

The Problem Set 2 for Exercise

1. Introduction

The problem in this set continues the exercise with the Triangle problem with a new part, Part 3. Review the problem specification in the previous exercise if needed.

2. Tasks for This Exercise

Part 3

This part differs from **Part 2** with two changes explained below. Otherwise, the task is the same as that in Part 2.

The first change is with the “report invalid” action. For this part, the expected action is to throw an `IllegalArgumentException`, with the error message “Invalid” generated.

The second change is that **all test cases** listed in Part 1 must be placed in **a single CSV file**. You can add additional items in each data line to help the `TriangleTest` class identify what action is expected.

If a test case is expected to either cause a “report out-of-range” action or a “report invalid” action, then your test class must verify that the correct exception is thrown by the `triangle()` method with correct error message generated. For all other test cases, your test class must verify the returned integer.

Review: Part 1

For this part, the action “report out-of-range” is expected to throw an `IllegalArgumentException`. The action “report invalid” is expected to return the integer value -1.

The task is to write `TriangleTest.java` to test the cases $(a, b, c) = (100, 100, 1), (100, 100, 100), (150, 200, 130), (100, 100, 201), (100, 100, 200), (120, 120, 100), (2, 50, 2), (201, 201, 201)$.

If a test case is expected to cause a “report out-of-range” action, then your test class must verify that the correct exception is thrown by the `triangle()` method *without checking any error messages*. For all other test cases, compose a CSV file to include all these cases, and the `TriangleTest` class should perform all these tests.

ReviewP Part 2

This part differs from Part 1 with only a single change explained below. Otherwise, the task is the same as that in Part 1.

For this part, the action “report out-of-range” is expected to throw an `IllegalArgumentException`, with the error message “Out of Range” generated (NOTE: a single space between the words).

If a test case is expected to cause a “report out-of-range” action, then your test class must verify that the correct exception is thrown by the `triangle()` method with correct error message generated. For all other test cases, compose a CSV file to include all these cases, and the `TriangleTest` class should perform all these tests.