Q1. Explore the following commands with various options, refer man pages for

further help a) date b) cal c) bc d) echo e) who

f) whoami

g) logname-**login name**

g) unam-**name of the kernel**

h)seq**-seq first increment last**

i) clear**-clear the screen**

Q2. A) Create three directory a b and c and create a.txt,b.txt and c.txt

in each directory respectively and then copy c directory into the a.

mkdir abc

cd a

touch a.txt

cd ..

cd b

touch b.txt

cd ..

cd c

touch c.txt

cd ..

cp -r c a

B)Move Directory b to c.

**mv b c**

C)Create alias of ls -lh command to your name.

**alias aviral = "ls -lh"**

D)Change Directory name a to cdac.

**mv c cdac**

Q3. A) Create five files file1.txt , file2.txt ,file3.txt file4.txt and

file5.txt with some text inside it. Search for 's' character

inside all the files using grep command.

Also Use cat to view all file content together.

**cat file1.txt**

**hello aviral,welcome to CDAC**

**cat >file2.txt**

**I am doing shell scriting**

**cat >file3.txt**

**I am learning OS**

**cat >file4.txt**

**I am learning in online mode**

**cat >file5.txt**

**I am using Cygwin terminal for OS**

**grep s \***

**cat ./\***

B)Create file.txt using cat and edit that using nano editor.

**touch file.txt**

c)Create 5 empty files using touch command

**touch file1.txt file2.txt file2.txt file4.txt file5.txt**

D)Remove previously created directory a , b and c.

**rm -r a b c**

Q4. Create a file with some content using vi editor

1. Display the file using cat command

**cat file1.txt**

1. Display line numbers along with content

**cat -n file1.txt**

1. Display the file in reverse order using tac

**tac file1.txt**

d) Combine multiple files using cat command

**cat ./\***

Q5. Create Random some files and sub directories.

1. display files row wise, column wise, 1 per row

**column wise : paste f1.txt f2.txt f3.txt f4.txt f5.txt | pr -t -e24(display content in column mode)**

**column wise : ls**

**row wise : ls-lh**

**1 per row :ls -1 -- \*.txt**

1. sort the files in ascending, descending order

**ascending : ls**

**descending: ls -r**

1. Create some hidden files and sub directories and display them using “ls -a”

**touch .file1.txt**

**ls -a**

1. Change time stamp of some files and directories using touch command and display the files using ls -t ls -rt

**touch -t 06011105 file1.txt**

**ls -t : file names in ascending order**

**ls -rt : file names in descending order**

1. Recursive display contents of your home directory.

**ls -R**

1. display all attributes of files and directories using ls -l

g) display attributes of a directory using ls -ld

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Q1. Create directory of your name and then create 4 files inside it named

a.txt, b.txt, c.txt and d.sh. And change the directory permission to

only user and also files permission to only user such that

mkdir aviral

touch a.txt b.txt c.txt d.sh

chmod 700 aviral

a)user can read and write the file a.txt and b.txt

**chmod 600 a.txt b.txt**

b)user can write the file c.txt

**chmod 200 c.txt**

c)user can exectuable the file d.sh. Make

**chmod 100 d.sh**

Contents of file d.sh:

#/bin/sh

ls -lh

Q2. Change the permission of the previous directory to executable only.

Analyze the output.

**d--x------**

Q3. Change the permission of the previous directory to read only.

Analyze the output.

**dr--------**

Q4. Use echo to list the all files of your home directory.

**echo \***

Q5. Use echo to list the all files of /etc/ directory

**echo \***

Q6. Use echo to list the all files of /etc/ directory with extension name .conf

**echo \*.conf**

Q7. Use echo to append your name to a.txt

**echo 'aviral sahu' >>a.txt**

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Note:Many operation might not work.Analyze them

1. Create Three level nested directory a,b and c

**mkdir a**

**cd a**

**mkdir b**

**cd b**

**mkdir c**

a)Create at least one hidden file in each directory

touch .a.txt

touch .b.txt

touch .c.txt

b)Create at least one normal text file in each directory

touch a.txt

touch b.txt

touch c.txt

c)Copy c into a

d)Copy file inside a into b

**cp a.txt b**

2. Change the third level directory c permission to read only

**chmod 400 c**

3. Try copying third level c directory to outside of a

4. Create the directory “data“ inside b

**cd b**

**mkdir data**

5. Change the permission of b to read and write only

**chmod 600 b**

6. Create directory “data2” inside b

**cd b**

**mkdir data2**

7. Create data.txt file inside b

**touch data.txt**

8. Rename the second level directory c to copied\_dir

**mv c copied\_dir**

9. Change permission of copied\_dir to only executable

**chmod 100 copied\_dir**

10. Try ls on copied\_dir

11. Try moving copied\_dir to outside of a

12. Try moving data directory outside of a

13. Now change the owner of the directory a to root

**sudochown root a**

14. Change permission of a to read write and executable to only user

**chmod 700 a**

15. Try creating directory sample inside a

**cd a**

**mkdir sample**

16. Create directory x outside a

**mkdir x**

17. Try moving x inside a

**mv x a**

18. Create directory movies

**mkdir movies**

19. Change group of movies to sudo

20. Change group of movies to avahi

21. Try changing permission after changing ownership to root

22. Try Changing permission after changing group to sudo without sudo

23. Try Changing owner and group both to root

24. Try changinging permission

25. Try deleting the file

**rm data.txt**