-a, --all =same as -b -d --login -p -r -t -T -u -b, --boot time of last system boot -d, --dead print dead processes -H, --heading print line of column headings -l, --login print system login processes --lookup attempt to canonicalize hostnames via DNS
3.	**pwd**	prints the absolute path to the current working directory	-L, --logical use PWD from the environment, even if it contains symlinks

			-P, --physical avoid all symlinks

4.	**cal**	Displays the calendar of the current month	-1, --one
			        Display single month output. (This is the default.)
			
			    -3, --three
			        Display prev/current/next month output.
			
			    -s, --Sunday
			        Display Sunday as the first day of the week.
			
			    -m, --Monday
			        Display Monday as the first day of the week.
			
			    -j, --Julian
			        Display Julian dates (days one-based, numbered from January 1).
			
			    -y, --year

5.	**echo**	This command will echo whatever you provide it.	-n do not output the trailing newline -e enable interpretation of backslash escapes -E disable the interpretation of backslash escapes (default)
6.	**date**	Displays current time and date.	-d, --date=STRING display time described by STRING, not 'now'

			-f, --file=DATEFILE like --date once for each line of DATAFILE
7.	**tty**	Displays the current terminal.	

8.	**id**	This command prints user and groups (UID and GID) of the current user.	-a ignore, for compatibility with other versions
			
			-Z, --context
			    print only the security context of the current user
			
			-g, --troup
			    print only the effective group ID
			
			-G, --groups
			    print all group IDs
			
			-n, --name
			    print a name instead of a number, for -ugG

9.	**clear**	This command clears the screen.	
10.	**man**	To show manual page	
11.	**cd**	Change the current working directory to the directory provided as an argument.	
12.	**mkdir**	To create a directory, the 'mkdir' command is used.	
13.	**touch**	For creating an empty file, use the touch command.	
14.	**cp**	Copy files and directories	

15.	**mv**	Move files or directories. The 'mv' command works like 'cp' command, except that the original file is removed. But, the mv command can be used to rename the files (or directories).	
16.	**rmdir**	the command removes any empty directories, but cannot delete a directory if a file is present in it.	
17.	**file**	The file command determines the file type of a given file.	
18.	**cat**	The 'cat' command is actually a concatenator but can be used to view the contents of a file.	
19.	**head**	Displays the first few lines of a file. By default, the 'head' command displays the first 10 lines of a file.	

20.	**tail**	the 'tail' command shows the last 10 lines by default	-c, --bytes=[-]K
			        print the first K bytes of each file
			-n, --lines=[-]K
			        print the first K lines instead of the first 10
			 -q, --quiet, --silent
			        never print headers giving file names

21.	**wc**	This command counts lines, words, and letters of the input given to it.	
22.	**grep**	The 'grep' command searches for a pattern in a file (or standard input).	

23.	**vi**	Visual editor	
24.	**alias**	The 'alias' is another name for a command.	
25.	**history**	shows the commands you have entered on your terminal so far.	
26.	**passwd**	To change your password	
27.	**help**	With almost every command, '--help' option shows usage summary for that command.	
28.	**chmod**	The *chmod* command lets you change access permissions for a file.	
29.	**stat**	To check the status of a file. This provides more detailed information about a file than 'ls -l' output.	-L, --dereference follow links -f, --file-system display file system status instead of file status -c --format=FORMAT use the specified FORMAT instead of the default; output a newline after each use of FORMAT --printf=FORMAT
30.	**ln**	The ln command is used in Linux to create links.	

Exercise

1. List the contents of user's home directory including the hidden files

```
[urk17cs038@code ~]$ ls -a
.               a18.c   a41.c       books.txt       ex10b.cpp       ex8b.cpp
..              a19.c   a42.c       borrowed.txt    ex10c.cpp       ex91.cpp
\               a1.c    a43.c       b.out           ex10.cpp        .ex91.cpp.swp
10.cpp          a2      a44.c       call.txt        ex11a.cpp       ex97.cpp
123.cpp         a20.c   a45.c       .cexp4.l.swo    ex11b.cpp       ex9a.cpp
234.cpp         a21.c   a46.c       .cexp4.l.swp    ex3a.cpp        ex9b.cpp
255.cpp         a22.c   a47.c       cexp9.c         ex3b.cpp        ex9c.cpp
256.cpp         a23.c   a49.c       class.cpp       .ex3b.cpp.swp   ex9g.cpp
257.cpp         a24.c   a4.c        classroom       ex3.cpp         example10.sh
6a.cpp          a25.c   a5.c        comp4.l         ex4a.cpp        .example10.sh.swp
.6a.cpp.swp     a26.c   a6.c        conditional.c   ex4.cpp         example11.sh
6b.cpp          a27.c   a7.c        .config         .ex4.cpp.swn    example12.sh
7a.cpp          a28.c   a8.c        dir1            .ex4.cpp.swo    example13.sh
7b.cpp          a29.c   a9.c        dir2            .ex4.cpp.swp    example14.sh
7.cpp           a2.c    ads11.cpp   dis             ex5a.cpp        example15.c
8ex.cpp         a3      ads1.cpp    dis2            .ex5a.cpp.swo   example16.c
.8ex.cpp.swp    a30.c   ads.cpp     dis3            .ex5a.cpp.swp   example17.c
97.cpp          a31.c   a.out       dis4.txt        ex5b.cpp        example1.sh
9.cpp           a32.c   armstrong.c distance.cpp    ex5c.cpp        example2.sh
a1              a33.c   array2.c    done.cpp        ex5d.cpp        example3.sh
a10.c           a34.c   array.c     dooba.cpp       .ex5d.cpp.swp   example4.sh
a11.c           a35.c   array.c.save doob.cpp       ex6a.cpp        example5.sh
a12.c           a36.c   .bash_history .emacs        ex6b.cpp        example6.sh
a13.c           a37.c   .bash_logout enum.c         ex6c.cpp        example7.sh
a14.c           a39.c   .bash_profile ex            ex7a.cpp        example8.sh
a16.c           a3.c    .bashrc     ex10a.cpp       ex7b.cpp        example9.sh
a17.c           a40.c   bitwise.c   .ex10a.cpp.swp  ex8a.cpp        example.sh
[urk17cs038@code ~]$
```

2. List the content of /var directory?

```
[urk17cs038@code ~]$ ls /var/log
anaconda            centrifydc-install.log          dmesg.old
audit               centrify_mapper_error.log       dnf.librepo.log
boot.log            centrify_mapper_error.log-20200103.gz dnf.librepo.log-20200802
boot.log-20200226   centrify_mapper_error.log-20200426.gz dnf.librepo.log-20200809
boot.log-20200304   centrify_mapper_error.log-20200819.gz dnf.librepo.log-20200816
boot.log-20200312   chrony                          dnf.librepo.log-20200823
boot.log-20200803   cron                            dnf.log
boot.log-20200804   cron-20200802                   dnf.log-20200802
boot.log-20200809   cron-20200809                   dnf.log-20200809
boot.log-20200813   cron-20200816                   dnf.log-20200816
btmp                cron-20200823                   dnf.log-20200823
btmp-20200801       dmesg                           dnf.rpm.log
```

3. Create two directories named dir1 & dir2

```
[urk17cs038@code ~]$ mkdir dir1 dir2
```

4. Create a hidden directory with your name?

```
[urk17cs038@code ~]$ mkdir .sanjeev
```

5. Display the content of a hidden directory.

6. Display the calendar of 2020.

7. Copy the file /etc/passwd file to current directory with sample.txt as the filename

```
[urk17cs038@code dir1]$ cat /etc/passwd > sample.txt
[urk17cs038@code dir1]$ cat sample.txt
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:99:99:Nobody:/:/sbin/nologin
systemd-network:x:192:192:systemd Network Management:/:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
polkitd:x:999:998:User for polkitd:/:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
postfix:x:89:89::/var/spool/postfix:/sbin/nologin
chrony:x:998:996::/var/lib/chrony:/sbin/nologin
ntp:x:38:38::/etc/ntp:/sbin/nologin
tss:x:59:59:Account used by the trousers package to sandbox the tcsd daemon:/dev/null:/sbin/nologin
nginx:x:997:995:Nginx web server:/var/lib/nginx:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin
```

8. Create a file test1.txt using Vim editor with the following contents to it

Name	RegNo	ResearchInterest
Melvin	07af501	GridComputing
Mithin	07af502	ClusterComputing
James	07af503	ImageProcessing
Jane	07af504	Networking
Caroline	07af505	ClusterComputing
Binu	07af506	GridComputing
Aaron	07af507	ImageProcessing
Selvin	07af508	Networking
Jerwin	07af509	WirelessNetworks
Arun	07af510	GridComputing

Answer the following questions

a) Display the student names who are having Research Interest as GridComputing

```
[urk17cs038@code ~]$ grep Grid test1.txt | cut -f 1
Melvin
Binu
Arun
[urk17cs038@code ~]$ 
```

b) List all the student names & RegNo in the class

```
[urk17cs038@code ~]$ cut -f 1,2 test1.txt
Name     RegNo
Melvin   07af501
Mithin   07af502
James    07af503
Jane     07af504
Caroline          07af505
Binu     07af506
Aaron    07af507
Selvin   07af508
Jerwin   07af509
Arun     07af510
```

c) List the count of students who have an interest as ImageProcessing and store the result in another file.

```
[urk17cs038@code ~]$ grep Image test1.txt | wc -l > test2.txt
[urk17cs038@code ~]$ cat test2.txt
2
```

d) Display the first two rows and last two and store them into another file.

```
[urk17cs038@code ~]$ head -3 test1.txt >> dis4.txt | tail -2 test1.txt >> dis4.txt
[urk17cs038@code ~]$ cat dis4.txt
Name     RegNo    researchInterest
Melvin   07af501 GridComputing
Mithin   07af502 ClusterComputing
Jerwin   07af509 WirelessNetworks
Arun     07af510 GridComputing
```

9. Display the contents of the file test1.txt without any blank lines

```
[urk17cs038@code ~]$ grep -v '^$' test1.txt
Name     RegNo    researchInterest
Melvin   07af501 GridComputing
Mithin   07af502 ClusterComputing
James    07af503 ImageProcessing
Jane     07af504 Networking
Caroline          07af505 ClusterComputing
Binu     07af506 GridComputing
Aaron    07af507 ImageProcessing
Selvin   07af508 Networking
Jerwin   07af509 WirelessNetworks
Arun     07af510 GridComputing
```

10. Move the file sample.txt from dir1 directory to dir2 directory

```
[urk17cs038@code ~]$ mv sample.txt dir2
[urk17cs038@code ~]$ cd dir2
[urk17cs038@code dir2]$ ls
sample.txt
[urk17cs038@code dir2]$ █
```

11. Change directory into dir2 directory

```
[urk17cs038@code ~]$ cd dir2
[urk17cs038@code dir2]$ █
```

12. Check whether the file sample.txt is present their

```
[urk17cs038@code dir2]$ ls
sample.txt
[urk17cs038@code dir2]$ █
```

13. Rename the file sample.txt to new.txt and check whether sample.txt is there or not?

```
[urk17cs038@code dir2]$ mv sample.txt new.txt
[urk17cs038@code dir2]$ ls
new.txt
[urk17cs038@code dir2]$ █
```

14. Remove the directory dir1

```
[urk17cs038@code ~]$ rm -r dir1
[urk17cs038@code ~]$ cd dir1
-bash: cd: dir1: No such file or directory
[urk17cs038@code ~]$ █
```

15. Display last 3 lines of the file test1.txt

```
[urk17cs038@code ~]$ tail -4 test1.txt
Aaron    07af507 ImageProcessing
Selvin   07af508 Networking
Jerwin   07af509 WirelessNetworks
Arun     07af510 GridComputing
[urk17cs038@code ~]$ █
```

16. Display all the commands you have executed so far and save the list into a file named todayshistory.txt

```
[urk17cs038@code ~]$ history > todayhistory.txt
[urk17cs038@code ~]$ cat todayhistory.txt
   45  cat > classroom
   46  cut -f 1,4 -d ":" classroom
   47  head -l classroom
   48  head -1 classroom
   49  head -2 classroom
   50  head 1-3 classroom
   51  tail -2 classroom
   52  ls -a
   53  cd /var
   54  ls
   55  ls -d
   56  mkdir dir1 dir2
   57  mkdir dir1
   58  cd --
   59  mkdir dir1 dir2
   60  mkdir .hidden
```

17. How many files are present under your home directory?

```
[urk17cs038@code ~]$ ls -A | wc -l
312
[urk17cs038@code ~]$
```

18. Perform the sorting of three files and store the sorted file in the fourth file.

```
[urk17cs038@code ~]$ sort file1.txt file2.txt file3.txt > file4.txt
```

19. Change the permission of your newly created file such that the group users and others don't access any type of access.

```
[urk17cs038@code ~]$ ls -l file5.txt
-rw-rw-r-- 1 urk17cs038 urk17cs038 6 Aug 27 20:06 file5.txt
[urk17cs038@code ~]$ chmod 700 file5.txt
[urk17cs038@code ~]$ ls -l file5.txt
-rwx------ 1 urk17cs038 urk17cs038 6 Aug 27 20:06 file5.txt
[urk17cs038@code ~]$
```

20. Display the network status on the shell.

```
[urk17cs038@code ~]$ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 code.karunya.edu:56516  code.karunya.edu:hbci   ESTABLISHED
tcp        0      0 code.karunya.edu:57242  code.karunya.edu:hbci   ESTABLISHED
tcp        0      0 code.karunya.edu:nfs    192.168.0.32:ftps-data  ESTABLISHED
tcp        0      0 code.karunya.edu:https  172.69.134.208:35676    ESTABLISHED
tcp        0      0 code.karunya.edu:https  162.158.165.191:28204   ESTABLISHED
tcp        0      0 code.karunya.edu:nfs    192.168.0.34:790        ESTABLISHED
tcp        0      0 code.karunya.edu:57204  code.karunya.edu:hbci   ESTABLISHED
tcp        0      0 code.karunya.edu:https  162.158.166.71:51244    ESTABLISHED
tcp        0      0 code.karunya.edu:ssh    192.168.11.208:59177    ESTABLISHED
tcp        0      0 code.karunya.edu:https  162.158.166.26:54628    ESTABLISHED
tcp        0      0 code.karunya.edu:https  162.158.165.76:25216    ESTABLISHED
tcp        0      0 code.karunya.edu:https  172.69.134.133:23322    ESTABLISHED
tcp        0      0 code.karunya.edu:hbci   code.karunya.edu:57076  ESTABLISHED
tcp        0      0 code.karunya.edu:hbci   code.karunya.edu:57302  TIME_WAIT
tcp        0      0 code.karunya.edu:56636  code.karunya.edu:hbci   ESTABLISHED
tcp        0      0 code.karunya.edu:56464  code.karunya.edu:hbci   ESTABLISHED
tcp        0      0 code.karunya.edu:hbci   code.karunya.edu:57296  ESTABLISHED
tcp        0      0 code.karunya.edu:https  162.158.166.158:38388   ESTABLISHED
tcp        0      0 code.karunya.edu:hbci   code.karunya.edu:56632  ESTABLISHED
tcp        0      0 code.karunya.edu:hbci   code.karunya.edu:56464  ESTABLISHED
tcp        0      0 code.karunya.edu:https  192.168.11.208:64476    ESTABLISHED
tcp        0      0 code.karunya.edu:https  162.158.165.181:61242   ESTABLISHED
```

21. Compares any two files and search for both common and exclusive features

```
[urk17cs038@code ~]$ diff co1.txt co2.txt
1c1
< abcdefghijkl
---
> ijklmnopqrstabc
[urk17cs038@code ~]$
```

22. Display the user ID, process ID, and parent process ID.

```
[urk17cs038@code ~]$ ps -f
UID         PID  PPID  C STIME TTY          TIME CMD
urk17cs+   1823 24128  0 20:06 pts/5    00:00:00 cat
urk17cs+   2112 24128  0 20:09 pts/5    00:00:00 cat
urk17cs+   2136 24128  0 20:10 pts/5    00:00:00 cat
urk17cs+   2195 24128  0 20:10 pts/5    00:00:00 ps -f
urk17cs+  24128 24112  0 19:19 pts/5    00:00:00 -bash
[urk17cs038@code ~]$
```

23. Report disk usages of the file system.

```
[urk17cs038@code ~]$ du -h
0        ./.mozilla/plugins
0        ./.mozilla/extensions
0        ./.mozilla
16K      ./.config/neofetch
16K      ./.config
0        ./.hidden
0        ./sanjeev
0        ./.hidden_direct
0        ./.hidden_1
0        ./.hidden_12
4.0K     ./dir2
0        ./.sanjeev
1.6M     .
[urk17cs038@code ~]$
```

24. Display the statistics of all ports connected to a network.

```
[urk17cs038@code ~]$ netstat -l
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 0.0.0.0:nfs             0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:46053           0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:sunrpc          0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:http            0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:mountd          0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:34067           0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:ssh             0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:hbci            0.0.0.0:*               LISTEN
tcp        0      0 localhost:smtp          0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:https           0.0.0.0:*               LISTEN
tcp6       0      0 [::]:nfs                [::]:*                  LISTEN
tcp6       0      0 [::]:sunrpc             [::]:*                  LISTEN
tcp6       0      0 [::]:http               [::]:*                  LISTEN
tcp6       0      0 [::]:mountd             [::]:*                  LISTEN
tcp6       0      0 [::]:ssh                [::]:*                  LISTEN
tcp6       0      0 [::]:57431              [::]:*                  LISTEN
tcp6       0      0 localhost:smtp          [::]:*                  LISTEN
tcp6       0      0 [::]:https              [::]:*                  LISTEN
tcp6       0      0 [::]:39228              [::]:*                  LISTEN
udp        0      0 0.0.0.0:39547           0.0.0.0:*
udp        0      0 0.0.0.0:mountd          0.0.0.0:*
udp        0      0 0.0.0.0:sunrpc          0.0.0.0:*
udp        0      0 0.0.0.0:49440           0.0.0.0:*
udp        0      0 localhost:323           0.0.0.0:*
udp        0      0 localhost:863           0.0.0.0:*
udp        0      0 0.0.0.0:xact-backup     0.0.0.0:*
udp        0      0 0.0.0.0:nfs             0.0.0.0:*
```

25. Display the uptime of the system.

```
[urk17cs038@code ~]$ uptime
 20:12:27 up 15 days,  8:27, 143 users,  load average: 0.04, 0.03, 0.05
[urk17cs038@code ~]$
```

26. Julian day.

```
[urk17cs038@code ~]$ date
Thu Aug 27 20:12:54 IST 2020
[urk17cs038@code ~]$ date +%j
240
[urk17cs038@code ~]$
```

27. IP information.

```
[urk17cs038@code ~]$ ip addr
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: ens32: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default q
len 1000
    link/ether 00:50:56:93:66:93 brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.29/24 brd 192.168.0.255 scope global noprefixroute ens32
       valid_lft forever preferred_lft forever
    inet6 fe80::1450:18ba:187f:1f02/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
[urk17cs038@code ~]$
```

28. Display only the free space in the system.

```
[urk17cs038@code ~]$ df -k
Filesystem                      1K-blocks     Used Available Use% Mounted on
devtmpfs                          3992636        0   3992636   0% /dev
tmpfs                             4004520        0   4004520   0% /dev/shm
tmpfs                             4004520   427560   3576960  11% /run
tmpfs                             4004520        0   4004520   0% /sys/fs/cgroup
/dev/mapper/centos_kitscode-root 68066844  3014212  65052632   5% /
/dev/sda1                         1942528   334256   1608272  18% /boot
/dev/mapper/centos_kitscode-home 24404336    32992  24371344   1% /home
/dev/mapper/centos_kitscode-data 97609148 26273980  71335168  27% /data
/dev/mapper/centos_kitscode-var  10004480  9336780    667700  94% /var
tmpfs                              800908        0    800908   0% /run/user/0
tmpfs                              800908        0    800908   0% /run/user/1010883125
tmpfs                              800908        0    800908   0% /run/user/1010875241
tmpfs                              800908        0    800908   0% /run/user/1010883025
tmpfs                              800908        0    800908   0% /run/user/1010883097
tmpfs                              800908        0    800908   0% /run/user/1010883215
tmpfs                              800908        0    800908   0% /run/user/1010883775
tmpfs                              800908        0    800908   0% /run/user/1010883040
tmpfs                              800908        0    800908   0% /run/user/1010883774
tmpfs                              800908        0    800908   0% /run/user/1010883058
tmpfs                              800908        0    800908   0% /run/user/1010887455
tmpfs                              800908        0    800908   0% /run/user/1010883676
[urk17cs038@code ~]$
```

29. Linux platform is infected over the network.

```
[urk17cs038@code ~]$ who
root       pts/0      2020-08-25 14:50 (192.168.11.208)
urk18cs237 pts/2      2020-08-27 20:13 (localhost)
urk18cs047 pts/4      2020-08-27 19:56 (localhost)
urk18cs065 pts/7      2020-08-27 20:11 (localhost)
urk18cs132 pts/1      2020-08-27 19:06 (localhost)
urk19ac1063 pts/10     2020-08-27 20:12 (localhost)
urk18cs032 pts/9      2020-08-27 19:24 (localhost)
urk18cs257 pts/12     2020-08-27 19:53 (localhost)
urk18cs222 pts/11     2020-08-27 19:45 (localhost)
urk18cs104 pts/6      2020-08-27 19:25 (localhost)
urk17cs038 pts/5      2020-08-27 19:19 (localhost)
urk18cs072 pts/86     2020-08-25 14:23 (localhost)
[urk17cs038@code ~]$
```

30. Display the configuration information of your network.

```
[urk17cs038@code ~]$ netstat -nr
Kernel IP routing table
Destination     Gateway         Genmask         Flags   MSS Window  irtt Iface
0.0.0.0         192.168.0.254   0.0.0.0         UG        0 0          0 ens32
192.168.0.0     0.0.0.0         255.255.255.0   U         0 0          0 ens32
[urk17cs038@code ~]$
```

Video link:

https://youtu.be/UMDL4dlrU9w

Results:

The Linux commands are studied and executed.