

Date: 22/01/25

Shell Script**Aim:**

To write a Shellscript to to display basic calculator.

Program:

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

```
echo "Basic Calculator"
echo "-----"
echo "Enter first number:"
read a
echo "Enter second number:"
read b

echo "Choose operation:"
echo "1. Addition (+)"
echo "2. Subtraction (-)"
echo "3. Multiplication (*)"
echo "4. Division (/)"
read choice

case $choice in
    "Add") result=$((a + b))
            echo "Result: $a + $b = $result"
            ;;
    "Sub") result=$((a - b))
            echo "Result: $a - $b = $result"
            ;;
    "Mult") result=$((a * b))
            echo "Result: $a * $b = $result"
            ;;
    "Div") if [ $b -ne 0 ]; then
            result=$(echo "scale=2; $a / $b" |
bc)
            echo "Result: $a / $b = $result"
            else
            echo "Error: Division by zero is
not allowed."
            fi
            ;;
    "Mod") if [ $b -ne 0 ]; then
```

```

        result=$(echo "scale=2; $a % $b" |
bc)
        echo "Result: $a / $b = $result"
    else
        echo "Error: Division by zero is
not allowed."
    fi
    ;;

    *) echo "Invalid choice. Please enter 1,
2, 3, or 4."
    ;;
esac

```

Sample Input and Output

Run the program using the below command

[REC@local host~]\$ sh arith.sh

```

Enter two no
5 10

Add
15

Sub
-5

Mult
500

Div
0

Mod
5

```

Result:

the basic calculator has been created using shell script

Ex. no: 2b)

Date: 25/01/2025

Aim:

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

Program:

```
#!/bin/bash

echo "Enter a year:"
read year

# Check if the year is a leap year
if [ $((year % 4)) -eq 0 ]
then
    if [ $((year % 100)) -eq 0 ]
    then
        if [ $((year % 400)) -eq 0 ]
        then
            echo "$year is a Leap Year"
        else
            echo "$year is Not a Leap Year"
        fi
    else
        echo "$year is a Leap Year"
    fi
else
    echo "$year is Not a Leap Year"
fi
```

Sample Input and Output

Run the program using the below command

```
[REC @ local host~]$ sh leap.sh
```

Enter number

2012

Leap year

Result:

A shell script to test whether the given year is a leap year or not using conditional statements is successfully executed.