Assignment - 2

OPERATING SYSTEM

TOPIC: BASIC SHELL PROGRAMMING

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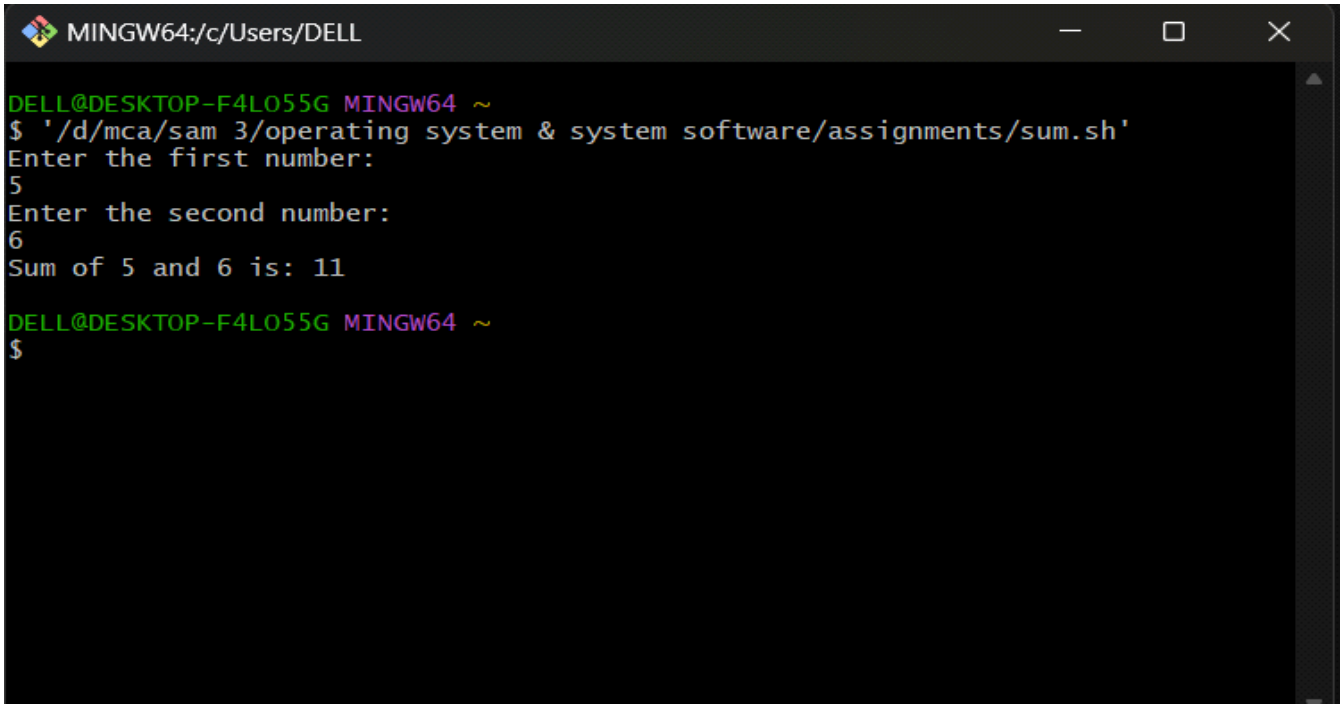
Roll no-43

- **Write a shell program to calculate the sum of two numbers. (Using 3rd variable)**
  Sol-

```
#!/bin/bash

# Input
echo "Enter the first number:"
read num1

echo "Enter the second number:"
read num2
# Calculate the sum using a third variable
sum=$((num1 + num2))

# Display the result
echo "Sum of $num1 and $num2 is: $sum"
```



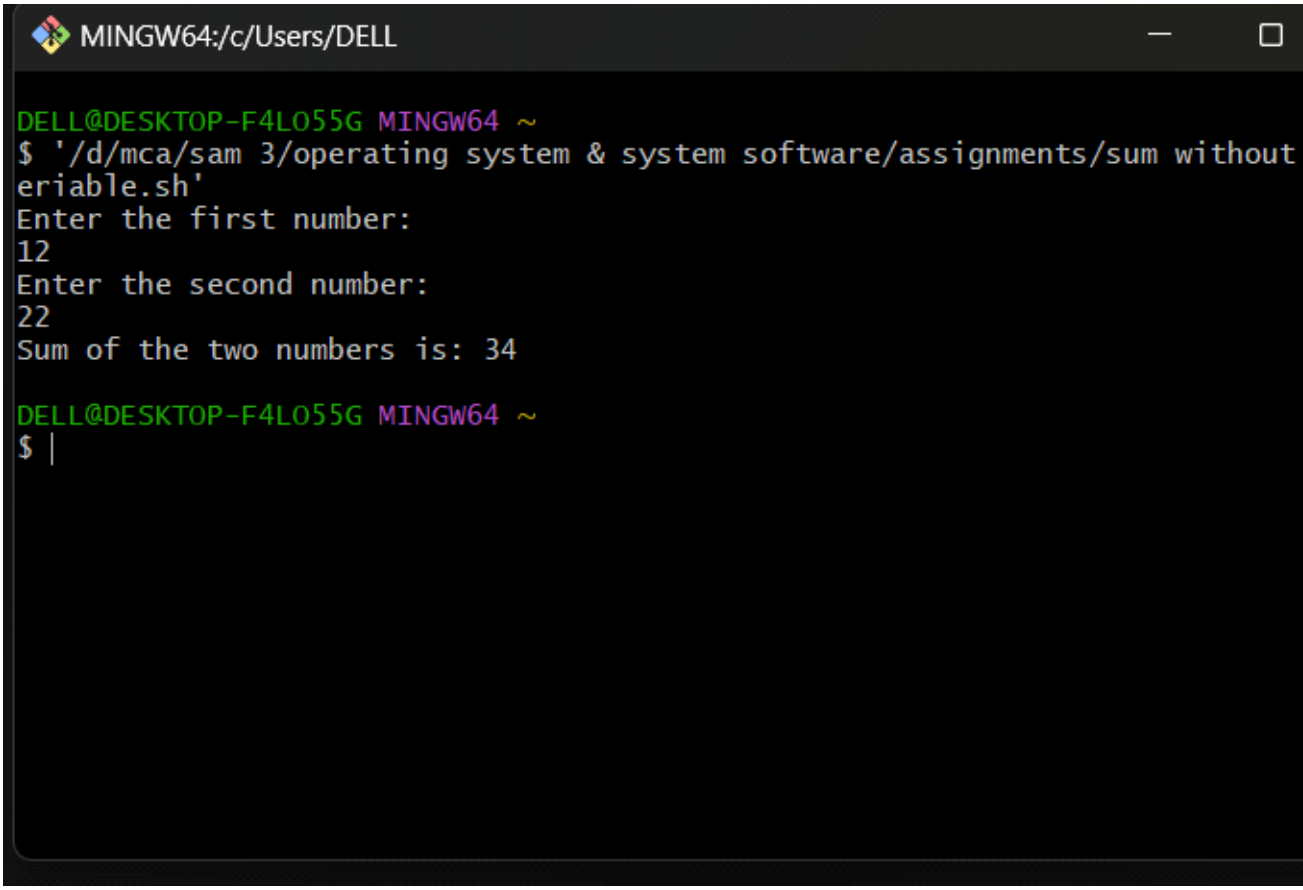
OUTPUT

- **Write a shell program to calculate the sum of two numbers. (Without using 3rd variable)**

  Sol-

```
#!/bin/bash

# Input
echo "Enter the first number:"
read num1

echo "Enter the second number:"
read num2

# Calculate the sum without using a third variable
num1=$((num1 + num2))

# Display the result
echo "Sum of the two numbers is: $num1"
```

OUTPUT

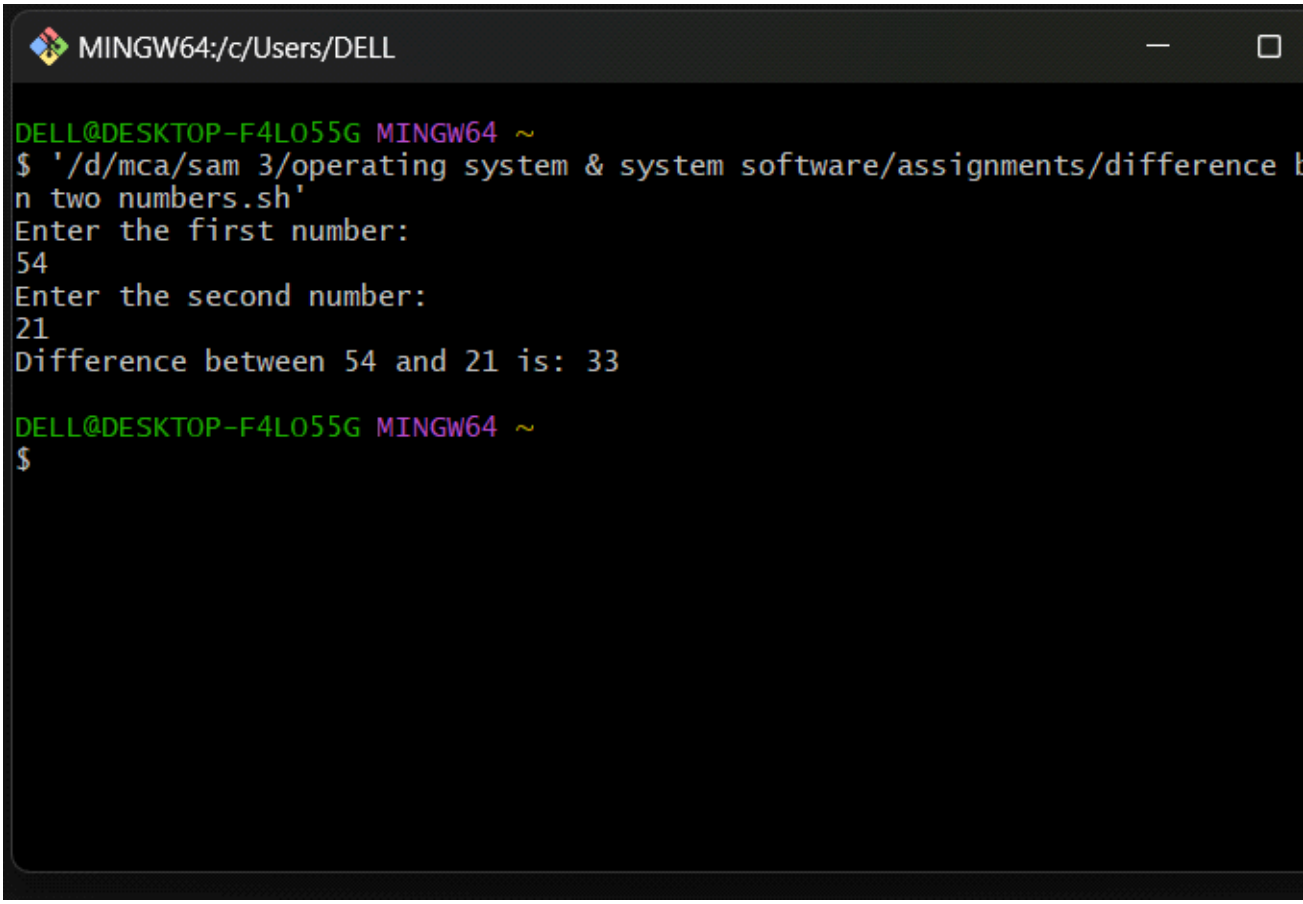


- **Write a shell program to calculate the difference between two numbers. (Using 3rd variable)**

  Sol-

```
#!/bin/bash

# Input
echo "Enter the first number:"
read num1

echo "Enter the second number:"
read num2

# Calculate the difference using a third variable
diff=$((num1 - num2))

# Display the result
echo "Difference between $num1 and $num2 is: $diff"
```

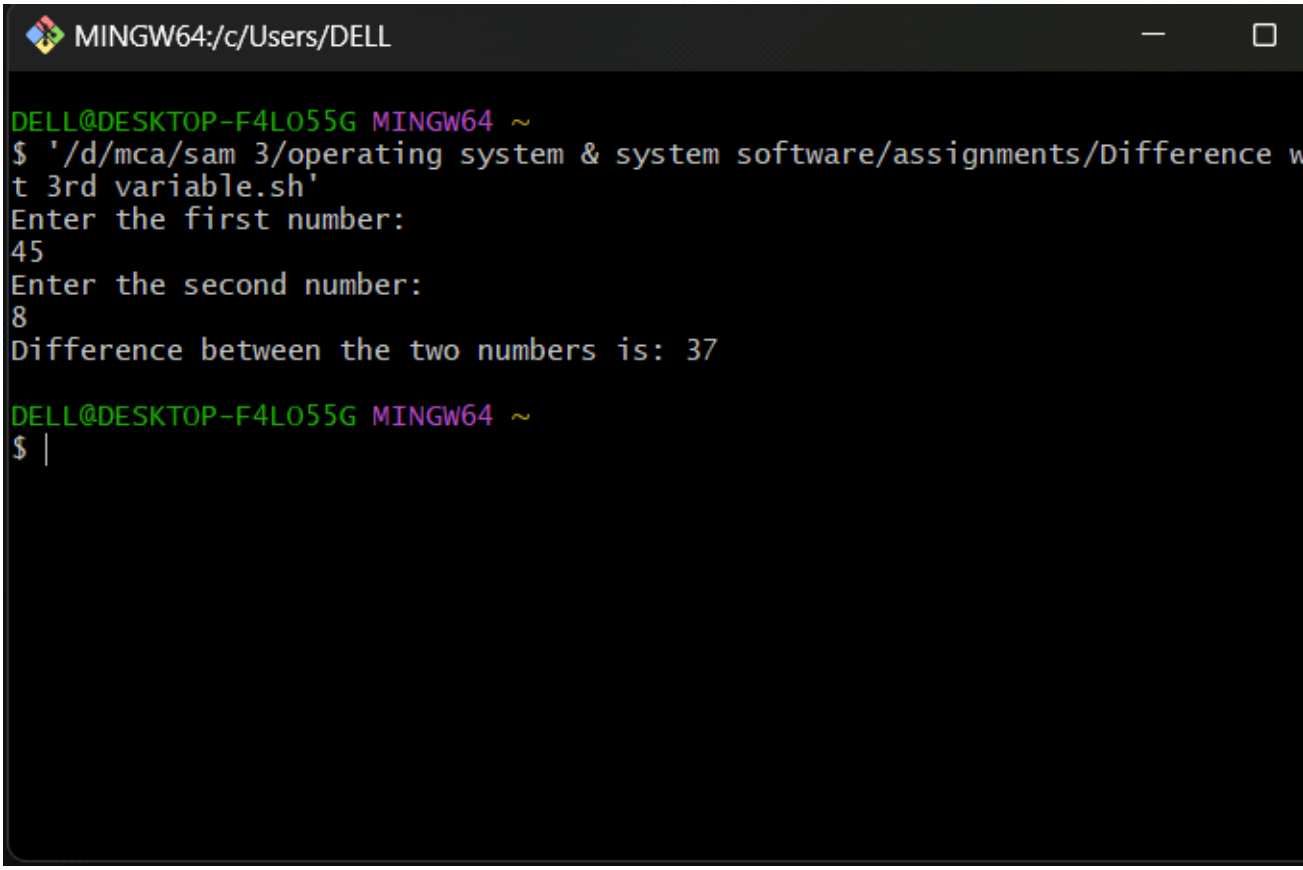
OUTPUT



- **Write a shell program to calculate the difference between two numbers. (Without using 3rd variable)**
  Sol-

```
#!/bin/bash

# Input
echo "Enter the first number:"
read num1

echo "Enter the second number:"
read num2

# Calculate the difference without using a third variable
num1=$((num1 - num2))

# Display the result
echo "Difference between the two numbers is: $num1"
```

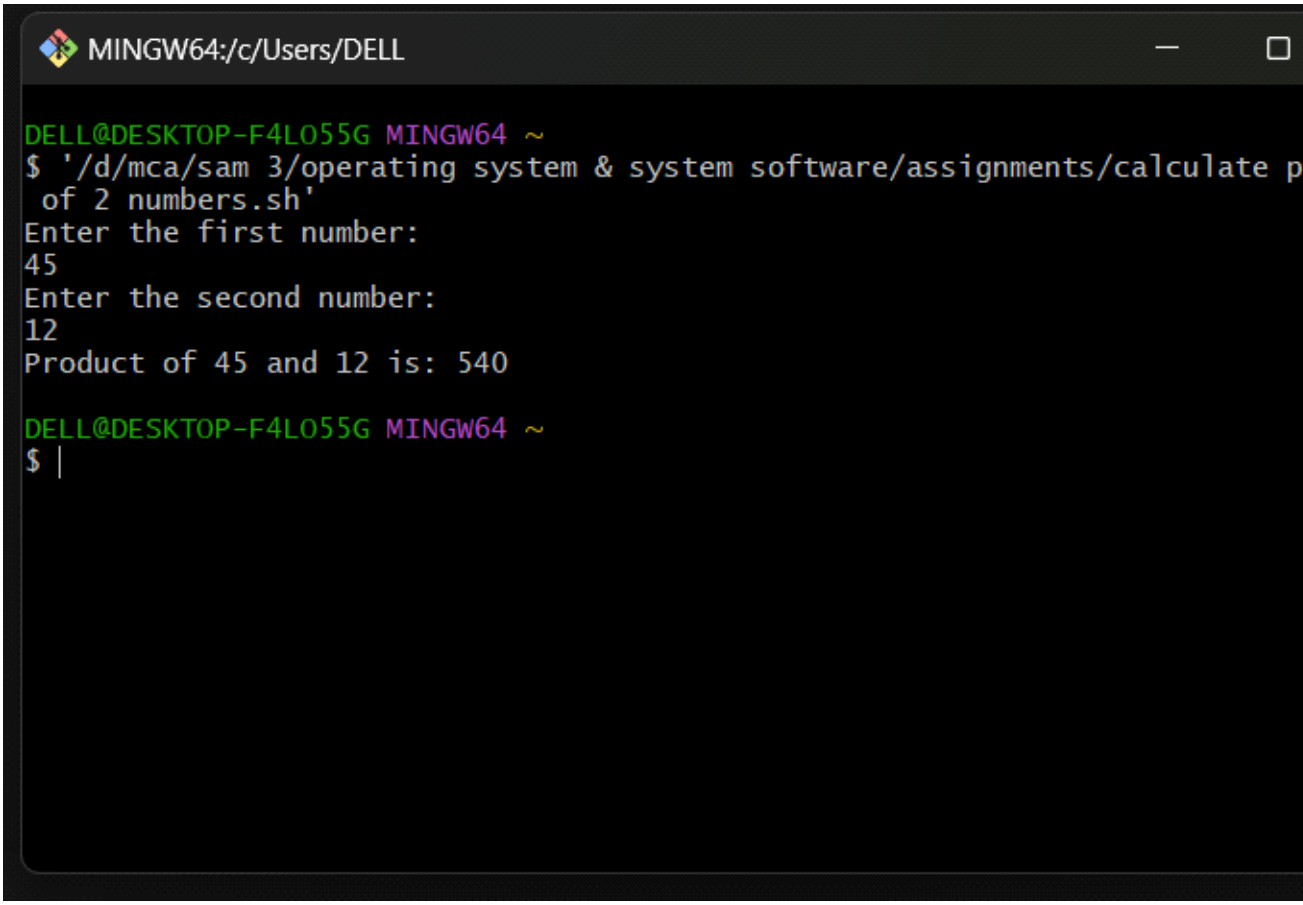
OUTPUT



- **Write a shell program to calculate the product of two numbers.**
  Sol-

```
#!/bin/bash

# Input
echo "Enter the first number:"
read num1

echo "Enter the second number:"
read num2

# Calculate the product
product=$((num1 * num2))

# Display the result
echo "Product of $num1 and $num2 is: $product"
```

OUTPUT



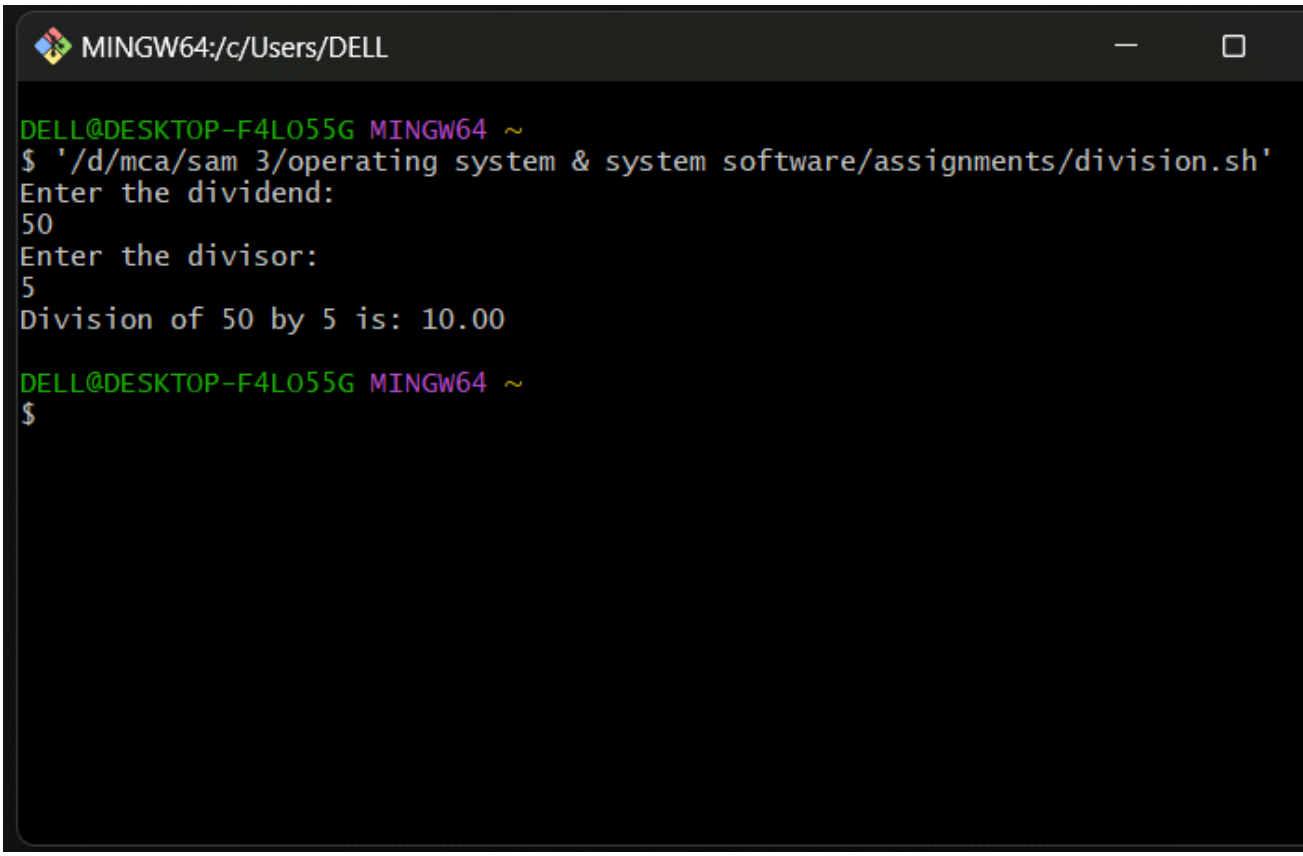
- **Write a shell program to find the division of two numbers.**

  Sol-

```
#!/bin/bash

# Input
echo "Enter the dividend:"
read dividend

echo "Enter the divisor:"
read divisor

# Check if divisor is zero
if [ $divisor -eq 0 ]; then
    echo "Error: Division by zero is not allowed."
else
    # Calculate the division
    division=$(awk "BEGIN {printf \"%.2f\", $dividend / $divisor}")

    # Display the result
```

```
    echo "Division of $dividend by $divisor is: $division"
fi
```

OUTPUT

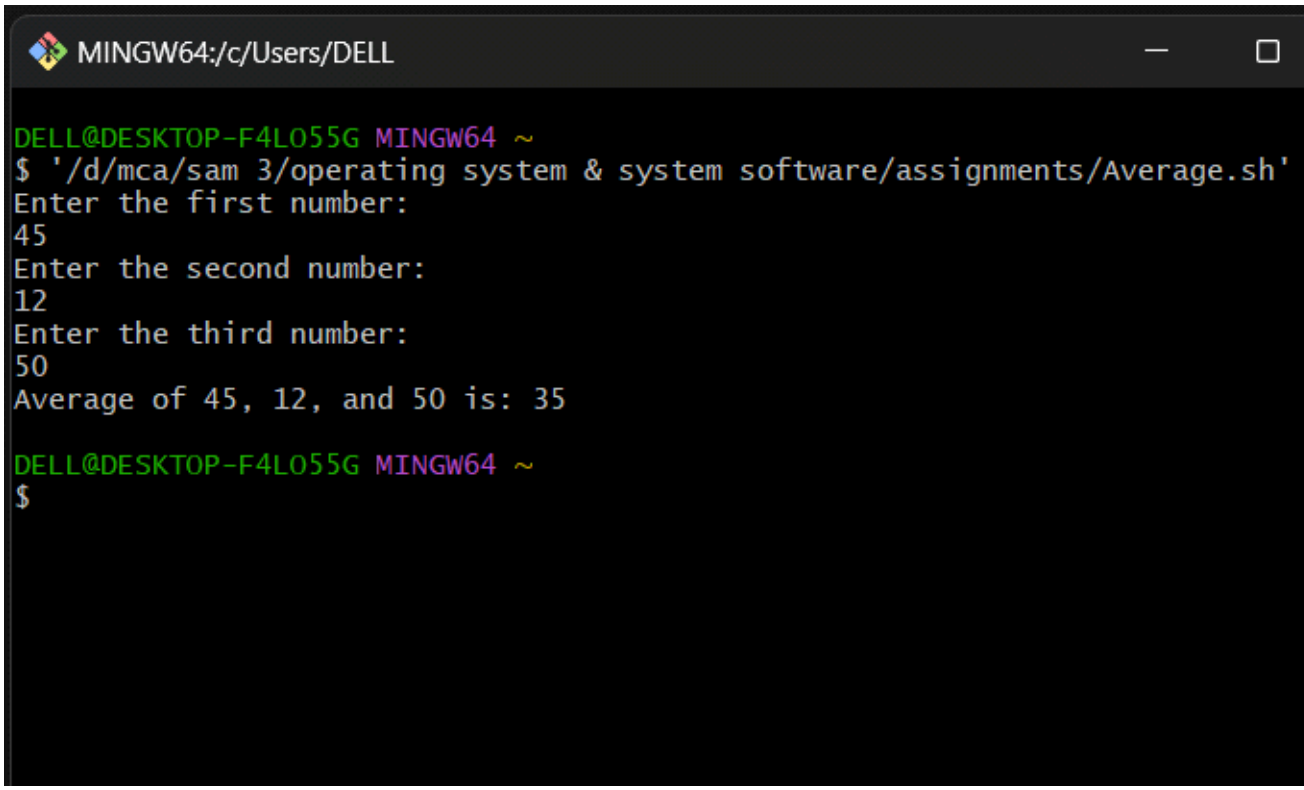


- **Write a shell program to calculate the average of three numbers.**
  Sol-

```
#!/bin/bash

# Input
echo "Enter the first number:"
read num1

echo "Enter the second number:"
read num2

echo "Enter the third number:"
read num3

# Calculate the average
average=$(( (num1 + num2 + num3) / 3 ))

# Display the result
```

```
echo "Average of $num1, $num2, and $num3 is: $average"
```

OUTPUT

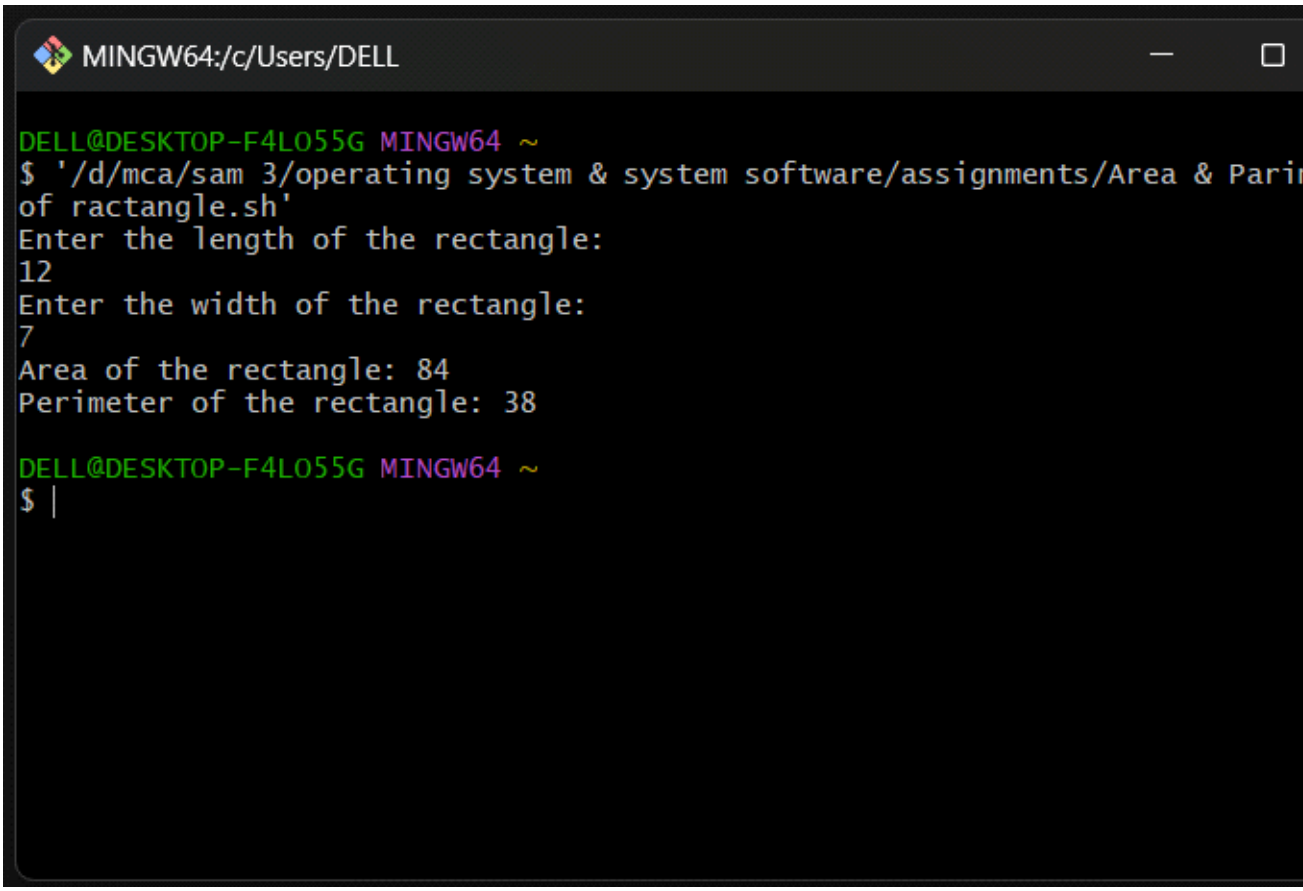


- **Write a shell program to find the area and perimeter of a rectangle.**
  Sol-

```
#!/bin/bash

# Input
echo "Enter the length of the rectangle:"
read length

echo "Enter the width of the rectangle:"
read width

# Calculate the area and perimeter
area=$((length * width))
perimeter=$((2 * (length + width)))

# Display the results
echo "Area of the rectangle: $area"
```

```
echo "Perimeter of the rectangle: $perimeter"
```

OUTPUT

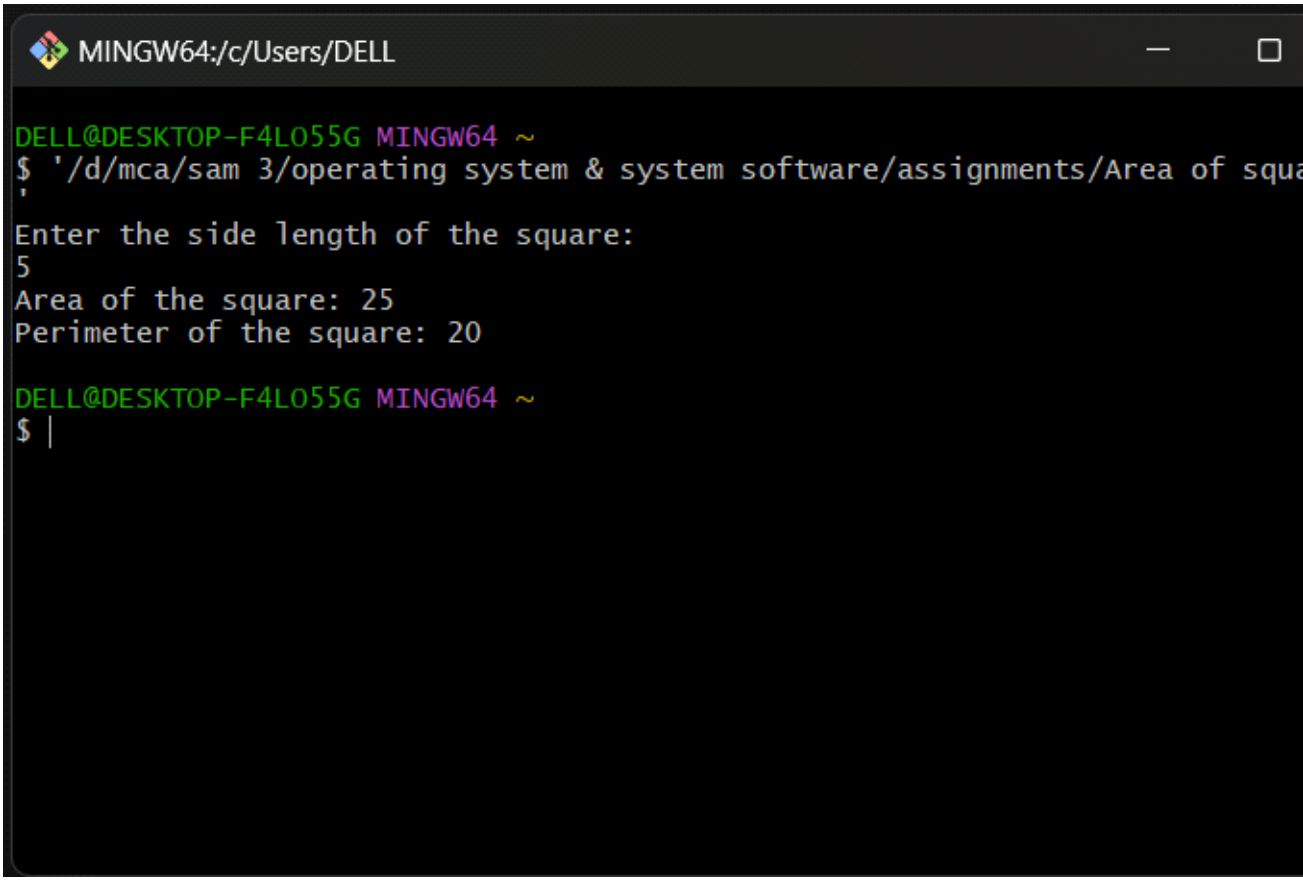


- **Write a shell program to find the area and perimeter of a square.**

  Sol-

```
#!/bin/bash

# Input
echo "Enter the side length of the square:"
read side

# Calculate the area and perimeter
area=$((side * side))
perimeter=$((4 * side))

# Display the results
echo "Area of the square: $area"
echo "Perimeter of the square: $perimeter"
```

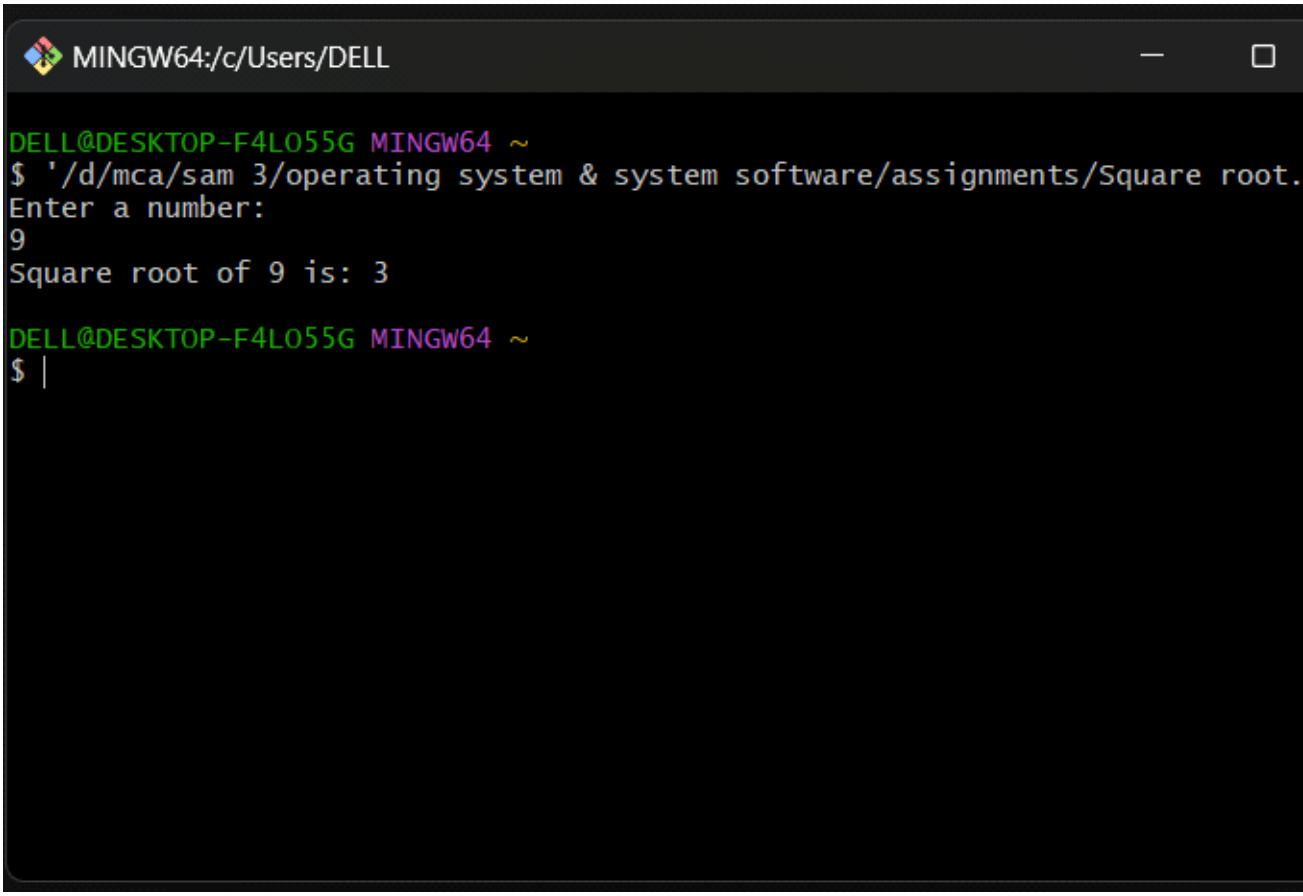
OUTPUT



- **Write a shell program to find the square root of a number.**
  Sol-

```
#!/bin/bash

# Input
echo "Enter a number:"
read number

# Calculate the square root using awk
square_root=$(awk "BEGIN {print sqrt($number)}")

# Display the result
echo "Square root of $number is: $square_root"
```

OUTPUT


MINGW64:/c/Users/DELL
DELL@DESKTOP-F4LO55G MINGW64 ~
$ '/d/mca/sam 3/operating system & system software/assignments/Square root.
Enter a number:
9
Square root of 9 is: 3
DELL@DESKTOP-F4LO55G MINGW64 ~
$