

Assignment 1: Calculator Application

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CalculatorApp.java U X
indium_javabootcamp-batch1 > labs > corejava > core-java-assignments > CalculatorApp.java > ...
1  import java.util.Scanner;
2
3  public class CalculatorApp {
4      public static void main(String[] args) {
5          Scanner input = new Scanner(System.in);
6
7          System.out.println("Welcome to the Calculator App!");
8          System.out.println("-----");
9
10         char operator;
11         double number1, number2, result;
12
13         System.out.print("Enter first number: ");
14         number1 = input.nextDouble();
15
16         System.out.print("Enter an operator (+, -, *, /): ");
17         operator = input.next().charAt(0);
18
19         System.out.print("Enter second number: ");
20         number2 = input.nextDouble();
21
22         switch (operator) {
23             case '+':
24                 result = number1 + number2;
25                 System.out.println("Result: " + number1 + " + " + number2 + " = " + result);
26                 break;
27             case '-':
28                 result = number1 - number2;
29                 System.out.println("Result: " + number1 + " - " + number2 + " = " + result);
30                 break;
31             case '*':
32                 result = number1 * number2;
33                 System.out.println("Result: " + number1 + " * " + number2 + " = " + result);
34                 break;
35             case '/':
36                 if (number2 != 0) {
37                     result = number1 / number2;
38                     System.out.println("Result: " + number1 + " / " + number2 + " = " + result);
39                 } else {
40                     System.out.println("Error: Division by zero is not allowed.");
41                 }
42                 break;
43             default:
44                 System.out.println("Error: Invalid operator.");
45                 break;
46         }
47
48         System.out.println("-----");
49         System.out.println("Thank you for using the Calculator App!");
50         input.close();
51     }
52 }
```

Explanation:

- ★ The program now starts with a welcoming message.
- ★ Designed a clean interface that prompts users to enter the first number, the desired operator (+, -, *, or /), and the second number.
- ★ Error handling in the division operation, the program now checks for division by zero. If the user attempts to divide by zero, the program displays a clear error message.
- ★ The calculated result is displayed in a clear format.
- ★ The program ends with a thank you message.

Output:

```
Welcome to the Calculator App!
-----
Enter first number: 10
Enter an operator (+, -, *, /): +
Enter second number: 10
Result: 10.0 + 10.0 = 20.0
-----
Thank you for using the Calculator App!
```