



Lab Report 05

Submitted by:

Name: Md Tushar Ahmed

ID: 201-15-3549

Section: PC-D

Course Code: CSE 324

Course Title: Operating System Lab

Dept. Of CSE

Submitted to:

Name: Md Shabab Zulfikar

Lecturer **Dept of** CSE

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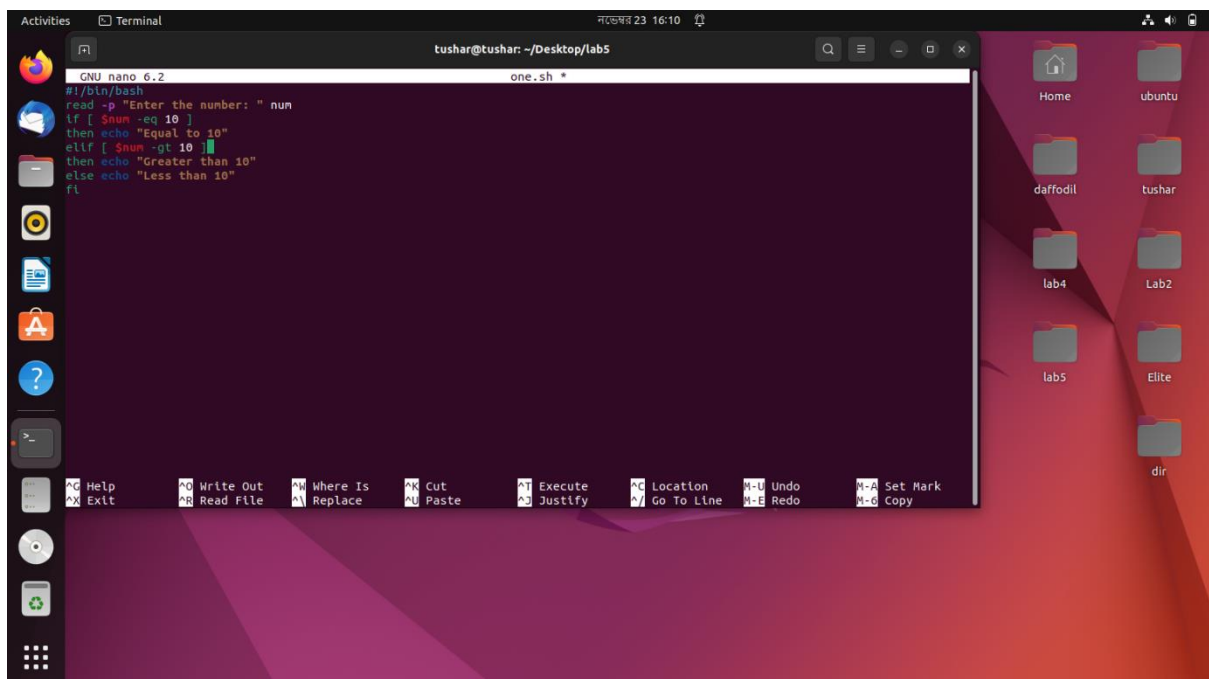
Experiment Name: Introduction to arithmetic operations in shell scripting.

1: Conditional operators(<,>,<=,>=,!= etc) with arithmetic operations.

Description:

-lt	<
-gt	>
-le	<=
-ge	>=
-eq	==
-ne	!=

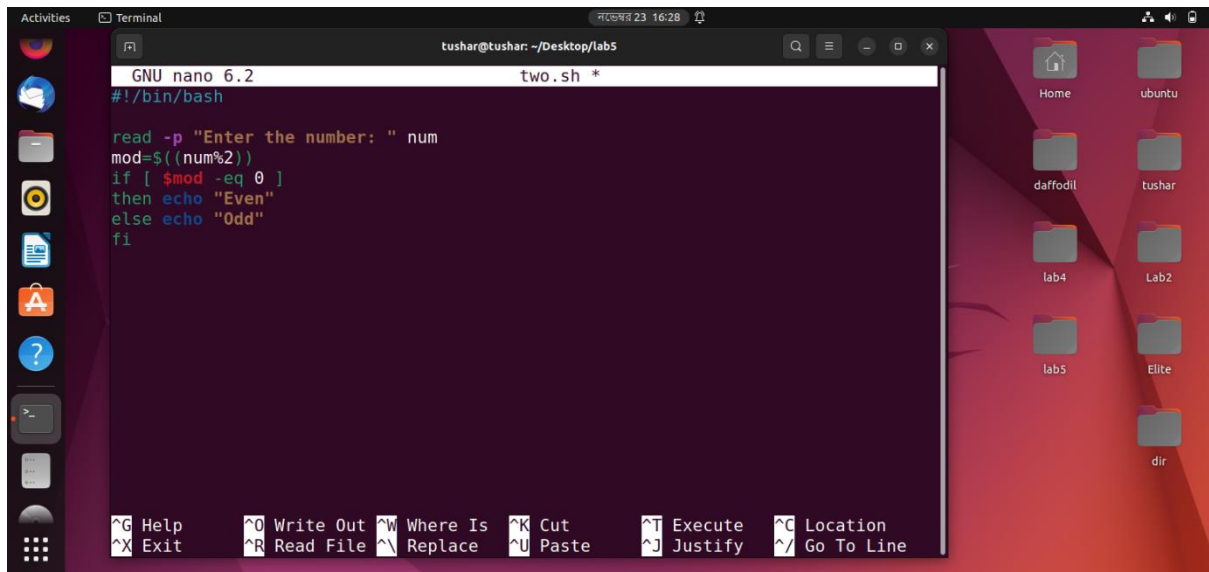
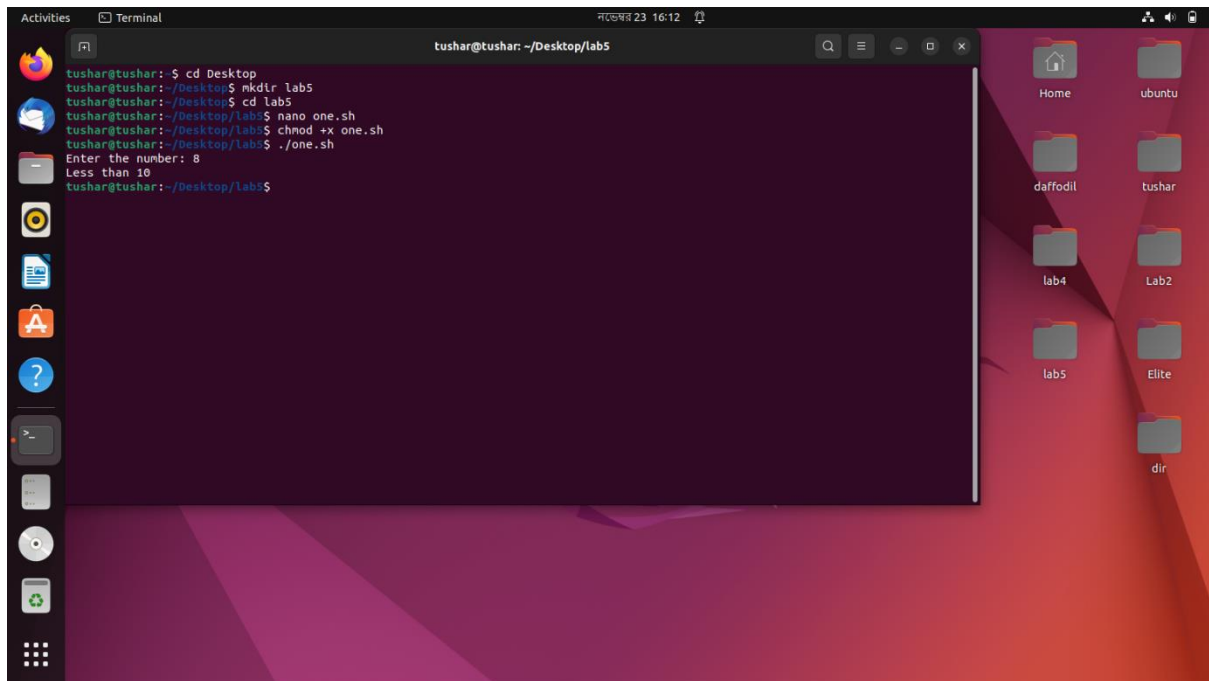
Screen shoot of the command:



The screenshot shows a terminal window titled 'tushar@tushar: ~/Desktop/lab5'. Inside the terminal, the GNU nano 6.2 editor is open, displaying a shell script named 'one.sh'. The script is as follows:

```
#!/bin/bash
read -p "Enter the number: " num
if [ $num -eq 10 ]
then echo "Equal to 10"
elif [ $num -gt 10 ]
then echo "Greater than 10"
else echo "Less than 10"
fi
```

The terminal window is part of a desktop environment with a sidebar on the left containing application icons and a desktop background with several folder icons (Home, ubuntu, daffodil, tushar, lab4, Lab2, lab5, Elite, dir). At the bottom of the terminal window, there is a menu bar with various options: Help, Write Out, Where Is, Cut, Execute, Location, Undo, Set Mark, Exit, Read File, Replace, Paste, Justify, Go To Line, Redo, and Copy.



```
Activities Terminal
নভেম্বর 23 16:28
tushar@tushar: ~/Desktop/lab5

tushar@tushar:~$ cd Desktop
tushar@tushar:~/Desktop$ cd lab5
tushar@tushar:~/Desktop/lab5$ nano two.sh
tushar@tushar:~/Desktop/lab5$ chmod +x two.sh
tushar@tushar:~/Desktop/lab5$ ./two.sh
Enter the number: 11
Odd
tushar@tushar:~/Desktop/lab5$
```

```
Activities Terminal
নভেম্বর 23 17:04
tushar@tushar: ~/Desktop/lab5

GNU nano 6.2 four.sh *
#!/bin/bash

read -p "Enter any Year: " year
yr=$((year%4))
if [ $yr -eq 0 ]
then echo "Leap Year"
else echo "Not Leap Year"
fi

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^N Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

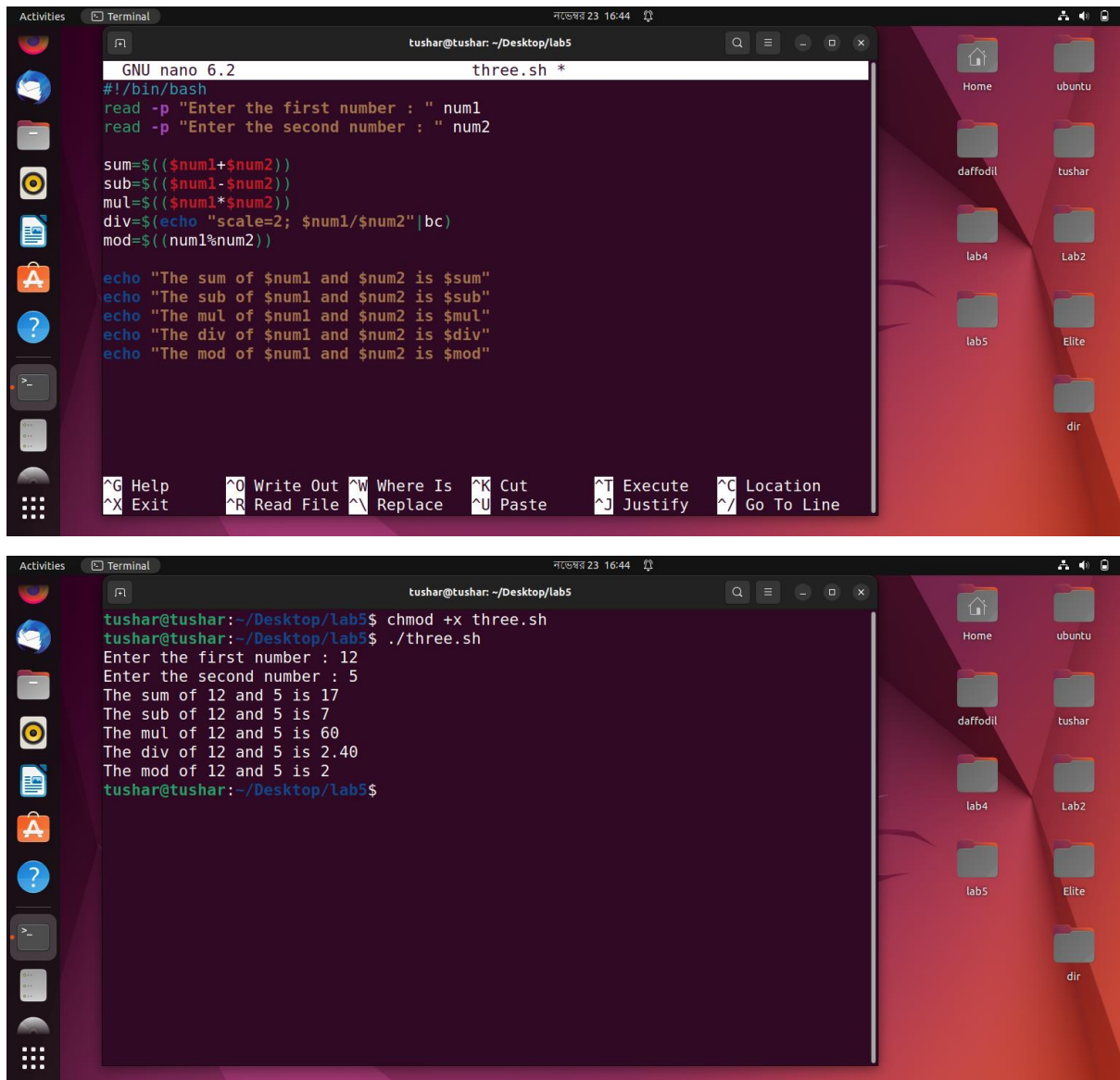
```
Activities Terminal
নভেম্বর 23 17:06
tushar@tushar: ~/Desktop/lab5

tushar@tushar:~$ cd Desktop
tushar@tushar:~/Desktop$ cd lab5
tushar@tushar:~/Desktop/lab5$ nano four.sh
tushar@tushar:~/Desktop/lab5$ chmod +x four.sh
tushar@tushar:~/Desktop/lab5$ ./four.sh
Enter any Year: 2022
Not Leap Year
tushar@tushar:~/Desktop/lab5$
```

2: Mathematical operations

Description: There are many mathematical operations in ubuntu shell scripting. Here, we are discuss about basic and simple math like add, sub, mul... numbers etc.

Screen shoot of the command:



The first screenshot shows the creation of a shell script named 'three.sh' using the nano text editor. The script takes two numbers as input and performs addition, subtraction, multiplication, division, and modulus operations. The second screenshot shows the execution of the script with the numbers 12 and 5, displaying the results of each operation.

```
GNU nano 6.2 three.sh *
#!/bin/bash
read -p "Enter the first number : " num1
read -p "Enter the second number : " num2

sum=$((num1+num2))
sub=$((num1-num2))
mul=$((num1*num2))
div=$(echo "scale=2; $num1/$num2"|bc)
mod=$((num1%num2))

echo "The sum of $num1 and $num2 is $sum"
echo "The sub of $num1 and $num2 is $sub"
echo "The mul of $num1 and $num2 is $mul"
echo "The div of $num1 and $num2 is $div"
echo "The mod of $num1 and $num2 is $mod"
```

```
tushar@tushar: ~/Desktop/lab5$ chmod +x three.sh
tushar@tushar: ~/Desktop/lab5$ ./three.sh
Enter the first number : 12
Enter the second number : 5
The sum of 12 and 5 is 17
The sub of 12 and 5 is 7
The mul of 12 and 5 is 60
The div of 12 and 5 is 2.40
The mod of 12 and 5 is 2
tushar@tushar: ~/Desktop/lab5$
```

Activities Terminal নভেম্বর 23 17:25

tushar@tushar: ~/Desktop/lab5

```
GNU nano 6.2 five.sh
#!/bin/bash

read -p "Enter Base : " base
read -p "Enter Height : " height
area=$((base*height))
echo "Area of Rectangle is : $area"
```

[Read 9 lines]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^_ Go To Line

Activities Terminal নভেম্বর 23 17:26

tushar@tushar: ~/Desktop/lab5

```
tushar@tushar:~/Desktop/lab5$ nano five.sh
tushar@tushar:~/Desktop/lab5$ chmod +x five.sh
tushar@tushar:~/Desktop/lab5$ ./five.sh
Enter Base : 12
Enter Height : 3
Area of Rectangle is : 36
tushar@tushar:~/Desktop/lab5$
```