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SSW567

HW2 Project Report

1. **Assignment Description:**

Sometimes you will be given a program that someone else has written, and you will be asked to fix, update and enhance that program. In this assignment you will start with an existing implementation of the classify triangle program that will be given to you. You will also be given a starter test program that tests the classify triangle program, but those tests are not complete.

* These are the two files: Triangle.py and TestTriangle.py
  + [***Triangle.py***](https://sit.instructure.com/courses/52802/files/8353488/download?wrap=1)is a starter implementation of the triangle classification program.
  + [***TestTriangle.py***](https://sit.instructure.com/courses/52802/files/8353460/download?wrap=1) **c**ontains a starter set of unittest test cases to test the classifyTriangle() function in the file Triangle.py file.

In order to determine if the program is correctly implemented, you will need to update the set of test cases in the test program. You will need to update the test program until you feel that your tests adequately test all of the conditions. Then you should run the complete set of tests against the original triangle program to see how correct the triangle program is. Capture and then report on those results in a formal test report described below. For this first part you should not make any changes to the classify triangle program. You should only change the test program.

Based on the results of your initial tests, you will then update the classify triangle program to fix all defects. Continue to run the test cases as you fix defects until all of the defects have been fixed. Run one final execution of the test program and capture and then report on those results in a formal test report described below.

Note that you should NOT simply replace the logic with your logic from Assignment 1. Test teams typically don't have the luxury of rewriting code from scratch and instead must fix what's delivered to the test team.

1. **Author:** Joseph Letizia
2. **Summary:**

|  | **Test Run 1** | **Test Run 2** | **Test Run 3** | **Test Run 4** |
| --- | --- | --- | --- | --- |
| **Tests Planned** | 7 | 7 | 7 | 7 |
| **Tests Executed** | 7 | 7 | **7** | **7** |
| **Tests Passed** | 1 | 4 | 6 | 7 |
| **Defects Found** | 6 | 3 | 1 | 0 |
| **Defects Fixed** | 3 | 2 | 1 | 0 |

With this assignment I was able to pick up on a few ways to go about testing my code for the future. The idea of coming up with test cases prior to working on final editions of code allows for a stable approach when it comes time to bug fix. It makes it clear and concise what I need to accomplish to finish my tasks. Taking the time to treat code as separate if statements also worked in allowing me to better understand the code given to me.

1. **Honor Pledge:** I pledge my honor that I’ve abided by the Stevens Honor System.
2. **Detailed Results, if any:**

Constraints placed on this project was the ability to only be allowed to touch tests vs the code at separate moments in time. Edits could only be made to the tests before the code itself allowing for the entire project to be treated as separate containers in a sense. In regards to data inputs, it was pretty simplistic with the tests allowing for int inputs into the code that they would test out the triangle types of said input sides. The results of the work is a program that is able to classify a triangle based on if it is right, scalene, isosceles, or equilateral based on the sides alone.