Program : 11

Aim : Write a script to print all prime numbers from 1 to n.

```
#!/bin/bash
echo “enter m and n”;
read m n
for a in $(seq $m $n)
do
k=0
for I in $(seq 2 $(expr $a -1))
do
if [ $expr $a % $i)-eq 0 ]
then
k=1
break
fi
done
if [ $k -eq 0 ]
then
echo $a
fi
done
```

Output

```
user@user:~$ bash prm.sh
enter m and n
1 10
1
2
3
5
7
```

Program : 12

Aim **:** Write a script to generate all combinations of a, b and c.

```
#!/bin/bash
echo “The combination of a,b,c is”;
for i in {a,b,c}
do
for j in {a,b,c}
do
for k in {a,b,c}
do
echo “$i $j $k”;
done
done
done
```

Output

```
user@user:~$ bash com.sh
The combination od a,b,c is
a a a
a a b
a a c
a b a
a b b
a b c
a c a
a c b
a c c
b a a
b a b
b a c
b b a
b b b
b b c
b c a
b c b
b c c
c a a
c a b
c a c
c b a
```

c b b
c b c
c c a
c c b
c c c

Program : 13

Aim **:** Write a shell script to sum up the following series 1/1! + 2/2! + 3/3! + ...

```
#!/bin/bash
echo “Enter the limit”;
read n
sum=0
for((i=1;i<=$n;i++))
do
fact=1
for((j=1;j<=i;j++))
do
fact=`expr $fact \* $j`
done
sum=$(echo “scale=3;$sum + $i / $fact”|bc)
done
echo $sum
```

Output

```
user@user:~$ bash series.sh
Enter the limit:
7
2.716
```

Program : 14

Aim **:** Write a script to read a year and to decide whether it is a leap year or not. If no year is supplied then the current year is assumed.

```
#!/bin/bash
if [ $# -eq 1 ]; then
year=$1
else
year=$(date +"%Y")
fi
if (( year % 4 == 0 && year % 100 != 0 )) || (( year % 400 == 0 )); then echo
"$year is a leap year";
else
echo "$year is not a leap year";
fi
```

Output

```
user@user:~$ bash year.sh
2023 is not a leap year
user@user:~$ bash year.sh 2000
2000 is a leap year
```

Program : 15

Aim **:** Shell script to perform operations like display, list, make directory and copy, rename, delete, edit file.

```
#!/bin/bash
clear
i=”y”;
while [ $i = “y” ]
do
echo “1.display”;
echo “2.list”;
echo “3.make directory”;
echo “4.copy”;
echo “5.rename”;
echo “6.delete”;
echo “7.edit”;
echo “Enter your choice :”;
read ch
case $ch in
1)pwd;;
2)ls;;
3)echo enter the name of the directory:
read dr
mkdir $dr
echo directory $dr created;;
4)touch >file1 this is first textfile touch>file2 this is second text file cp file1
new_folder1
echo copied successfully;;
5)mv file1 file3
echo file moving successfully;;
6)rm file2
echo file removed successfully;;
 7)touch>file3 this is edited textfile
 echo file edited successfully;;
 *)echo “invalid choice”; ;;
esac
echo “do you want to continue?”
 read i
if [ $i != “y” ]
then
exit
fi
```

done

Output

```
user@user:~$ bash dir.sh
1.display
2.list
3.make directory
4.copy
5.rename
6.delete
7.edit
Enter your choice:
1
/home/user
do you want to continue?
y
1.display
2.list
3.make directory
4.copy
5.rename
6.delete
7.edit

Enter your choice:
3
enter the name of the directory:
user1
directory user1 created
do you want to continue? y
1.display
2.list
3.make directory
4.copy
5.rename
6.delete
7.edit
Enter your choice:
4
copied successfully
do you want to continue? y
1.display
2.list
```

3.make directory
4.copy
5.rename
6.delete

7.edit
Enter your choice:
5
file moving successfully
do you want to continue? y
1.display
2.list
3.make directory

4.copy
5.rename
6.delete
7.edit
Enter your choice:
6
file removed successfully
do you want to continue? y
1.display
2.list
3.make directory
4.copy
5.rename
6.delete
7.edit
Enter your choice:
7
file edited successfully
do you want to continue? n

Program :16

Aim **:** Write a menu driven program to display the following options.

➢ Contents of /etc/passwd

➢ List of output of ‘who’

➢ Present working directory

➢ Exit

```
#!/bin/bash
while true; do
echo “Select an option:”;
echo “1. Display contents of /etc/passwd”;
echo “2. List output of ‘who’”;
echo “3. Display present working directory”;
echo “4. Exit”;
read choice
case $choice in
1)
cat /etc/passwd
;;
2)
who
;;
3)
pwd
;;
4)
exit 0
;;
*)
echo “Invalid choice. Please enter a number from 1 to 4.” ;;
esac
done
```

Output

```
user@user:~$ bash direc.sh
Select an option:
1. Display contents of /etc/passwd
2. List output of ‘who’;
3. Display present working directory
4. Exit
2
```

user tty2 2023-02-27 18:56 (tty2)
Select an option:
1. Display contents of /etc/passwd
2. List output of ‘who’;
3. Display present working directory
4. Exit
3
/home/user
Select an option:
1. Display contents of /etc/passwd
2. List output of ‘who’;
3. Display present working directory
4. Exit

Program : 17

Aim **:** Write a shell script to find how many terminals this user logged in.

```
#!/bin/bash
username=$(whoami)
num_terminals=$(who | awk -v user="$username" '$1 == user {print $2}' | sort - u |
wc -l)
echo "User $username logged in on $num_terminals";
```

Output

```
user@user:~$ bash term.sh
user logged in on 1
```