Date: 20-01-2023 **Name:** Ashvath S.P **Reg No**: 2162014

Lab Experiment – 1. a

Aim: Write a java program to make a simple calculator.

Code:

```
/**
 *
 * @author 2162014
 */
import java.util.Scanner;

public class Calculator {

   public double Operations(char o, double r, double n1, double n2) {
      // conditions to perform arithmetic operations
      switch (o) {
         case '+' -> {
            System.out.println("\nAddition: " + n1 + " + " + n2);
            r = n1 + n2;
            break;
         }
         case '-' -> {
            System.out.println("\nSubtraction: " + n1 + " - " + n2);
            r = n1 - n2;
            break;
         }
         case '*' -> {
            System.out.println("\nMultiplication: " + n1 + " * " + n2);
            r = n1 * n2;
            break;
         }
         case '/' -> {
            System.out.println("\nDivision: " + n1 + " / " + n2);
            r = n1 / n2;
            break;
         }
         default -> {
            System.out.println("\nInvalid input!\n");
            break;
         }
      }
      return r;
   }

   public static void main(String[] args) {
      Scanner scn = new Scanner(System.in);
```

```
        Calculator obj = new Calculator();
        System.out.print("\n-+-+-+-+Calculator-+-+-+-+\n");
        // Menu
        System.out.print("\nOperations:\n1. Addition\n2. Subtraction\n3.
    Multiplication\n4. Division\n");
        // get numbers from user
        System.out.print("\nEnter first number: ");
        double num1 = scn.nextDouble();
        System.out.print("\nEnter second number: ");
        double num2 = scn.nextDouble();
        // get operation from user
        System.out.print("\nChoose operations(+,-,*,/): ");
        char op = scn.next().charAt(0);
        double result = 0, ans = obj.Operations(op, result, num1, num2);
        // display output to user
        System.out.printf("\nResult: %.2f \n", ans);
        System.out.print("\n");
    }
}
```

Output:

```
Windows PowerShell
PS C:\Users\ashva\Work\christ\                    > javac Calculator.java
PS C:\Users\ashva\Work\christ\                    > java Calculator

-+-+-+-+Calculator-+-+-+-+

Operations:
1. Addition
2. Subtraction
3. Multiplication
4. Division

Enter first number: 5.87

Enter second number: 6.32

Choose operations(+,-,*,/): +

Addition: 5.87 + 6.32

Result: 12.19

PS C:\Users\ashva\                                > java Calculator

-+-+-+-+Calculator-+-+-+-+

Operations:
1. Addition
2. Subtraction
3. Multiplication
4. Division

Enter first number: 7.142

Enter second number: 3.55

Choose operations(+,-,*,/): -

Subtraction: 7.142 - 3.55

Result: 3.59
```

Fig. 1 – Output for addition and subtraction

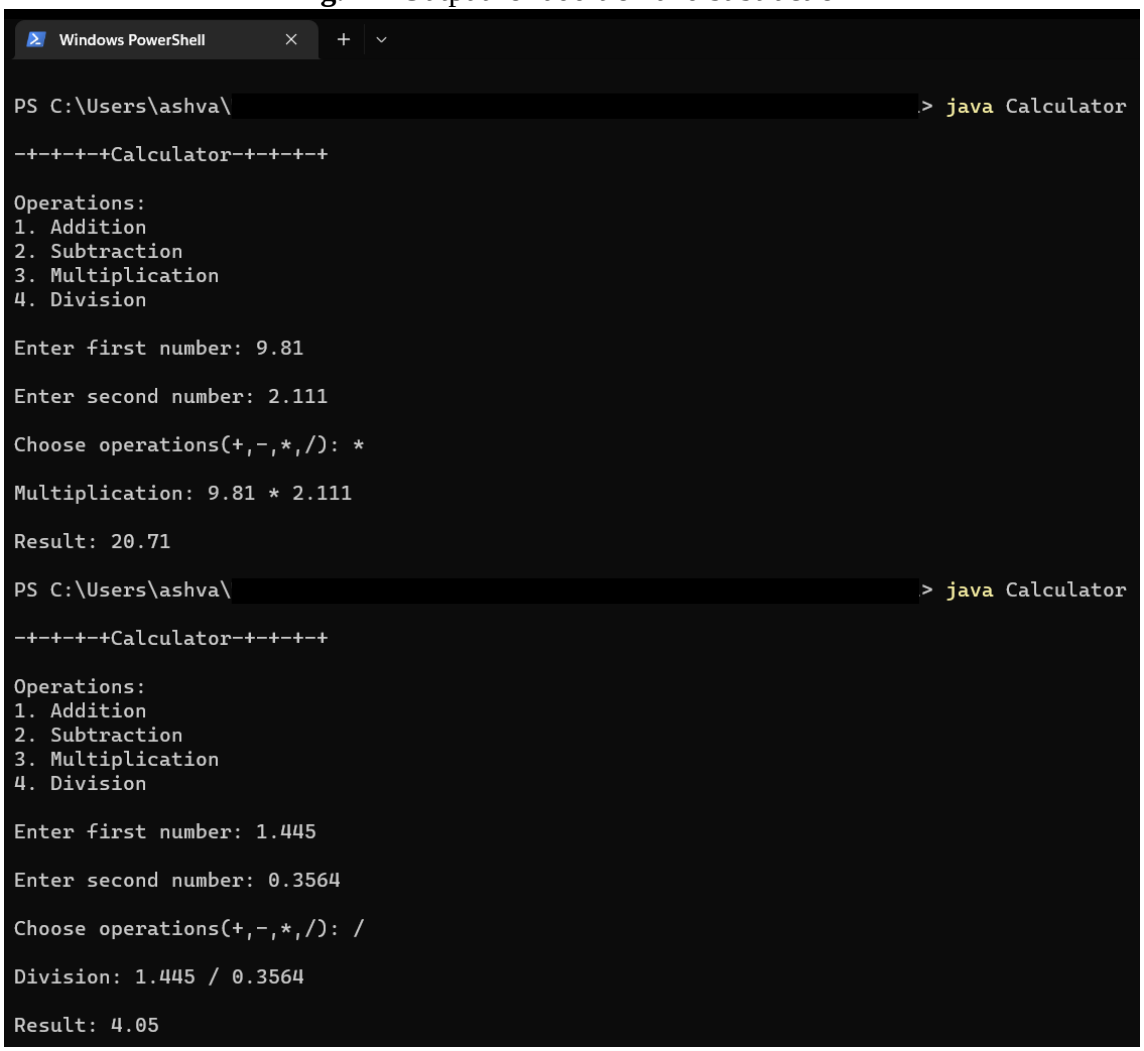

Fig. 2 – Output for multiplication and division