Linux Shell Script Assignment – 3

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

```
#!/bin/bash

#-------------------------------------
# Aim:Display your LOGIN Name and HOME dir
#=====================================
echo "Hello Deependra Sharma"

echo "Mylogin name : $USER"

echo "my Home Dir : $HOME"
```

```
osboxes@osboxes:~/scripts$ vim Assign_5_Q_1.sh
osboxes@osboxes:~/scripts$ bash Assign_5_Q_1.sh
Hello Deependra Sharma
Mylogin name : osboxes
my Home Dir : /home/osboxes
```

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.

```
#!/bin/bash

#-------------------------------------
# Aim:Display your LOGIN Name and HOME dir
#=====================================
echo "Hello Deependra Sharma"
while(true)
do
echo "=========================================="
echo -e "1.Date\n2.Cal\n3.Ls\n4.Pwd\n5.Exit\n"
echo "Enter your choice:"
read choice

case $choice in

1)
 echo "Current date :"
 date
;;
2)
 echo "Current caleder  :"
 cal
;;
Assign_5_Q_2.sh" 38L, 599B                                    1
```

```
Hello Deependra Sharma
========================================
1.Date
2.Cal
3.Ls
4.Pwd
5.Exit

Enter your choice:
4
Current dir path :
/home/osboxes/scripts
----------------------------------------
```

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.

```
 1 #!/bin/bash
 2
 3 #-----------------------------------
 4 # Aim:file or dir name and print its size
 5 #===================================
 6 echo "Hello Deependra Sharma"
 7
 8 echo "Enter file or dir name :"
 9
10 read name
11
12 if [ -e $name ]
13 then
14 echo "$name is exist "
15  if [ -f $name ]
16  then
17      echo "$name is a regular file "
18      size=$(stat -c%s "$name")
19      echo"size of $name : $size bytes"
20   else
21    echo "$path is a directory"
22    echo "contents of $name :"
23    ls "$name"
Assign_5_Q_3.sh" 27L, 509B
```

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

```
#!/bin/bash

#-----------------------------------
# Aim: Number is prime or not
#===================================
echo "Hello Deependra Sharma"

echo -n "Enter number :"
read num

i=2
while [ $i -lt $num ]
do
    if [ `expr $num % $i` -eq 0 ]
    then
        echo "number is not prime :"
        break
    fi
    i=`expr $i + 1`
done
if [ $num -eq $i ]
then
#2,3,4,5,6,7
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_4.sh
Hello Deependra Sharma
Enter number :5
Number is prime
osboxes@osboxes:~/scripts$ bash Assign_5_Q_4.sh
Hello Deependra Sharma
Enter number :4
number is not prime :
```

5. Write a Program to find the greatest of three numbers

```
#!/bin/bash

#-----------------------------------
# Aim: find max from two numbers
#===================================
echo "Hello Deependra Sharma"

echo -n "Enter Number "
read n1 n2 n3

max=0
if [ $n1 -gt $n2 ] && [ $n1 -gt $n3 ];
then
    echo "$n1 num1 is greater"
    max=$n1
elif [ $n2 -gt $n3 ] && [ $n2 -gt $n1 ];
then
  echo "$n2 num 2 is greater"
  max=$n2
else
    echo "$n3 num3 is greater"
    max=$n3

```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_5.sh
Hello Deependra Sharma
Enter Number 4 5 6
6 num3 is greater
maximun value = 6
osboxes@osboxes:~/scripts$ vim Assign_5_Q_5.sh
```

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

```
#!/bin/bash

#-----------------------------------
# Aim:check leap year
#===================================
echo "Hello Deependra Sharma"

echo "Enter year  :"
read year

if [ $(($year % 400)) -eq 0 ];
then
 echo "$year is leap year"

elif [ $(($year % 100)) -eq 0 ];
then
  echo "$year is not a leap year"

elif [ $(($year % 4)) -eq 0 ];
then
  echo "$year is a leap year"
else
  echo "$year is not a leap year"
"Assign_5_Q_6.sh" 24L, 421B
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_6.sh
Hello Deependra Sharma
Enter year  :
1800
1800 is not a leap year
```

7. Write a Program to find whether a given number is positive or negative

```
#!/bin/bash

#-----------------------------------
# Aim:Display your LOGIN Name and HOME dir
#===================================
echo "Hello Deependra Sharma"

echo "Enter Number :"
read num

if [ $num -gt 0 ]
then
echo "$num is a positive number "

elif [ $num -lt 0 ]
then
echo "$num is a negative number "

else
echo "$num is zero"
fi

"Assign_5_Q_7.sh" 21L, 346B
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_7.sh
Hello Deependra Sharma
Enter Number :
2
2 is a positive number
osboxes@osboxes:~/scripts$ bash Assign_5_Q_7.sh
Hello Deependra Sharma
Enter Number :
-2
-2 is a negative number
```

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

```
#!/bin/bash

#-------------------------------------
# Aim:To write a table
#=====================================
echo "Hello Deependra Sharma"

echo "Enter a  number :"
read num

echo "======================"

for i in `seq 10`
do
res=`expr $num  \* $i`
echo "$res"
done
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_8.sh
Hello Deependra Sharma
Enter a  number :
5
====================
5
10
15
20
25
30
35
40
45
50
```

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

```
#!/bin/bash

#-------------------------------------
# Aim:To write a table
#=====================================
echo "Hello Deependra Sharma"

echo "Enter a  number :"
read num

echo "====================="
res=1;
for((i=1;i<=$num;i++))
do
res=`expr $res  \* $i`
done
echo "fectorial :$res"
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_9.sh
Hello Deependra Sharma
Enter a  number :
5
====================
fectorial :120
```

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

```
#!/bin/bash

#-------------------------------------
# Aim:Fibonacci series
#=====================================
echo "Hello Deependra Sharma"
echo "Enter no of term of fibonacci series"
read n
 # n=4
    a=0
    b=1

   echo "$a,$b"
    for ((i=0; i<n; i++)); do
        echo -n "$a "
        fn=$((a + b))
        a=$b
        b=$fn
    done

```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_10.sh
Hello Deependra Sharma
Enter no of term of fibonacci series
6
0,1
0 1 1 2 3 5 osboxes@osboxes:~/scripts$
```

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 V:alue).

```
 1 #!/bin/bash
 2
 3 #-------------------------------------
 4 # Aim:To write a table
 5 #=====================================
 6 echo "Hello Deependra Sharma"
 7
 8 echo "Enter a salary:"
 9 read salary
10
11 echo "====================="
12 da=`echo " $salary * 0.4" | bc`
13 echo "DA :$da"
14 hra=`echo "$salary * 0.20"|bc`
15 echo "HRA :$hra"
16
17 grosssalary=`echo "$salary + $da + $hra" | bc`
18
19 echo "the gross salary :$grosssalary"
20
~
:~
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_11.sh
Hello Deependra Sharma
Enter a salary:
500
=====================
DA :200.0
HRA :100.00
the gross salary :800.00
osboxes@osboxes:~/scripts$ vim Assign_5_Q_11.sh
```

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.

```
#!/bin/bash

#-----------------------------------
# Aim:To write a table
#===================================
echo "Hello Deependra Sharma"

# Check if a filename argument is provided
if [ $# -eq 0 ]; then
    echo "Usage: $0 filename"
    exit 1
fi

filename=$1

# Check if the file exists
if [ -e "$filename" ]; then
    # Display the last modification time
    mod_time=$(stat -c %y "$filename")
    echo "Last modification time of '$filename': $mod_time"
else
    echo "File '$filename' does not exist."
fi
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_12.sh
Hello Deependra Sharma
Usage: Assign_5_Q_12.sh filename
```

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

```
#!/bin/bash

#-----------------------------------
# Aim:
#===================================
echo "Hello Deependra Sharma"

# List hidden files in the current directory
echo "Hidden files in the current directory:"
ls -d .[^.]*

# Check if there are no hidden files
if [ "$(ls -A .[^.]*)" ]; then
    ls -d .[^.]*
else
    echo "No hidden files found."
fi

```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_13.sh
Hello Deependra Sharma
Hidden files in the current directory:
ls: cannot access '.[^.]*': No such file or directory
ls: cannot access '.[^.]*': No such file or directory
No hidden files found.
osboxes@osboxes:~/scripts$
```

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

```
#!/bin/bash

#-----------------------------------
# Aim:To write a table
#===================================
echo "Hello Deependra Sharma"

# List executable files in the current directory
echo "Executable files in the current directory:"
executable_files=$(find . -maxdepth 1 -type f -executable)

if [ -z "$executable_files" ]; then
    echo "No executable files found."
else
    echo "$executable_files"
fi

```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_14.sh
Hello Deependra Sharma
Executable files in the current directory:
No executable files found.
```

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

```
 1 #!/bin/bash
 2
 3 #-----------------------------------
 4 # Aim:To write a table
 5 #===================================
 6 echo "Hello Deependra Sharma"
 7
 8 # Accept two filenames from the user
 9 read -p "Enter the first filename: " file1
10 read -p "Enter the second filename: " file2
11
12 # Check if the first file exists
13 if [ ! -f "$file1" ]; then
14     echo "File '$file1' does not exist."
15     exit 1
16 fi
17
18 # Convert contents of the first file to reverse case and append to the secon
   d file
19 # Using tr to change lowercase to uppercase and vice versa
20 {
21     echo "Appending contents of '$file1' to '$file2' in reverse case:"
22     tr '[:lower:][:upper:]' '[:upper:][:lower:]' < "$file1"
Assign_5_Q_15.sh" 26L, 715B                                  16,1          Top
```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_15.sh
Hello Deependra Sharma
Enter the first filename: Deependra
Enter the second filename: txt
File 'Deependra' does not exist.
osboxes@osboxes:~/scripts$ bash Assign_5_Q_15.sh
```

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).

17. Print the following pattern.

```
*

* *

* * *

* * * *

* * * * *
```

```bash
#!/bin/bash

#-------------------------------------
# Aim:draw a pattern
#=====================================
echo "Hello Deependra Sharma"

echo "Enter no of pattern"
read rows

# Loop to print the pattern
for ((i=1; i<=rows; i++)); do
    for ((j=1; j<=i; j++)); do
        echo -n "* "
    done
    echo # Move to the next line
done

```

```
osboxes@osboxes:~/scripts$ bash Assign_5_Q_17.sh
Hello Deependra Sharma
Enter no of pattern
5
*
* *
* * *
* * * *
* * * * *
osboxes@osboxes:~/scripts$ vim Assign_5_Q_17.sh
```