

LAB #02

SHELL Programming (Part I)



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CSE-204L Operating Systems Lab

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Section: C

“On my honor, as a student of the University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work”

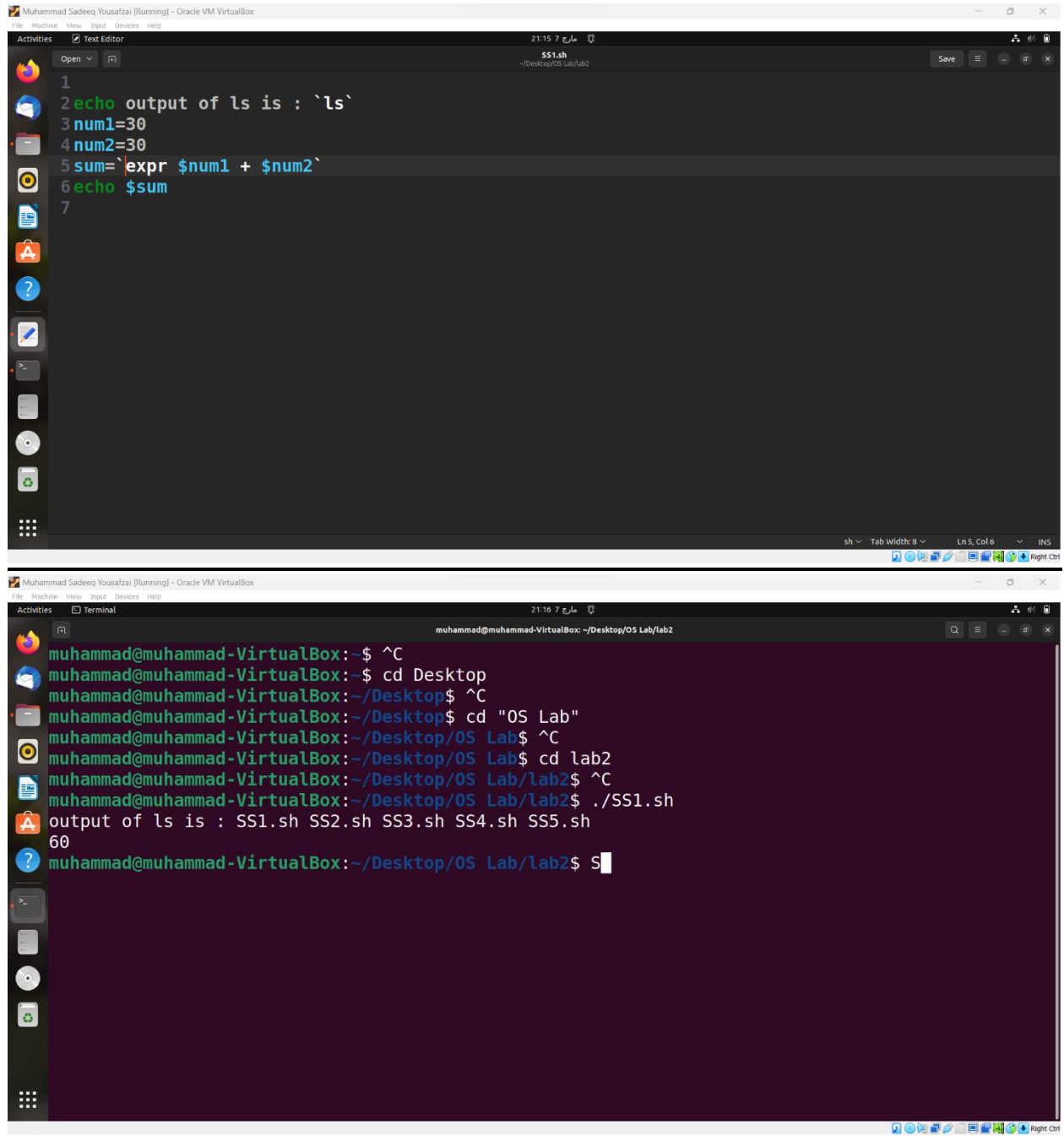
Submitted to:

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(7 Mar 2023)

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Task 1



The screenshot displays a Linux desktop environment within an Oracle VM VirtualBox window. The window title is "Muhammad Sadeeq Yousafzai [Running] - Oracle VM VirtualBox". The desktop has a dark theme with a sidebar on the left containing icons for applications like Firefox, LibreOffice, and the Dash. The main area is divided into two windows:

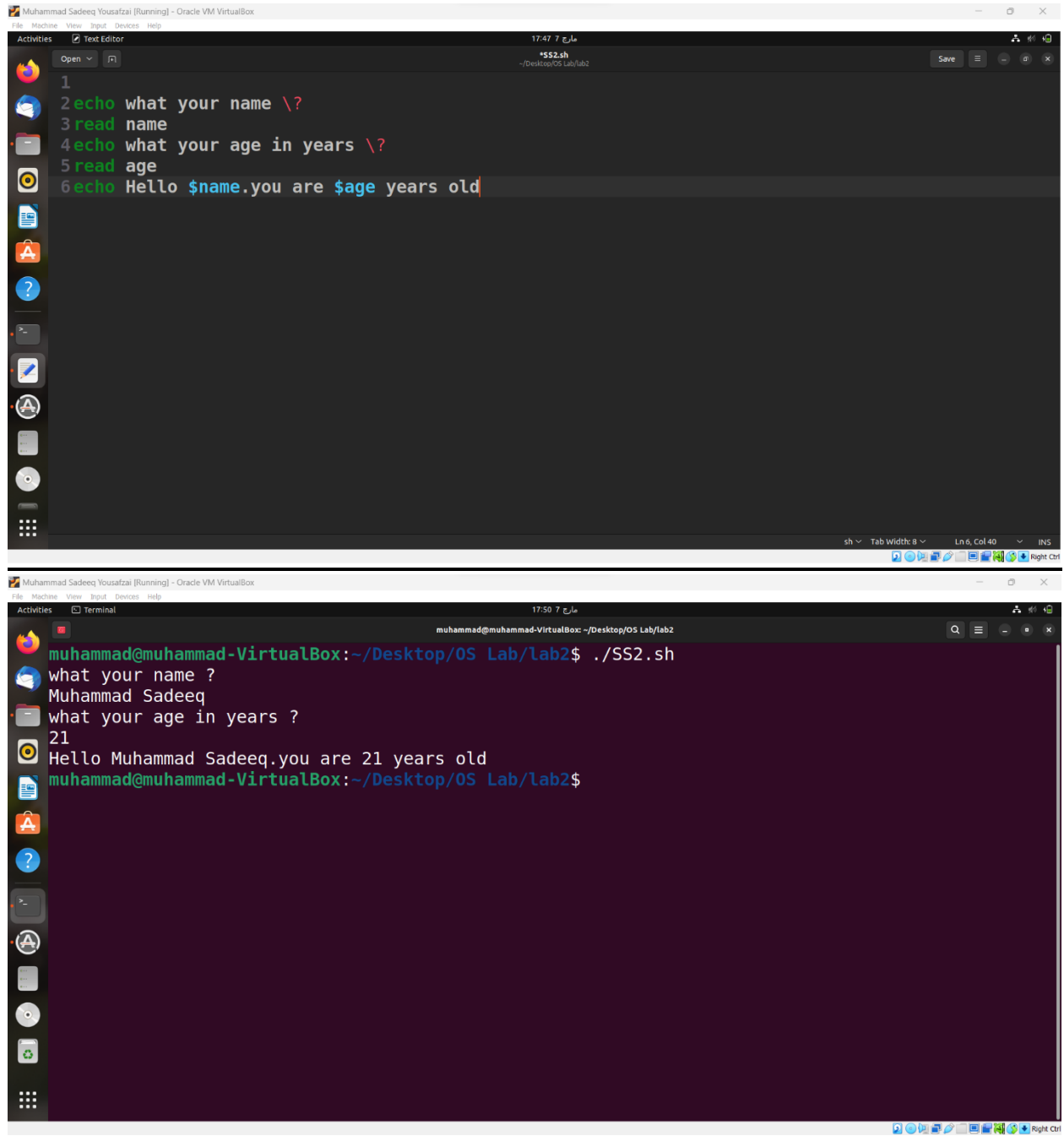
- Text Editor:** A window titled "SS1.sh" with a file path of "~/Desktop/OS Lab/lab2". It contains a script with the following lines:

```
1
2 echo output of ls is : `ls`
3 num1=30
4 num2=30
5 sum=`expr $num1 + $num2`
6 echo $sum
7
```
- Terminal:** A window titled "Terminal" with a file path of "~/Desktop/OS Lab/lab2". It shows the execution of the script and subsequent directory navigation commands:

```
muhammad@muhammad-VirtualBox:~$ ^C
muhammad@muhammad-VirtualBox:~$ cd Desktop
muhammad@muhammad-VirtualBox:~/Desktop$ ^C
muhammad@muhammad-VirtualBox:~/Desktop$ cd "OS Lab"
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab$ ^C
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab$ cd lab2
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ^C
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ./SS1.sh
output of ls is : SS1.sh SS2.sh SS3.sh SS4.sh SS5.sh
60
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ S
```

The terminal window also shows a status bar at the bottom with system icons and a "Right Ctrl" label.

Task 2



The image displays two screenshots of a VirtualBox VM running on a host named 'Muhammad Sadeeq Yousafzai'. The VM is named 'muhammad-VirtualBox' and is running a Linux operating system.

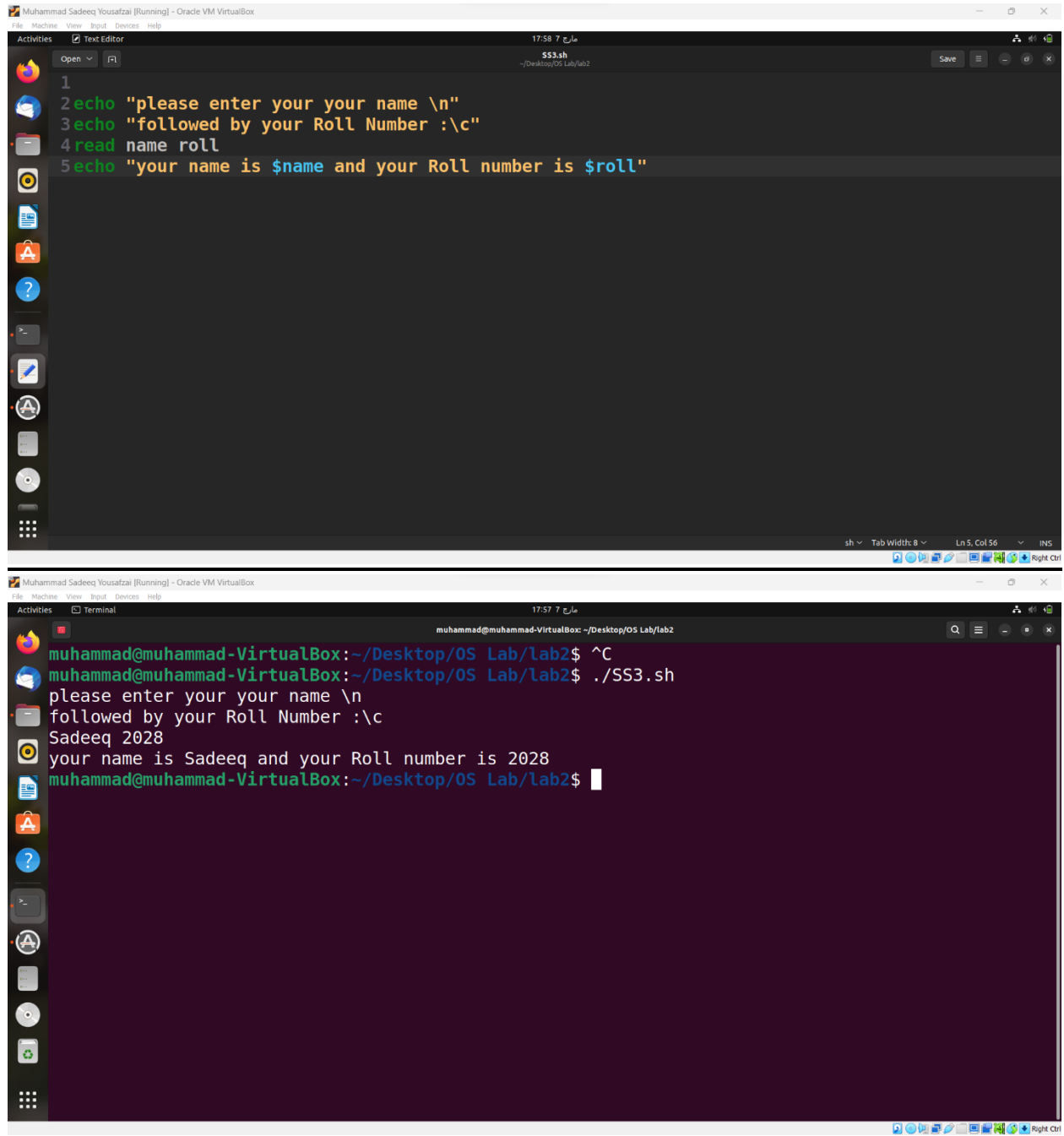
The top screenshot shows a text editor window titled '*SS2.sh' with the following script content:

```
1
2 echo what your name \?
3 read name
4 echo what your age in years \?
5 read age
6 echo Hello $name.you are $age years old
```

The bottom screenshot shows a terminal window titled 'Terminal' with the following output:

```
muhammad@muhammad-VirtualBox: ~/Desktop/OS Lab/lab2
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ./SS2.sh
what your name ?
Muhammad Sadeeq
what your age in years ?
21
Hello Muhammad Sadeeq.you are 21 years old
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$
```

Task 3



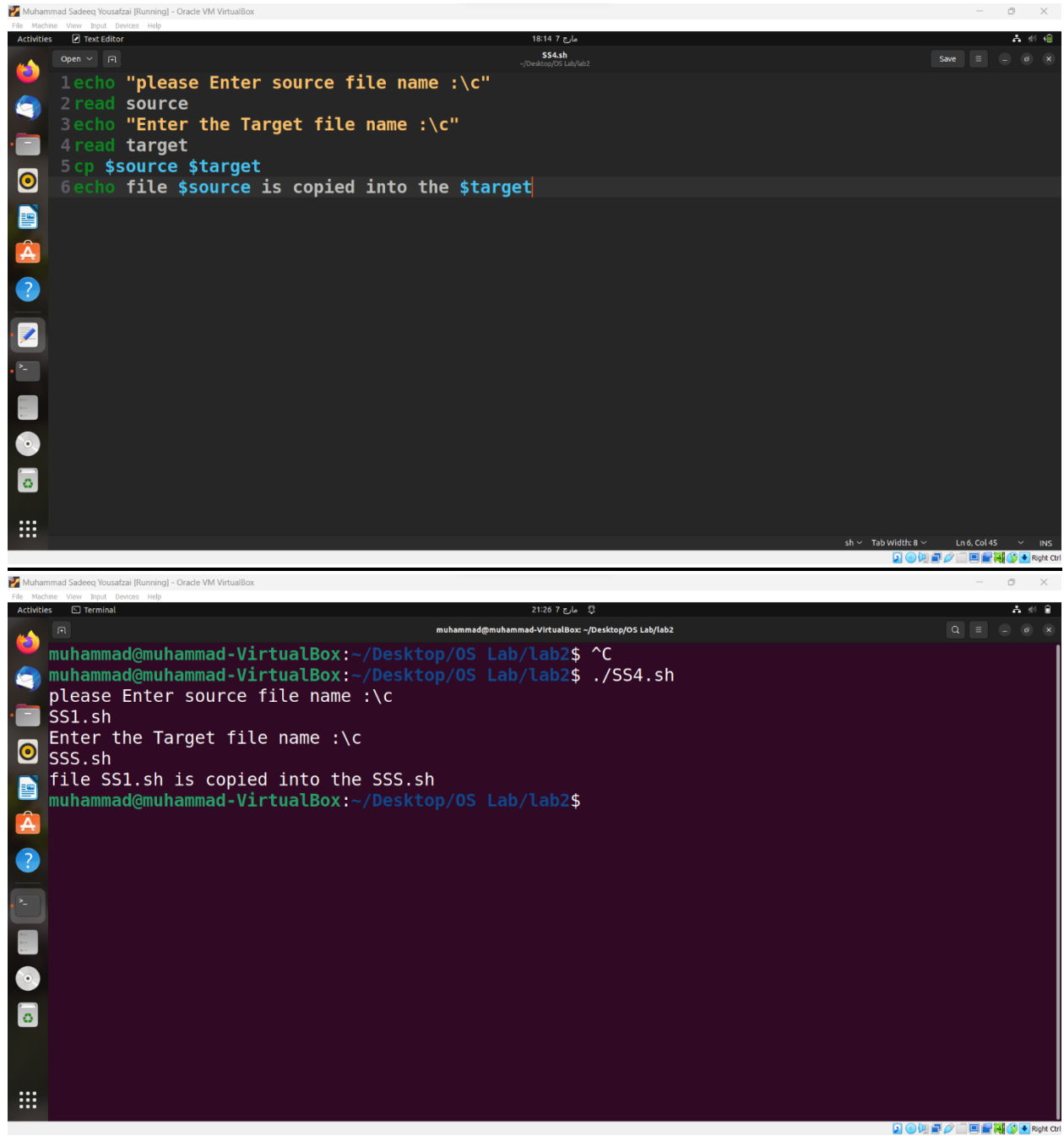
The image shows two screenshots of a Linux virtual machine environment. The top screenshot displays a text editor window titled "SS3.sh" with the following script:

```
1
2 echo "please enter your your name \n"
3 echo "followed by your Roll Number :\c"
4 read name roll
5 echo "your name is $name and your Roll number is $roll"
```

The bottom screenshot shows a terminal window where the script is executed. The user enters the command `./SS3.sh`, and the script prompts for a name and roll number. The user enters "Sadeeq" and "2028", and the script outputs the result.

```
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ^C
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ./SS3.sh
please enter your your name \n
followed by your Roll Number :\c
Sadeeq 2028
your name is Sadeeq and your Roll number is 2028
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$
```

Task 4



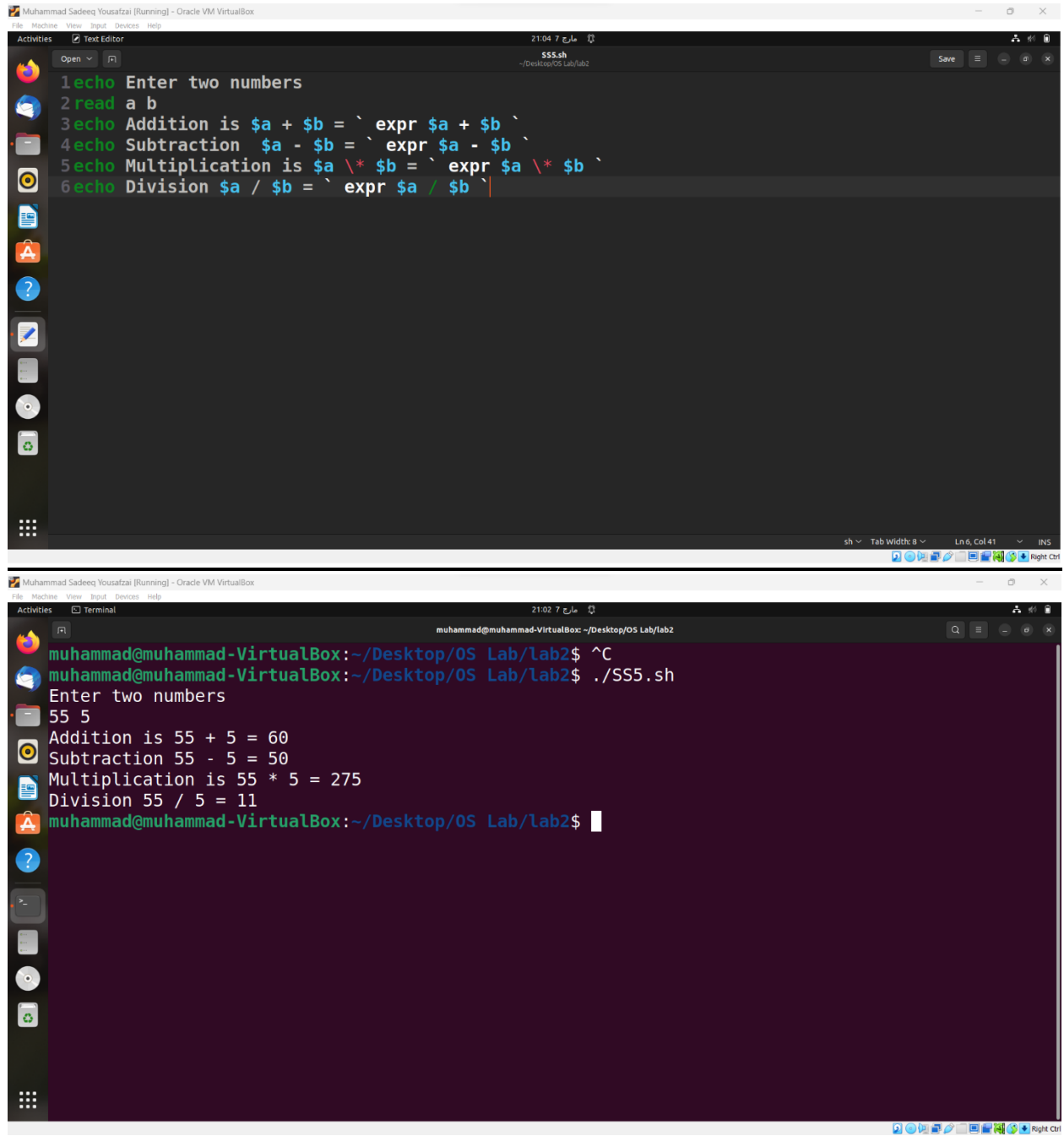
The screenshot displays a VirtualBox window titled "Muhammad Sadeeq Yousafzai [Running] - Oracle VM VirtualBox". Inside the VM, the desktop environment shows a text editor window titled "SS4.sh" with the following script:

```
1 echo "please Enter source file name :\c"
2 read source
3 echo "Enter the Target file name :\c"
4 read target
5 cp $source $target
6 echo file $source is copied into the $target
```

Below the text editor, a terminal window titled "Terminal" shows the execution of the script. The user is at the prompt "muhammad@muhammad-VirtualBox: ~/Desktop/OS Lab/lab2". The terminal output is as follows:

```
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ^C
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ./SS4.sh
please Enter source file name :\c
SS1.sh
Enter the Target file name :\c
SSS.sh
file SS1.sh is copied into the SSS.sh
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$
```

Task 5



The image shows a Linux desktop environment with a text editor and a terminal window. The text editor is titled "SS5.sh" and contains a shell script. The terminal window shows the execution of the script with input values 55 and 5, resulting in arithmetic calculations for addition, subtraction, multiplication, and division.

```
1 echo Enter two numbers
2 read a b
3 echo Addition is $a + $b = `expr $a + $b `
4 echo Subtraction $a - $b = `expr $a - $b `
5 echo Multiplication is $a \* $b = `expr $a \* $b `
6 echo Division $a / $b = `expr $a / $b `
```

Terminal output:

```
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ^C
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$ ./SS5.sh
Enter two numbers
55 5
Addition is 55 + 5 = 60
Subtraction 55 - 5 = 50
Multiplication is 55 * 5 = 275
Division 55 / 5 = 11
muhammad@muhammad-VirtualBox:~/Desktop/OS Lab/lab2$
```