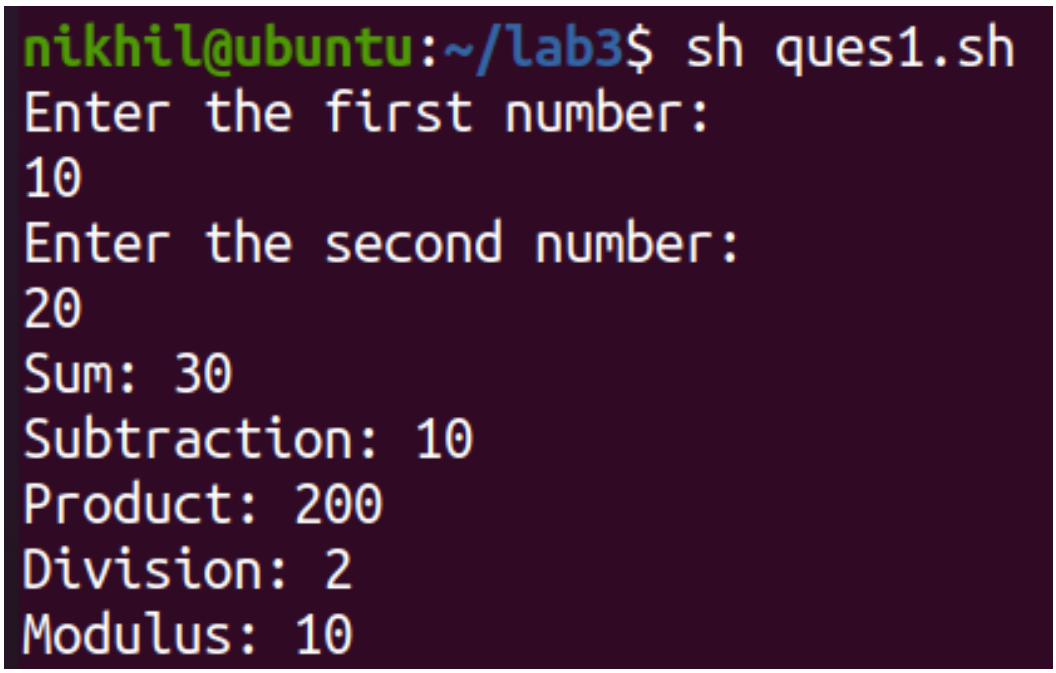
LAB ASSIGNMENT 3

Ques 1. Write a shell script to input 2 integer number and perform all its arithmetic operation.

```
echo "Enter the first number: "
read n1
echo "Enter the second number: "
read n2
s=`expr $n1 + $n2`

echo "Sum: $s"

sub=`expr $n2 - $n1`

echo "Subtraction: $sub"

p=`expr $n1 \* $n2`

echo "Product: $p"

d=`expr $n2 / $n1`

echo "Division: $d"

m=`expr $n1 % $n2`

echo "Modulus: $m"
```

Name: Nikhil Gupta
Roll No.: 20051523

Output

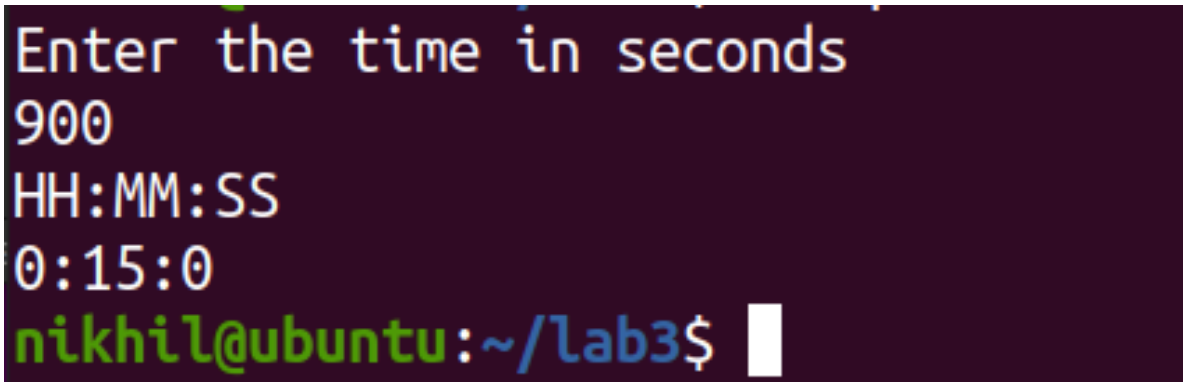


Name: Nikhil Gupta
Roll No.: 20051523

Ques 2. Write a shell script to input time in sec and find out how many hours, mins and secs are there.

```
echo "Enter the time in seconds"

read s
hours=`expr $s / 3600`
d=`expr $s % 3600`
min=`expr $d / 60`
sec=`expr $d % 60`
echo "HH:MM:SS "
echo "$hours:$min:$sec"
```

Output

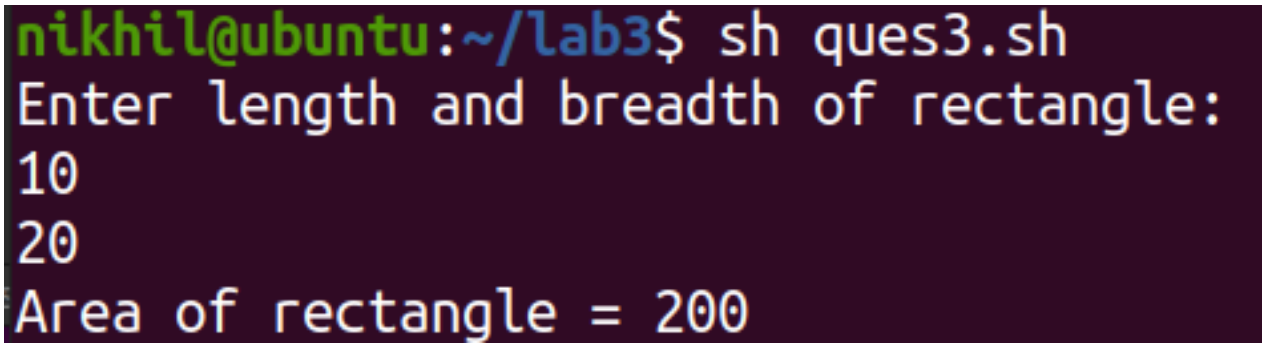


Name: Nikhil Gupta
Roll No.: 20051523

Ques 3. Write a shell script to input 2 sides of rectangle and find it's area.

```
echo "Enter length and breadth of rectangle:"
read l
read b
area=`expr $l \* $b`
echo "Area of rectangle = $area"
```

Output



Name: Nikhil Gupta
Roll No.: 20051523

Ques 4. Write a shell script to input a 3 digit number and find out the sum of all digits.

```
echo "Enter a 3-digit number: "
read n
temp=$n
val=`expr $temp % 10`
sum=$val
temp=`expr $n / 10`
val=`expr $temp % 10`
sum=`expr $sum + $val`
temp=`expr $temp / 10`
val=`expr $temp % 10`
sum=`expr $sum + $val`
echo "Sum of the three digits = $sum"
```

Output

```
nikhil@ubuntu:~/lab3$ sh ques4.sh
Enter a 3-digit number:
147
Sum of the three digits = 12
nikhil@ubuntu:~/lab3$
```

Name: Nikhil Gupta
Roll No.: 20051523

Ques 5. Write a shell script to input a 2 numbers and swap them.

```
echo "Enter the two numbers to be swapped: "
read a
read b
echo "Values of a = $a and b = $b (before swapping)"
c=$a
a=$b
b=$c
echo "Values of a = $a and b = $b (after swapping)"
```

Output

```
nikhil@ubuntu:~/lab3$ sh ques5.sh
Enter the two numbers to be swapped:
12
13
Values of a = 12 and b = 13 (before swapping)
Values of a = 13 and b = 12 (after swapping)
nikhil@ubuntu:~/lab3$
```

Without using third variable.

```
echo "Enter the two numbers to be swapped: "
read a
read b
echo "Values of a = $a and b = $b (before swapping)"
a=`expr $a + $b`
b=`expr $a - $b`
a=`expr $a - $b`
echo "Values of a = $a and b = $b (after swapping)"
```

Ques 6. Write a shell script to find greatest and smallest no.

```
echo "Enter the two numbers : "
read a
read b
if [ $a -gt $b ]
then
echo "$a is the greatest and $b is the smallest"
else
echo "$b is the greatest and $a is the smallest"
fi
```

Output

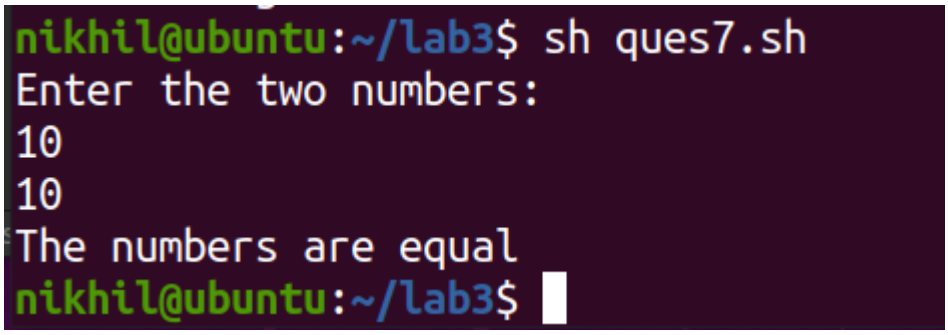
```
nikhil@ubuntu:~/lab3$ sh ques6.sh
Enter the two numbers :
50
60
60 is the greatest and 50 is the smallest
nikhil@ubuntu:~/lab3$
```

Name: Nikhil Gupta
Roll No.: 20051523

Ques 7. Write a shell script to check equal to or greater among 2 nos.

```
echo "Enter the two numbers: "
read a
read b
if [ $a -eq $b ]
then
echo "The numbers are equal"
else
    if [ $a -gt $b ]
    then
    echo "$a is the greatest and $b is the smallest"
    else
    echo "$b is the greatest and $a is the smallest"
    fi
fi
```

Output



Name: Nikhil Gupta
Roll No.: 20051523

Ques 8. Write a shell script to find the square of a number if it is positive and cube if it is negative.

```
echo "Enter a number: "
read a
if [ $a -lt 0 ]
then
echo "The number is negative ($a)"
a=`expr $a \* $a`
echo "The square of number is (-$a)"
else
echo "The number is positive"
a=`expr $a \* $a \* $a`
echo "The cube of number is $a"
fi
```

Output

```
nikhil@ubuntu:~/lab3$ sh ques8.sh
Enter a number:
20
The number is positive
The cube of number is 8000
nikhil@ubuntu:~/lab3$ sh ques8.sh
Enter a number:
-28
The number is negative (-28)
The square of number is (-784)
nikhil@ubuntu:~/lab3$
```

Name: Nikhil Gupta
Roll No.: 20051523