OPERATING SYSTEM

ASSIGNMENT::4

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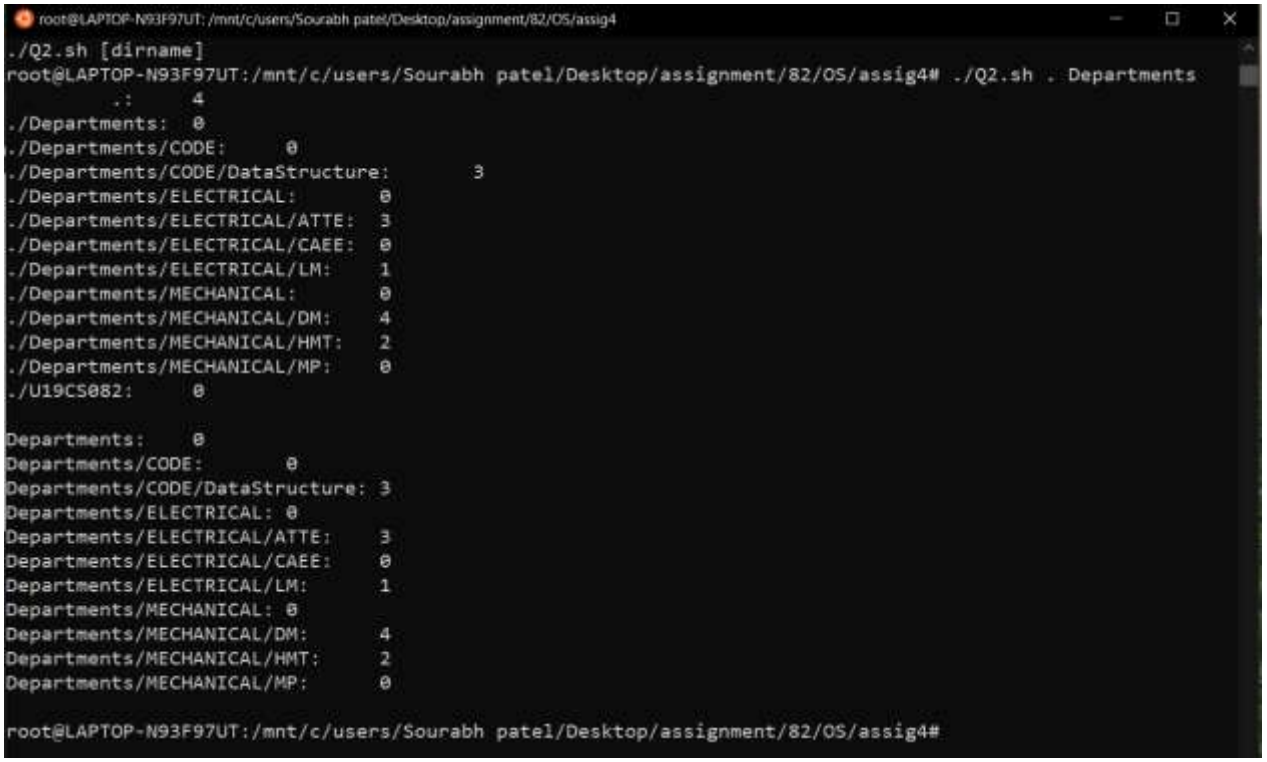
ADMISSION NO::U19CS082

1) Write a shell script which takes filename as argument and checks whether file is regular file,directory,block special file, character special file, named pipe, symbolic link, socket, device file etc.

```
if [ $# == 1 ]
then
if [ -e $1 ]
then
if [ -f $1 ]
then
echo "Regular file"
elif [ -d $1 ]
then
echo "Directory"
elif [ -b $1 ]
then
echo "Block special file"
elif [ -c $1 ]
then
echo "Character special"
elif [ -S $1 ]
then
echo "Socket"
elif [ -p $1 ]
then
echo "Named pipe"
elif [ -h $1 ]
then
echo "Symbolic link"
fi
else
echo "'$1' doesn't exist"
fi
else
echo "Incorrect no of arguments"
fi
```

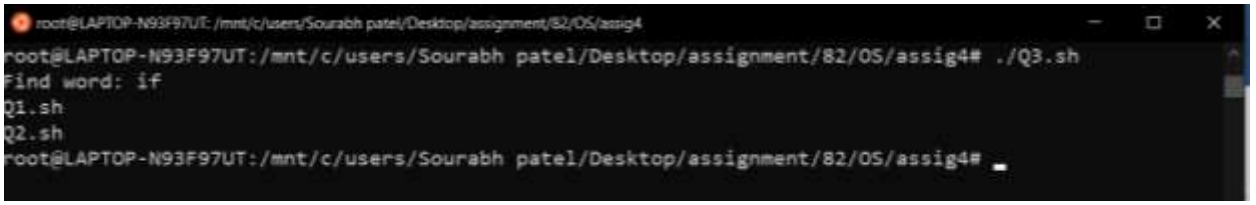
2) Write a shell script which will take file name as argument and check whether the file name is a dir or not and then proceed further only if it is a dir, else give usage message. The script should then print in the tabular format, name of each sub-dir (within the argument dir) and a count of the number of top level files in that sub-dir. Modify the program to work with multiple numbers of arguments, too.

```
for direc in $@
do
if [ -d $direc ]
then
find $direc -type d |
while read -r dir
do printf "%10s:\t" "$dir"; find "$dir" -maxdepth 1 -type f | wc -l;
done
echo " "
else
echo "./Q2.sh [dirname]"
fi
done
```



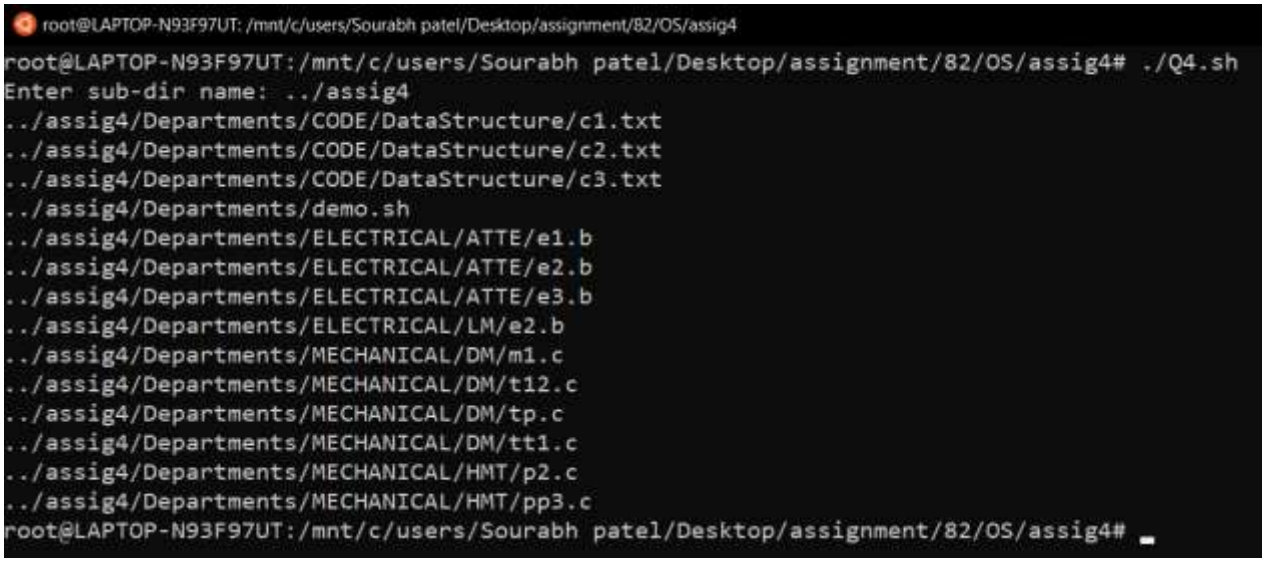
3) Write a script that will search for a specific word in all the files in the current dictionary and then prompt with the file name in which word is found.

```
read -p "Find word: " word
grep -l "$word" *.*
```



4) Write a script to print only the number of executable files in each sub-dir of theargument directory specified.

```
direc="."
echo -e "Enter sub-dir name: \c"
read direc
find $direc -mindepth 2 -executable -type f
```



5) Write a non-interactive script that takes in any no. of directory name as argument and calculates total no. of blocks of disk space occupied by the ordinary files in all the directories.

```
for direc in $@
do
if [ -d $direc ]
then
echo -e "Blocks by $direc: \c"
ls -s $direc | sed 's/^ *//' | grep total
else
echo "$direc not found"
fi
done
```

6) Write a shell script file named exercise2.sh that makes a list of files in your home directory that were changed less than 24 hours ago, but leave out directories.

```
find ~ -type f -mtime -1 -ls
```