HW01 experience

Author: Xinyi Ye

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When I saw this assignment, I thought it was very simple. But I was wrong.

1. What challenges did you encounter with this assignment?

This assignment is to classify triangle whose three sides are a, b, c and whether it is scalene, isosceles, equilateral and whether it is a right triangle. I didn’t think about this question very complicated first. I only did some judges like comparing a, b and c, doing some calculations to judge whether a^2 + b^2 =c^2, such as these.

The first challenge is that I should know the order of three numbers, a>b>c or a<b<c or other orders. So, I choose to sort a list to determine the order.

Next is when I want to do some judges to know how many sides are equal, I chose to compare those one by one. But this method is very complicated and not convenient. So, I chose to use defaultdict to determine how many sides are equal which is very convenient.

Then I did main program. I thought I finished this assignment. But when I saw the requirement again, I remembered I ignored some important points. I needed to judge whether three length can make up a triangle. So, I did if, else again to judge whether three lengths can make up a triangle. And I also do some judges to determine invalid parameters, like a<0, special characters, lank space and so on.

1. What did you think about the requirements specification for this assignment?

The requirements specification is not complicated and ambiguous. It only specifies three lengths, but it doesn’t claim whether these three parameters are numbers and

whether three lengths can make up a triangle.

1. What challenges did you encounter with the tools?

I used Visual Studio to finish this program. And because I have been exposed to this tool before, so I didn’t encounter some challenges.

1. Describe the criteria you used to determine that you had sufficient test cases, i.e. how did you know you were done?

I use equivalence classes to determine I had enough test cases. I had valid input, invalid input two classes. For valid parameters which means three parameters are all numbers and they are all greater than zero, I had equilateral, right isosceles, not right isosceles, not right scalene and right scalene five classes. For invalid, I had invalid parameters, like length <= 0, strings and the length which cannot be a triangle.

It is worth noting that the order of the arguments to classify\_triangle() function should not change the result. So, I repeat the inputs with the same inputs in different orders.