

# Lab Assignment-03

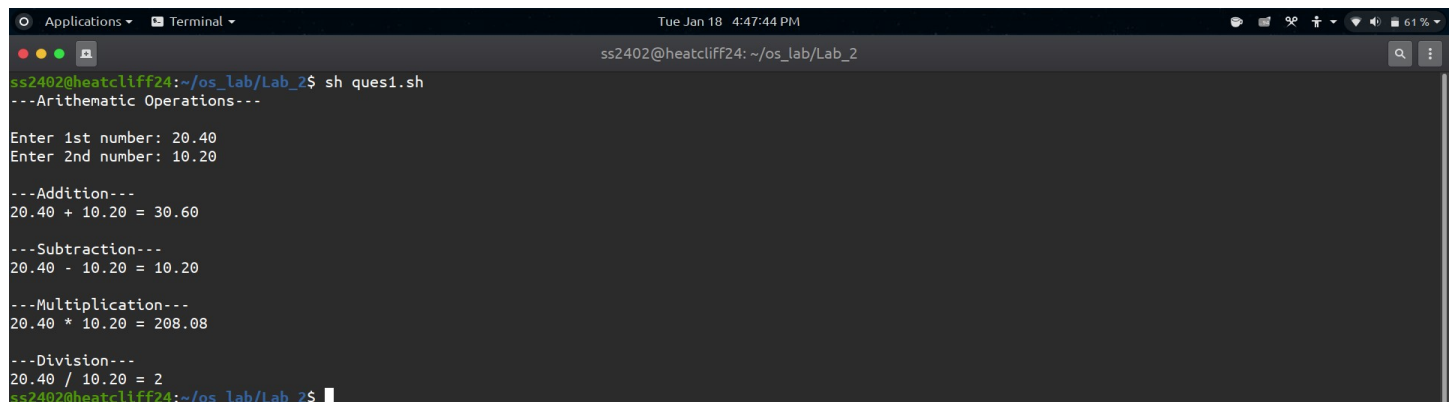
ROLL: 2005535 | NAME: SAHIL SINGH | DATE: 18/01/22

**QUES 1:** WAS to perform all the arithmetic operation of two integers and display the results.

**SOLUTION:**

```
echo "---Arithmetic Operations---\n"
read -p "Enter 1st number: " num1
read -p "Enter 2nd number: " num2
echo "\n---Addition---"
sum=`echo $num1 + $num2|bc`
echo "$num1 + $num2 = $sum"
echo "\n---Subtraction---"
sub=`echo $num1 - $num2|bc`
echo "$num1 - $num2 = $sub"
echo "\n---Multiplication---"
mul=`echo $num1 \* $num2|bc`
echo "$num1 * $num2 = $mul"
echo "\n---Division---"
div=`echo $num1 / $num2|bc`
echo "$num1 / $num2 = $div"
```

**OUTPUT:**

A screenshot of a terminal window titled "Terminal" with a timestamp of "Tue Jan 18 4:47:44 PM". The window shows the execution of a shell script named "ques1.sh". The script prompts the user to enter two numbers, 20.40 and 10.20. It then performs four arithmetic operations: addition (20.40 + 10.20 = 30.60), subtraction (20.40 - 10.20 = 10.20), multiplication (20.40 \* 10.20 = 208.08), and division (20.40 / 10.20 = 2). The terminal output matches the script's logic and the provided solution code.

```
ss2402@heatcliff24:~/os_lab/Lab_2$ sh ques1.sh
---Arithmetic Operations---
Enter 1st number: 20.40
Enter 2nd number: 10.20

---Addition---
20.40 + 10.20 = 30.60

---Subtraction---
20.40 - 10.20 = 10.20

---Multiplication---
20.40 * 10.20 = 208.08

---Division---
20.40 / 10.20 = 2
ss2402@heatcliff24:~/os_lab/Lab_2$
```

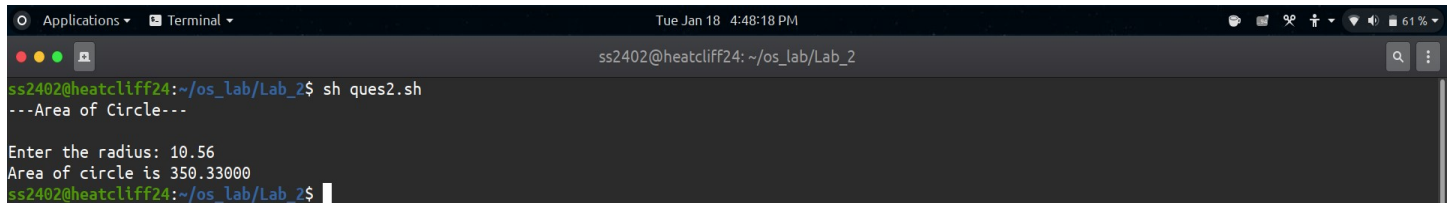
**QUES 2:** WAS to calculate the area of a circle.

**SOLUTION:**

```
echo "---Area of Circle---\n"
read -p "Enter the radius: " radius
```

```
area=`echo 3.14159 \* $radius \* $radius|bc`
echo "Area of circle is $area"
```

OUTPUT:



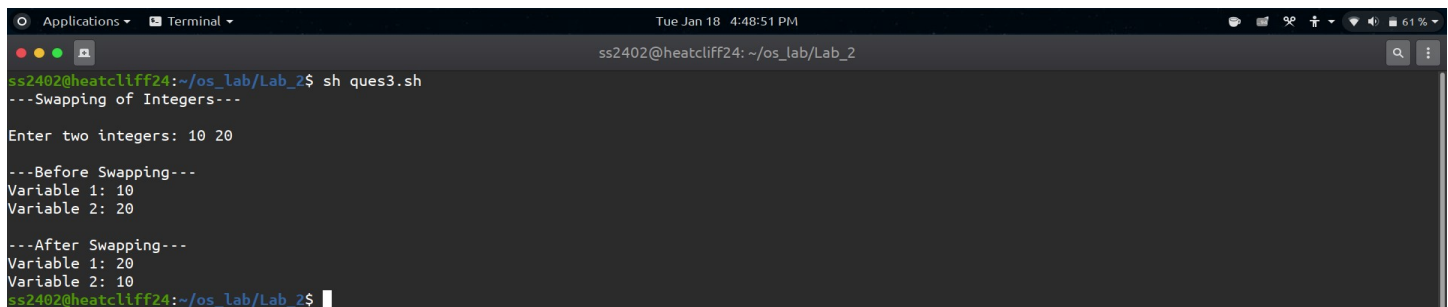
```
ss2402@heatcliff24: ~/os_lab/Lab_2
ss2402@heatcliff24:~/os_lab/Lab_2$ sh ques2.sh
---Area of Circle---
Enter the radius: 10.56
Area of circle is 350.33000
ss2402@heatcliff24:~/os_lab/Lab_2$
```

**QUES 3: WAS to swap two integer numbers without using a third variable.**

SOLUTION:

```
echo "---Swapping of Integers---\n"
read -p "Enter two integers: " num1 num2
echo "\n---Before Swapping---"
echo "Variable 1: $num1"
echo "Variable 2: $num2"
num1=`expr $num1 + $num2`
num2=`expr $num1 - $num2`
num1=`expr $num1 - $num2`
echo "\n---After Swapping---"
echo "Variable 1: $num1"
echo "Variable 2: $num2"
```

OUTPUT:



```
ss2402@heatcliff24: ~/os_lab/Lab_2
ss2402@heatcliff24:~/os_lab/Lab_2$ sh ques3.sh
---Swapping of Integers---
Enter two integers: 10 20
---Before Swapping---
Variable 1: 10
Variable 2: 20
---After Swapping---
Variable 1: 20
Variable 2: 10
ss2402@heatcliff24:~/os_lab/Lab_2$
```

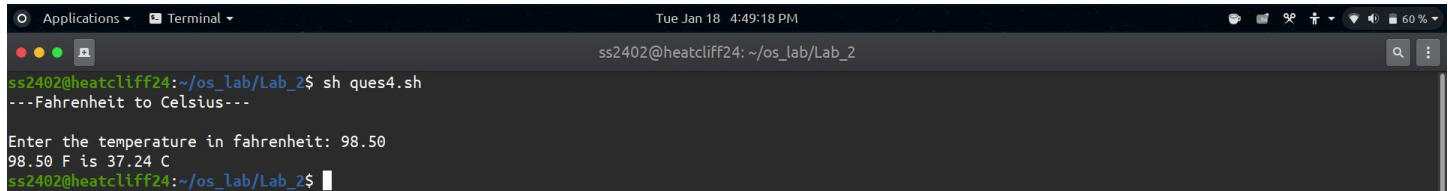
**QUES 4: WAS to find centigrade for a given Fahrenheit temperature.**

SOLUTION:

```
echo "---Fahrenheit to Celsius---\n"
read -p "Enter the temperature in fahrenheit: " fahr
cels=`echo "($fahr - 32) * 0.56"|bc`
```

```
echo "$fahr F is $cels C"
```

OUTPUT:



```

Applications ▾ Terminal ▾
Tue Jan 18 4:49:18 PM
ss2402@heatcliff24: ~/os_lab/Lab_2
ss2402@heatcliff24:~/os_lab/Lab_2$ sh ques4.sh
---Fahrenheit to Celsius---
Enter the temperature in fahrenheit: 98.50
98.50 F is 37.24 C
ss2402@heatcliff24:~/os_lab/Lab_2$

```

**QUES 5:** WAS to convert given second into its equivalent hour, minute and second as per the following format. Example. 7560 second = 2 Hour, 6 Minute and 0 Second.

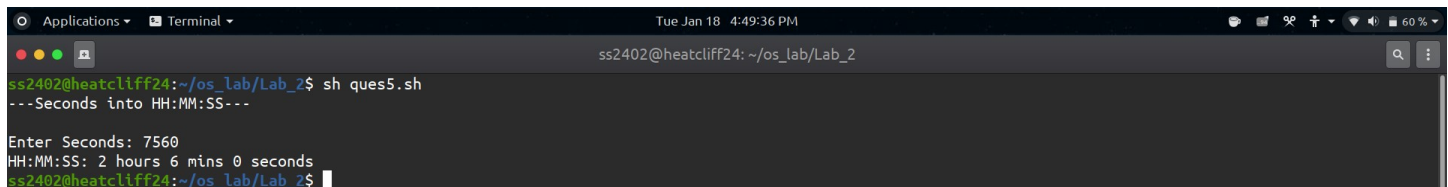
SOLUTION:

```

echo "---Seconds into HH:MM:SS---\n"
read -p "Enter Seconds: " sec
hour=`echo "($sec / 3600)"|bc`
mins=`echo "($sec - (3600 * $hour)) / 60"|bc`
sec=`echo "($sec - (3600 * $hour) - ($mins * 60))"|bc`
echo "HH:MM:SS: $hour hours $mins mins $sec seconds"

```

OUTPUT:



```

Applications ▾ Terminal ▾
Tue Jan 18 4:49:36 PM
ss2402@heatcliff24: ~/os_lab/Lab_2
ss2402@heatcliff24:~/os_lab/Lab_2$ sh ques5.sh
---Seconds into HH:MM:SS---
Enter Seconds: 7560
HH:MM:SS: 2 hours 6 mins 0 seconds
ss2402@heatcliff24:~/os_lab/Lab_2$

```