**Experiment No. 2**

Name : Dnyanesh Agale

Class : TE E&TC (2025-26)

Subject : FJP

Roll No. : 1

import java.util.Scanner;

public class Experiment2 {

    public static double calculate(double a, double b, char op) {

        switch (op) {

            case '+':

                return a + b;

            case '-':

                return a - b;

            case '\*':

                return a \* b;

            case '/':

                if (b == 0) {

                    System.out.println("Undefined (cannot divide by zero)");

                    return Double.NaN; // Return NaN to indicate an error

                }

                return a / b;

            case '%':

                return a % b;

            default:

                System.out.println("Invalid operation");

                return Double.NaN; // Return NaN for invalid operation

        }

    }

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        char continueChoice;

        do {

            // Get input from the user

            System.out.print("Enter first number: ");

            double a = sc.nextDouble();

            System.out.print("Enter second number: ");

            double b = sc.nextDouble();

            System.out.print("Enter operator (+ - \* / %): ");

            char op = sc.next().charAt(0);

            // Perform the calculation

            double result = calculate(a, b, op);

            // Check for valid result

            if (!Double.isNaN(result)) {

                System.out.println("Result = " + result);

            } else {

                System.out.println("Error in calculation.");

            }

            // Ask the user if they want to continue or exit

            System.out.print("Do you want to continue? (Y/N): ");

            continueChoice = sc.next().toUpperCase().charAt(0);

        } while (continueChoice == 'Y'); // Loop if the user presses 'Y'

        System.out.println("Thank you for using the calculator! Goodbye.");

        sc.close();

    }

}

Output :

Enter first number: 23

Enter second number: 21

Enter operator (+ - \* / %): +

Result = 44.0

Do you want to continue? (Y/N): Y

Enter first number: 55

Enter second number: 5

Enter operator (+ - \* / %): \*

Result = 275.0

Do you want to continue? (Y/N): N

Thank you for using the calculator! Goodbye.