

ROLL NO: 230701211

## OS LAB 2

1. To write a shell script to display basic calculator

### Program

```
#!/bin/bash

# Function for basic arithmetic operations
calculate() {

    add=$(( $1 + $2 ))
    sub=$(( $1 - $2 ))
    mul=$(( $1 * $2 ))
    if [ $3 -eq 0 ]; then
        echo "Error: Division by zero is not allowed."
        return
    else
        div=$(( $1 / $2 ))
    fi
    mod=$(( $1 % $2 ))
    echo -e "Result: \nADD= $add\nSUB= $sub\nMUL= $mul\nDIV= $div\nMOD= $mod"
}

read -p "Enter first number: " num1
read -p "Enter second number: " num2
calculate $num1 $num2
```

**SAMPLE INPUT AND OUTPUT:**

```
Enter first number: 5
Enter second number: 10
main.bash: line 10: [: -eq: unary operator expected
Result:
ADD= 15
SUB= -5
MUL= 50
DIV= 0
MOD= 5

...Program finished with exit code 0
Press ENTER to exit console.
```

## 2)AIM:

To write a shellscrip to test given year is leap or not using conditional statement

## PROGRAM:

```
#!/bin/bash
```

```
# Read year from user
```

```
read -p "Enter the year you want to Check: " y
```

```
# Check if the year is a leap year
```

```
if [ $((y % 400)) -eq 0 ]; then
```

```
    echo "$y is a leap year."
```

```
elif [ $((y % 100)) -eq 0 ]; then
```

```
    echo "$y is not a leap year."
```

```
elif [ $((y % 4)) -eq 0 ]; then
```

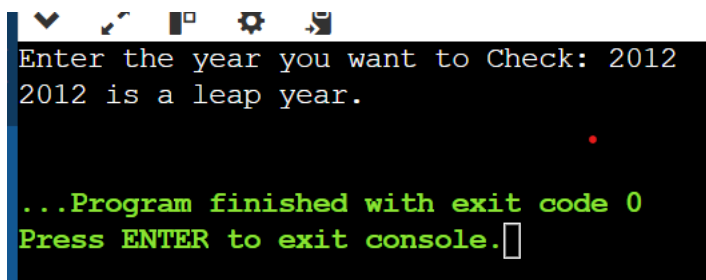
```
    echo "$y is a leap year."
```

```
else
```

```
    echo "$y is not a leap year."
```

```
Fi
```

## SAMPLE INPUT AND OUTPUT:

A screenshot of a terminal window with a black background and a blue title bar. The title bar contains several icons: a downward arrow, a magnifying glass, a square, a gear, and a document. The terminal text is as follows:

```
Enter the year you want to Check: 2012
2012 is a leap year.

...Program finished with exit code 0
Press ENTER to exit console.
```