LAB #6
Practice Strings and Functions in Python

You need to use the TAs office hours and class study sessions to get extra help in understanding the material and what is required from an assignment or lab!!!

1. In this course, all our labs involve paired programming. You do not have to keep the same partner for each lab, but you MUST work with someone in each lab, as specified in the student handout.

2. At this time, you need to pair with someone in the lab, and finish the rest of the lab as a pair.

Modify the Buoyancy Program (5 pts)

3. If you haven’t done so already, take your design from lab #5, and use it to modify your buoyance program so that the user must enter a 1 to continue or 0 to quit. Provide a message to the user if she/he enters an invalid number, i.e. the number is not a 1 or 0. For instance, if the user enters a number other than 1 or 0, then the program must give an error message and re-prompt the user for a 1 or 0 to continue or quit.

**Hint:** Do not convert your string input into an int, until you know you have a good integer!!! You can access each character in the string by using the brackets, starting at zero for the first character, i.e. continue[i]. In addition, you can get the length of a string by using len(), i.e. len(continue).

What if you want to catch an invalid weight or radius entered by the user? Remember, these can be floating point numbers or whole numbers!!! Now, catch these errors!!!

Modify the Turtle Program (5 pts)

4. Change your turtle program from lab #5 to contain a main function, as well as functions for each one of these shapes drawn by the turtle. Now, prompt the user for which shape they want to draw and then draw only that shape.

Ask the user if they want to continue, and if they do, then clear the screen and ask them which shape they want to draw again. Continue this until the user doesn’t want to draw anymore shapes!

1. An equilateral triangle
2. A square
3. A hexagon (six sides)
4. An octagon (eight sides)

Make sure you handle when the user doesn’t enter a good input for continuing and/or a specific shape they can choose to draw.

Make sure you sign-up with a TA for demoing/explaining your Assignment #4 this week and Assignment #5 next week. This is how all assignments are graded in the course, and if you sign-up and do not make your appointment without rescheduling, then you will be penalized 50 points!!!