LINUX SHELL SCRIPT ASSIGNMENT - 3

1. Write a shell script to display your LOGIN NAME and HOME directory.

```
clear
echo "Login Name : $LOGNAME "
echo "Home directory : $HOME "
```

2. Write a shell script to display menu like “1. Date, 2. Cal, 3. Ls, 4. Pwd, 5. Exit” and execute the commands depending on user choice.

```
clear
echo ------------------------------------------
echo '\tMenu Implementation'
echo ------------------------------------------
echo 1.Today DATE
echo 2.Calendar
echo 3.List of files
echo 4.Print working directory
echo 5.Exit
echo Enter your choice
read choice
case $choice in
        1)date;;
        2)cal;;
        3)ls -1;;
        4)pwd;;
        5)exit;;
        *)echo This is not a choice
esac
```

3. Write a shell script to accept the name from the user and check whether user entered name is file or directory. If name is file display its size and if it is directory display its contents.

```
#!/bin/bash
echo "Enter Name"
read Name
inpu=$Name
 [ -d "$inpu" ] && echo "This is a directory and its contents are" && ls -l $Name
 [ -f "$inpu" ] && echo -n "This is a file and its size is " && ls -s $Name
```

4 . Write a shell script to determine whether a given number is prime or not

```
prime or not
num=29
for((i=2; i<=num/2; i++))
do
if [ $((num%i)) -eq 0 ]
then
echo "$num is not a prime number."
exit
fi
done
echo "$num is a prime number."
```

5] shell script to find the greatest of three numbers

```
echo "Enter Num1"
read num1
echo "Enter Num2"
read num2
echo "Enter Num3"
read num3
if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]
then
echo $num1
elif [ $num2 -gt $num1 ] && [ $num2 -gt $num3 ]
then
echo $num2
else
```

```
echo $num3
fi
```

6] Write a Program to find whether a given year is a leap year or not

```
leap=$(date +"%Y")
echo taking year as $leap
if [ expr $leap % 400 -eq 0 ]
then
echo leap year
elif [ expr $leap % 100 -eq 0 ]
then
echo not a leap year
elif [ expr $leap % 4 -eq 0 ]
then
echo leap year
else
echo not a leap year
fi
```

7] shell script to check whether a number is positive or negative

```
echo "Enter a Number"
read num
if [ $num -lt 0 ]
then
echo "Negative"
elif [ $num -gt 0 ]
then
echo "Positive"
else
echo "Neither Positive Nor Negative"
fi
```

8] Write a program to print the table of a given number.

```
echo "Enter a Number"
read n
i=0
while [ $i -le 10 ]
do
echo " $n x $i = expr $n \\* $i"
i=expr $i + 1
done
```

9] Write a program to find the factorial of given number

```
#shell script for factorial of a number
#factorial using while loop

echo "Enter a number"
read num

fact=1

while [ $num -gt 1 ]
do
fact=$((fact * num))  #fact = fact * num
num=$((num - 1))      #num = num - 1
done

echo $fact
```

10] Write a program to find given number of terms in the Fibonacci series.

```
clear
echo "Program to Find Fibonacci Series"
echo "How many number of terms to be generated ?"
read n
x=0
y=1
i=2
echo "Fibonacci Series up to $n terms :"
echo "$x"
echo "$y"
while [ $i -lt $n ]
do
i=expr $i + 1
z=expr $x + $y
```

```
echo "$z"
x=$y
y=$z
done
```

11] Write a program to calculate gross salary if the DA is 40%, HRA is 20% of basic salary. Accept basic salary form user and display gross salary (Result can be floating point value).

```
echo -e "Enter ur basic salary \c"
read sal
if [ $sal -ge 1000 ]
then
da=expr $sal \\* 40 / 100
ha=expr $sal \\* 20 / 100
Nsal=expr $sal + $da + $ha
echo "ur Basic Salary        $sal "
echo "ur Dearness Allowance    $da "
echo "Ur House rent            $ha "
echo "                     ------------"
echo "Ur Net Salary is   Rs. $Nsal "else
echo "Pls enter basic salary greater than 1000 "
fi
```

12] Write 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 doesn’t exist

```
echo -n "Enter name of the file:"
read filename
if [ -f $filename ]
then
echo 'Last modification time is 'ls -lt $filename | tr -s " " "," | cut -d "," -f7
else
echo "File not exist"
fi
```

13. Write a shell script to display only hidden file of current directory.

```
#!/bin/bash

ls -ald .*
```

14. Write a shell script to display only executable files of current directory.

```
#!/bin/bash

ls -Fla | grep \*$
```

15. Accept the two file names from user and append the contents in reverse case of first file into second file.

```
#!/bin/bash

echo "Append File1 contents in File2"
echo "Enter File 1 Name"
read file1
echo "Enter File 2 Name"
read file2
tac "$file1" | cat >> "$file2"
echo ""
echo "Below are File1 contents"
cat "$file1"
echo ""
echo "Below are the File2 contents"
cat "$file2"
```

16. Write a shell script to display welcome message to the user along with contents of his
    home directory. Ensure that shell script will execute automatically when user login to the
    shell. (Make entry of your shell script into .bashrc file into your home directory).

```
clear
echo -e "Welcome ${USER} \ncontent of your home directory are:" && ls -1
```

17. Print the following pattern.

```
*

* *

* * *

* * * *

* * * * *
```

```
#Bash Shell Script to print half pyramid using *
rows=5
for((i=1; i<=rows; i++))
do
  for((j=1; j<=i; j++))
  do
    echo -n "* "
  done
  echo
done
```