**CALCULATOR**

```
import java.util.Scanner;

public class calculator {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in); // Create a Scanner object for user input
        char choice; // Variable to store user's choice for continuing or exiting the program

        do {
            System.out.println("Welcome to Simple Calculator!");
            System.out.print("Enter the first number: ");
            double num1 = scanner.nextDouble(); // Read the first number from the user

            System.out.print("Enter the operator (+, -, *, /): ");
            char operator = scanner.next().charAt(0); // Read the operator from the user

            System.out.print("Enter the second number: ");
            double num2 = scanner.nextDouble(); // Read the second number from the user

            double result = 0; // Variable to store the result of the calculation
            try {
                // Perform the calculation based on the operator
                switch (operator) {
                    case '+':
                        result = num1 + num2;
                        break;
                    case '-':
                        result = num1 - num2;
```

```
                break;
            case '*':
                result = num1 * num2;
                break;
            case '/':
                if (num2 == 0) {
                    throw new ArithmeticException("Division by zero is not allowed");
                }
                result = num1 / num2;
                break;
            default:
                throw new IllegalArgumentException("Invalid operator: " + operator);
        }

        System.out.println("Result: " + result); // Display the result
      } catch (ArithmeticException e) {
        System.err.println("Error: " + e.getMessage()); // Handle division by zero exception
      } catch (IllegalArgumentException e) {
        System.err.println("Error: " + e.getMessage()); // Handle invalid operator exception
      }

      System.out.print("Do you want to perform another calculation? (y/n): ");
      choice = scanner.next().charAt(0); // Ask the user if they want to continue
    } while (choice == 'y' || choice == 'Y'); // Continue the loop if the user enters 'y' or 'Y'

    System.out.println("Thank you for using Simple Calculator!");
    scanner.close(); // Close the Scanner object to release resources
  }
}
```

**OUTPUT**

**Welcome to Simple Calculator!**

**Enter the first number: 10**

**Enter the operator (+, -, *, /): +**

**Enter the second number: 30**

**Result: 40.0**

**Do you want to perform another calculation? (y/n): Y**

**Welcome to Simple Calculator!**

**Enter the first number: 50**

**Enter the operator (+, -, *, /): -**

**Enter the second number: 30**

**Result: 20.0**

**Do you want to perform another calculation? (y/n): Y**

**Welcome to Simple Calculator!**

**Enter the first number: 200**

**Enter the operator (+, -, *, /): ***

**Enter the second number: 3**

**Result: 600.0**

**Do you want to perform another calculation? (y/n): Y**

**Welcome to Simple Calculator!**

**Enter the first number: 500**

**Enter the operator (+, -, *, /): /**

**Enter the second number: 2**

**Result: 250.0**

**Do you want to perform another calculation? (y/n): N**

**Thank you for using Simple Calculator!**