**LINUX & Shell Programming Lab Assignment – 08**

1. Write a shell script to check that given file is regular file or a directory.

#! /bin/bash

echo "Enter file name:"

read f

if [ -d $f ]

then

echo "It is a directory"

elif [ -f $f ]

then

echo "It is a file"

fi

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8a.sh

Enter file name:

f1.txt

It is a file

1. Write a shell script to check that read and write permission is given on a file.

#! /bin/bash

echo "Enter file name:"

read f

if [ -r $f ] && [ -w $f ]

then

echo "file is both writable and readable"

elif [ -w $f ]

then

echo "file is writable"

elif [ -r $f ]

then

echo "file is readable"

fi

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8b.sh

Enter file name:

f1.txt

file is both writable and readable

1. Write a shell script to remove a file if the file exist, otherwise display an error message on the screen.

#! /bin/bash

echo "Enter file name:"

read f

if [ -f $f ]

then

rm $f

echo "file deleted...!!"

else

echo "file does not exist"

fi

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8c.sh

Enter file name:

f1.txt

file deleted...!!

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8c.sh

Enter file name:

f1.txt

file does not exist

1. Write a shell script to find factorial of a given number.

#! /bin/bash

echo "Enter a number:"

read n

i=1

while [ $n -gt 0 ]

do

i=`echo $i \\* $n |bc`

n=`expr $n - 1`

done

echo "Factorial: $i"

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8d.sh

Enter a number:

5

Factorial: 120

1. Write a shell script to check that given string is palindrome or not.

#!/bin/bash

echo "Please Enter a String"

read name

echo ""

name1=`echo $name | rev`

if [ "$name" == "$name1" ]

then

echo "$name is palindrome"

else

echo "$name is not a palindrome"

fi

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8e.sh

Please Enter a String

nitin

nitin is palindrome

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8e.sh

Please Enter a String

amit

amit is not a palindrome

1. Write a shell script to check that given number is prime number or not.

#!/bin/bash

echo "Please Enter a number:"

read n

new=`expr $n - 1`

c=2

mod=`expr $n % $c`

while [ $c -le $new ]

do

if [ $mod -eq 0 ]

then

echo "The number is not Prime Number."

break

fi

c=`expr $c + 1`

done

if [ $n -eq $c ]

then

echo "The number is a Prime Number."

fi

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8f.sh

Please Enter a number:

7

The number is a Prime Number.

pc-105@gehu-HP-EliteDesk-800-G2-SFF:~/sagar$ bash 8f.sh

Please Enter a number:

6

The number is not Prime Number.

1. Write a shell script to display the series 1, 4, 9, 16, 25, ...

#!/bin/bash

echo "Enter the limit for calculating square:"

read n

i=1

echo ""

echo "squares till $n are: "

while [ $i -le $n ]

do

s=`expr $i \\* $i`

echo "$s"

i=`expr $i + 1`

done

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8g.sh

Enter the limit for calculating square:

10

squares till 10 are:

1

4

9

16

25

36

49

64

81

100

1. Write a shell script to display the series 1, 8, 27, 64, 125, ...

#!/bin/bash

echo "Enter the limit for calculating cube:"

read n

i=1

echo ""

echo "cubes till $n are: "

while [ $i -le $n ]

do

s=`expr $i \\* $i \\* $i`

echo "$s"

i=`expr $i + 1`

done

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8h.sh

Enter the limit for calculating cube:

5

cubes till 5 are:

1

8

27

64

125

1. Write a shell script to display the series 0, 1, 1, 2, 3, 5, 8, ...

#!/bin/bash

echo "Enter a number:"

read n

t1=0

t2=1

echo ""

echo "Fibonacci Series till $n are: "

echo "$t1"

echo "$t2"

next=`expr $t1 + $t2`

while [ $next -le $n ]

do

echo "$next"

t1=$t2

t2=$next

next=`expr $t1 + $t2`

done

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8i.sh

Enter a number:

10

Fibonacci Series till 10 are:

0

1

1

2

3

5

8

1. Write a shell script to find out sum of digits of a given number.

#!/bin/bash

echo "Enter a number:"

read n

t=$n

echo ""

rev=0

sum=0

while [ $n -gt 0 ]

do

rem=`expr $n % 10`

n=`expr $n / 10`

sum=`expr $sum + $rem`

done

echo "The Sum of the digit $t is: $sum"

**OUTPUT:-**

pc-171@gehu-HP-EliteDesk-800-G2-SFF:~/Desktop/RAWATAMIT$ bash 8j.sh

Enter a number:

143

The Sum of the digit 345 is: 8