**ITEC 136 Homework 2 Name: \_Danielle Hooven\_\_\_\_\_\_\_**

1. **[10 points]** Write a program that prompts user to enter three sides of a triangle. The program should determine if the three sides can form a triangle. If the three sides can form a triangle, then determine the type of the triangle.   
   There are three types of triangles:

* **Equilateral** triangle (all 3 sides are equal)
* **Isosceles** triangle (two sides are equal, the third side is of a different length)
* **Scalene** triangle (all 3 sides are of different lengths)

The program should have a function called **triangle\_type()** that takes 3 parameters, the lengths of each side. The **triangle\_type()** function should return **Equilateral**, **Isosceles**, or **Scalene** according to the descriptions above. Do not use global variables. Function parameters must be used.

**Sample output:**

Enter side 1 length: 5

Enter side 2 length: 5

Enter side 3 length: 5

Triangle with lengths 5.0, 5.0 and 5.0 is an Equilateral triangle.

Enter side 1 length: 5

Enter side 2 length: 5

Enter side 3 length: 4

Triangle with lengths 5.0, 5.0 and 4.0 is an Isosceles triangle.

Enter side 1 length: 10

Enter side 2 length: 5

Enter side 3 length: 30

Triangle with lengths 10.0, 5.0 and 30.0 cannot form a triangle.

1. **[10 points]** Write a program that determines if the number entered is a prime number. The program should have a function called **is\_prime(num)** that takes a single integer argument and returns **True** when the argument is a prime number, and **False** otherwise.

**Hint**: Prime number is a positive number whose only factors are 1 and itself.

Here is sample output:

Enter an integer: 19

19 is a prime number.

Enter an integer: 136

136 is not a prime number.

1. **[5 points]** Weekly Learning and Reflection  
   In two to three paragraphs of prose (i.e. sentences, not bullet lists) using APA style citations if needed, summarize and interact with the content that was covered in the introductory videos provided for this course. In your summary, you should highlight the major topics, theories, practices, and knowledge that were covered. Your summary should also interact with the material through personal observations, reflections, and applications to the field of study. In particular, highlight what surprised, enlightened, or otherwise engaged you. Make sure to include at least one thing that you’re still confused about. In other words, you should think and write critically not just about what was presented but also what you have learned through the session. Feel free to ask questions in this as well since it will be returned to you with answers.