Q 1.Write a shell script to convert all lowercase to uppercase in a file.

Sol:
```
echo “Enter the file name to convert”
read fname
 if [ -f $fname ]
 then
 echo “file exist”
 echo tr “[a-z]””[A-Z]” < $fname
 else
 echo “File not exist”
 Fi
```

Q 2)Write a shell script that takes a command-line argument and reports on whether it is directory, a file, or something else.

Sol:

```
echo "enter file"

read str

if test -f $str

then echo "file exists n it is an ordinary file"

elif test -d $str

then echo "directory file"

else

echo "not exists"

fi
```

Q 3) Write a shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it.

Sol:

```
if [ $# -lt 1]

then

echo "Check the arguments once"
```

```
exit

fi

echo "Enter a word"

read word

for file in $*

do

grep -iv "$word" $file | tee 1> /dev/null

done

echo "lines containing given word are deleted"
```

Q 4) Write a shell script to check the existence of the file . check if the file is block special file or not and print number of characters,words and lines .

Sol" ::

```
#!/ bin / Sh
echo "Enter the file name "
read fname
if [ -e $fname ]
then
 echo  "$fname exists"
else
echo " $fname doesn't exist"
fi

if [ -b $fname ]
then
 echo  "$fname is a block special file"
else
echo " $fname is not a block special file"
fi
```

```
 c= `cat $fname  | wc -c`
w= `cat $fname  | wc -w`
  l= `grep -c "." $fname`
echo "Number of characters in $fname is $c"
echo "Number of words in $fname is $w"
echo "Number of lines in $fname is $l"
```

Q 5) Given a file with 1 row and 12 columns, write a shell script to print the 10th, 11th and 12th column element.

```
#!/bin/sh
#col.txt contains the details with a single line in 12 columns
echo “The file is : ”
set `cat col.txt`
shift 3
echo $7 $8 $9
```

Q6) Write a shell script to display list of file names having all read, write and execute permission.

Solution:

```
echo "The name of all files having all permissions :"
# loop through all files in current directory
for file in *
do
# check if it is a file
if [ -f $file ]
then
# check if it has all permissions
if [ -r $file -a -w $file -a -x $file ]
then
# print the complete file name with -l option
ls -l $file
# closing second if statement
fi
# closing first if statement
fi
done
```

O/P :

-rwxrwxrwx 1 roomie roomie 0 1 Jul 22 23:19 nik.sh
-rwxrwxrwx 1 roomie roomie 0 2 Jul 22 23:19 hil.sh
-rwxrwxrwx 1 roomie roomie 0 3 Jul 22 23:19 bhal.sh
-rwxrwxrwx 1 roomie roomie 0 4 Jul 22 23:19 erao.sh

Q7.Write a shell script that accept the file name,starting and ending line number as an argument and display all the lines between the given line number.

```
#!/bin/sh
echo "enter the filename"
read fname
echo "enter the starting line number"
read s
echo "enter the ending line number"
read n
sed -n $s,$n\p $fname | cat > newline
cat newline
```

Output:

```
enter the filename
p.txt
enter the starting line number
2
enter the ending line number
4
lab
invalid
shell
```

Q8. Assign values to positional parameters using set command , print the values of the parameters and then unset the positional parameters.

```
#!/bin/sh
set apple mango orange guava
echo $1
echo $2
echo $3
```

```
echo $4
set --
echo $1
echo $2
echo "Hello"
```

Q9). Write a shell script to list all the files beginning with a given letter and store them in a file.

Sol).

```
#!/bin/sh
echo "Enter the letter:-"
read l
ls $l* > list.txt
echo "The files which start from given letter $l is"
cat list.txt
```

Q.10) Write a shell script to display the calendar of the users birthday (given users birth month and birth year print calendar of the respective month and year)

Ans:

```
#!/bin/sh
    echo “Enter the birth month of the user”
    read m
    echo “Enter the birth year of the user”
    read y
    cal $m $y
```

Output:

“Enter the birth month of the user” 9
“Enter the birth year of the user” 2002

September 2002

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14

15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30

Q.11)Write a shell script to sort files according to file size and display the empty files in the directory.

```
#!/bin/sh
echo "Enter a directory to check file size"
read dir
if[ -d "$dir" ]
then
echo "Directory exists"
for word in `find $dir -size 0`
do
echo $word
echo "Zero sized files are displayed"
done
else
echo "Directory doesn't exist"
fi
```

OUTPUT:

```
Enter a directory to check file size
(Read any directory)
Directory exists
./abcd.txt
./mail.txt
./f1.sh
Zero sized files are displayed
```

Q.12 Write a shell script program to pause the execution of any command for specified period of time

```
#!/bin/bash

echo “Wait for 5 seconds”
sleep 5
```

echo “Completed”

Q.13 write a shell script program to send email

```
#!/bin/bash
Recipient=”admin@example.com”
Subject=”Greeting”
Message=”Welcome to our site”
`mail -s $Subject $Recipient <<< $Message`
```

Q.14 Write a shell script to segregate all .sh files and .txt files of current directory by redirecting them into separate files.

Solution:

```
#!/bin/sh
ls *.txt > text.txt
ls *.sh > script.txt
cat text.txt
cat script.txt
```

Q.15 Write a Shell Script to execute the comm command and store the output to a file,copy the contents of that file to another file and add the new data to that copied file.

Ans:

```
#!/bin/sh
comm file1.txt file2.txt >file3.txt
cp file3.txt file4.txt
echo “          File4 is :          “
echo
cat file4.txt
echo “hello” >>file4.txt
echo “          File4 after adding new data                “
echo
cat file4.txt
```

Q16. Write a shell script to count the number of matches using grep command.

```
#!/bin/sh
echo “Enter file name: ”
read filename

echo “Enter pattern: ”
read pattern

grep -c “$pattern” $filename
```

Q17. Write a shell script to remove the duplicate lines from a file.

```
#!/bin/sh
echo “Enter the file name”
read file
echo “The file is”
cat $file
sort -u $file > data.txt
echo  “The file after removing duplicates is”
cat data.txt
```

Q18)Write a shell script to join two files horizontally

```
#!/bin/sh

echo "enter the file name"
read f1
read f2
echo "the files after joining are"
```

```
paste $f1 $f2 > result.txt
cat result.txt
```

Q.19 Write a shell script to make a directory which contains the files which are deleted using positional parameters.

```
#!/bin/sh
if [ -d “deleted” ]
then
        echo “The directory already exists”
else
        mkdir deleted
fi
cp $1 deleted
rm $1
```

Q.20 Write a shell script to open the last edited text file in the current directory.

```
#!/bin/sh
vi first_file.txt
vi second_file.txt
vi `ls -t | head -1`
```

21) Write a shell script that accepts as filename as argument and display its creation time if file exist and if it does not send output error message.

```
#! /bin/sh
if [ $# -eq 0 ]
then
echo "No argument"
exit
fi
if [ -f $1 ]
then
time=`ls -l $1|cut -c 33-59`
echo "File $1 has created on $time"
else
echo "File $1 does not exist"
fi
```

22):A shell script to accept a filename as argument and displays the last modification time if the file exists
and a suitable message if it does not.

```
#!/bin/sh
echo "Enter name of the file: \c"
read filename
if [ -e $filename ]
then
echo 'Last modification time is: \c'
echo `ls -l $filename | cut -d " " -f 6,7,8`
else
echo "file does not exist"
fi
```

23) A shell shell script to append doc extension to all filenames.

```
#!/bin/sh
for file in ch1 ch2 ch3;
do
cp $file ${file}.doc
echo $file copied to $file.doc
done
```

24) A shell script to accept 2 file names & check if the permission for these files are identical and if they are
not identical, display each filename followed by permission.

```
#!/bin/sh
echo "Enter 2 filenames: \c"
read f1 f2
file1 =`ls -l $f1 | cut -c 2-10`
```

```
file2 =`ls -l $f2 | cut -c 2-10`
 if [ $file1 == $file2 ]
 then
echo "Common file permission: $file1"
else
echo "Different file permissions "
echo " permission of $f1: $file1"
echo " permission of $f2: $file2"
fi
```

Q 25. Write a shell script that displays the message either “good morning”, “good afternoon” or “good evening” depending upon the current time.

```
#!/bin/sh
date +%R | cut -d " " -f 5 > time.txt
cut -d ":" -f 1 time.txt > hour.txt
h=`cat hour.txt`
if [ $h -lt 12 ]
then
        echo "Good Morning!"
elif [ $h -lt 16 ]
then
        echo "Good Afternoon!"
else
        echo "Good Evening!"
fi
```

Q 26) Write a shell script to print the content of a file without using cat command

```
#!/bin/sh
echo “Enter the filename”
read file
while read line
do
        echo $line
done < $file
```

27 Q] Write a shell script to create a directory confirming it's existence.
Solution:

```
#!/bin/sh
echo " enter the directory name "
read d
if [ -d $d ]
then
echo "exists "
exit
else
mkdir $d
echo " created "
fi
```

Q 28.write a shell script file called file properties that read file name entered and output it’s permissions.

```
#!/bin/sh
x=1
while [ $x -eq 1 ]
do
echo "enter your choice!!"
read ch
echo "your choice is $ch"

case $ch in
1 )echo "file permission    `ls -l $0|cut -d' ' -f1`";;
2 )echo "link info          `ls -l $0|cut -d' ' -f2`";;
3 )echo "owner info         `ls -l $0|cut -d' ' -f3`";;
4 )echo "group info         `ls -l $0|cut -d' ' -f4`";;
5 )echo "size of the file   `ls -l $0|cut -d' ' -f5`";;
6 )echo "month of creation `ls -l $0|cut -d' ' -f6`";;
```

```
7 )echo "time                `ls -l $0|cut -d' ' -f9`";;
8 )echo "file name         `ls -l $0|cut -d' ' -f10`";;
* )echo "invalid choice!!";;
esac
echo "do u want to continue....yes=1 or no =0"
read x
done
```

Q .29) Write shell script to print number of files and directories in the current working directories.

```
#!/bin/sh
If [ -d  "$@" ]
then
echo "number of files found : $(find "$@" -type f|wc -l)"
echo "Number of directories found : $(find "$@" -type d|wc -l)"
else
echo "[ERROR] please retry with another directory"
exit 1
fi
```

Output :

```
Number of files found :17
Number of directories found :3
```

Q 30. Write a shell script to display all .txt files and rename them as .temp files.

Sol:-

```
#!/bin/sh
ls *.txt > file1
for word in 'file1'
do
  mv $word.txt $word.temp
Done
```

Q 31)Write a menu driven shell script to display 1.list of current users.2.current user login,3.current date.4)long listing of all files in current directory.5)exit

SOL:

```
#!/bin/sh
```

```
Echo “enter choice”
Read choice
Case $choice in
1)who;;
2)who am i;;
3)date;;
4)ls -l;;
5)exit;;
*)echo “invalid choice”;;
esac
```

Q 32. Write a shell script to display the unique words in a text along with their count.

Ans)
```
!#/bin/sh
    sort animals.txt>animals1.txt
    uniq -c animals1.txt>unique.txt
    cat unique.txt
```

O/P:

Animals.txt
Bear
Lion
Tiger
Snake
Bear
Snake
Snake
Elephant
Lion
Lion
Lion

unique.txt:
2 bear
1 elephant
4 lion
3 tiger

1 snake
and

Q. 33. Write a shell script which accepts pathname and displays the total number of files in it.

```
#!/bin/sh
echo “Enter the path”
read path
echo “The number of files is: \c”
ls  $path|wc -w
```

Q.34 .Write a shell script to display your current time zone.

```
#!/bin/sh
Echo "Your current time zone is"
Set `date`
Echo $5
```

Output:- Your current time zone is
IST

Q 35 . write a shell script to check if the two files exists or not and if they do then append the contents of those files into a third file

```
#!/bin/sh
touch ans.txt
if [ -r $1 ]
then
    if [ -r $2 ]
    then
        while read line
        do
            echo $line >> ans.txt
        done < $1
        echo "\n" >> ans.txt
```

```
            while read line
            do
                  echo $line >> ans.txt
            done < $2
      else
            echo " $2 does not exists "
      fi
else
      echo "$1 does not exists"
Fi
```

Q 36. Write a shell script to copy all the directories into a particular directory.

```
#!/bin/sh
ls > file1.txt
mkdir ans
while  read line
do
   if [ -d $line ]
   then
       mv $line ans
    fi
done < file1.txt
```

Q 37) Write a shell script to accept directory path as an argument and display the recently modified file in the same.

SOL -

```
#!/bin/sh
if [ $# -ne 1 ]
then
      echo "invalid number of arguments"
      exit
else
      cd $1
      set `ls -clt`
      echo " The recently modified file in the given directory is ${11} at ${10} on ${8} - ${9}"
fi
```

Q 38.Write a shell script to find a file consisting of list of story books and append the name of the new books.

```
#!/bin/sh
echo enter the file name you are searching for
```

```
read file
find $file
if [ $? -eq 0 ]
then
echo file exists
echo enter the name of new books
cat>>$file
else
echo file does not exist
fi
```

Output
Enter the file name you are searching for
Story.txt
File exists
Enter the name of news books
A Million Thoughts

Q 39). Write a shell script to check if the user is logged in or not

```
#!/bin/sh
echo enter the username
read name
who > test
if grep $name test
then
echo logged in
else
echo not logged in
fi
```

Output
Enter username
test
logged in

Q 40) write menu driven shell script program to
1.show the link count f file

2.to show the file size

For given input file using case statement.

Soln:

```
#!/bin/sh
echo “Menu”
echo  “1.to show the link count of a file”
echo  “2.to display file size”
rcho “enter your file”
read file
echo “enter your choice”
read choice
if [ -f $file ]
then
        case $choice in
                1)ls -l $file | cut -d “ “ -f 2 > temp1.txt
                  echo “the count of file is”
                  cat temp1.txt
                  exit ;;
                2)ls -l $file | cut -d “ “ -f 5 > temp2.txt
                  echo “the file size is”
                  cat temp2.txt
                  exit ;;
                *)echo “invalid choice”;;
        esac
else
        echo “provided file is not regular file”
fi
```

Q 41) Write a shell script to move the file with the largest size to a directory provided by the user as a positional parameter.

```
#!/bin/sh
ls > 1.txt
cat 1.txt |sort -n -k 5 |tail -1 > q.txt
mkdir $1
while read line
do
mv $line $1
done <q.txt
```

Q42) SHELL SCRIPT TO GET WEEKLY REMINDERS

```
#!/bin/sh
#weekly reminder

D=`date | cut -d " " -f 1`

if test $D = "Monday"
then
 echo MONDAY REMINDERS

elif test $D = "Tuesday"
then
 echo TUESDAY REMINDERS

elif test $D = "Wednesday"
then
echo WEDNESDAY REINDERS

elif test $D = "Thursday"
then
echo THURSDAY REMINDERS

elif test $D = "Friday"
then
echo FRIDAY REMINDERS

elif test $D = "Saturday"
then
echo SATURDAY REMINDERS

else
echo SUNDAY REMINDERS
fi
```

OUTPUT

SATURDAY REMINDERS

Q 43) write a shell script to perform basic operations

```
#!/bin/sh
a=10
b=20
val=' expr $a + $b'
echo "a + b : sval"
val=' expr $a - $b°
```

```
echo "a - b : sval"
val= 'expr $a \* $b
echo "a * b : sval"
val= 'expr $b / sa
echo "b / a: sval"
val=' exor $b % $a
echo "b % a : sval"
if [ $a == $b 1
then
echo "a is equal to b"
fi
if [ $a != $b ]
then
echo "a is not equal to b"
fi
```

Q 44) write a shell script to display current data time, username and directory

```
#!/bin/sh

#
echo "Hello, $LOGNAME"
echo "Current date is `date`"
echo "User is `whoami`"
echo "Current direcotry `pwd`"
```

45) Write a shell script to read a filename and check if it is a regular file or not and if it is a regular file then display the number of lines, words and characters it contains.

```
#!/bin/sh
echo " enter the file name"
read filename
if [ -f $filename ]
then
echo "it is a regular file"
echo " the number of lines:"
wc -l $filename
echo "the number of words:"
wc -w $filename
echo "the number of characters:"
wc -c $filename
else
echo "it is not a regular file"
fi
```

46) write a shell script to demonstrate positional parameters

```
#!/bin/sh
echo positional parameters
echo first argument is \$1 $1
echo second argument is \$2 $2
echo number of arguments are \$\# $#
echo arguments are \$* $*
echo Process ID of current shell \$\$ is $$
```

47) Write a shell script to find length of string

```
#!/bin/sh
echo "Enter string"
read str
len=`echo -n "$str" | wc-c`
echo "length of $str = $len"
```

48)Write a shell script to display the current date and time

```
#!/bin/sh
Year=$(date +"%Y")
Month=$(date +"%m")
Day=$(date +"%d")
Hour=$(date +"%H")
Minute=$(date +"%M")
Second=$(date +"%S")
echo `date`
echo " Current date: $Day-$Month-$Year"
echo " Current time: $Hour:$Minute:$Second"
```

Output:

```
Saturday 02 July 2022 01:11:14 PM IST
 Current date: 02-07-2022
 Current time: 13:11:14
```

49)write a shell script to print number of lines of all text files along with
their names and path from home directory, of a given directory.

```
#!/bin/sh
FILES=path/*.txt
for f in $FILES
do
wc -l $f
done
```

Q50)Write a shell program to create a directory which contains all files whose names have only alphabets without any numbers

```
#!/bin/sh
ls>ff.txt
mkdir d2
grep -v [0-9] ff.txt >fff.txt
for word in `cat fff.txt`
do
cp $word d2
done
```

Q51) Write a shell script program to copy file 1 to file 2 and create a backup of file 2

```
#!/bin/sh
echo " enter file 1 and file 2"
read f1
read f2
cp -b $f1 $f2
echo " file 1 copied to file 2 with backup"
```

Q52)Write a menu driven shell programe:

1.to append the given file to another file
2.to override and copy the given file to another file
3.exit

```
echo 'menu'
```

```
echo 1.append
echo 2.copy
echo 3.exit
echo enter your choice
read choice
echo enter the file names
read f1
read f2
case $choice in
1 ) cat $f1>>$f2 ;;
2 ) cp $f1 $f2 ;;
3 ) exit ;;
* ) echo invalid input;;
esac
```

Q53) write a shell script to check whether the file(f1) is regular ar linked or directory file and check whether the given file(f1) is new or old or linked to another given file

```
#!/bin/sh
echo “Enter the filenames”
read f1 f2
If [ -f $f1 ]
then
        echo “The file is regular”
elif [ -d $f1 ]
then
        echo “The file is directory file”
elif [ -l $f1 ]
then
        echo “The file is linked”
else
        echo “The file is of invalid type”
fi
if [ $f1 -nt $f2 ]
then
        echo “File 1 is newer”
else
        echo “File 1 is older”
fi
if [ $f1 -lt $f2 ]
then
        echo “File 1 is linked with File 2”
fi
```

Q.54) write a shell script to display last 10 commands executed by the user.

```
#!/bin/sh
echo "last 10 commands are  "
history | tail
```

Output
$source file.sh

```
date
cal
whoami
who
ls
ls -a
ls -l
vi file.sh
source file.sh
source file.sh
```

Q 55) Write a shell script to display the digits which are in odd position in a given 5 digit number

```
#!/bin/sh
echo "Enter a 5 digit number"
read num
n=1
while [ $n -le 5 ]
do
a=`echo $num | cut -c $n`
 echo $a
n=$(($n+2))
done
```

Output:
Enter a 5 digit number
12345

1
3
5

56) Write a shell script to check if the file exists.

```
#!/bin/sh
filename=$1
```

```
if [ -f "$filename" ]; then
echo "File exists"
else
echo "File does not exist"
fi
```

57)Write a shell script which get executed only one time.

```
#!/bin/sh
echo "hello world!"
chmod 000 filename.sh
```

Output

```
sh filename.sh
Hello world!
sh filename sh
Can't open filename.sh
```

Q.58)Write a shell script to count only files we own

```
#!/bin/bash
# counting the number of lines in a list of files
# for loop over argument
# count only those files i am owner of

if [$# -lt 1 ]
then
  echo "Usage: $0 file …."
exit 1
fi

echo "$0 counts the lines of codes"
l=0
n=0
s=0
for f in $*
do
  if [ -0 $f ] # checks whether file owner is running the script
then
       l=`wc  -l $f | sed 's/^\( [0-9]*\).*$/\1/' `
echo "$f : + $1"
n=$ [  $n +1  ]
s=$ [  $s +$1  ]
else
      Continue
fi
done
```

```
echo "$n files in total, with $s lines in total"
```