

Problem Set 4 Exercise #10: Simple Calculator

Reference: Lecture 11 notes

Learning objectives: Characters and Strings; String comparison

Estimated completion time: 25 minutes

Problem statement:

Write a **non-OO** program **PS4_Ex10_Calculator.java** to implement a simple calculator which can perform the following arithmetic operations on integers:

- Addition (+)
- Subtraction (-)
- Multiplication (*)
- Division (/)

In each operation, the operator appears in the middle of the two operands (e.g. 5 * 2), separately by spaces. The following are examples:

- 2 + 3 = 5
- 2 * 3 = 6
- 2 / 3 = 0.67

Note that for division, the result shall be shown in 2 decimal places.

Sample run #1:

```
Enter the number of operations: 4
23 + 40
23 + 40 = 63
50 - 40
50 - 40 = 10
7 / 2
7 / 2 = 3.50
5 * -7
5 * -7 = -35
```

Sample run #2:

```
Enter the number of operations: 1
4 * -10
4 * -10 = -40
```

Useful tips:

Explore the `next()` method of the Java `Scanner` class and `equals()` method of the `String` class.