CIS 500 – Fundamentals of Software Practice
Weekly Exercise #1

Topic: Variables, Assignments, and Input/Output

1. Write Python code that prompts the user for two integers and then prints the following, each with an identifying label:

   - The sum
   - The difference
   - The product
   - The average
   - The distance (the absolute value of the difference)
   - The maximum (the larger of the two)
   - The minimum (the smaller of the two)

   Hint: Use the built-in function `abs`, `max`, and `min` in Python. Refer to https://docs.python.org/3/library/functions.html for information on built-in functions in Python.

2. Write Python code that prompts the user for the lengths of the sides of a rectangle and prints the following, each with an identifying label:

   - The area of the rectangle: A = L * W
   - The perimeter of the rectangle: P = 2 * L + 2 * W
   - The length of the diagonal: D = `math.sqrt`(L ** 2 + W ** 2)
     - Include this statement to use `sqrt()` function: `import math`

3. Write Python code that prompts the user to input

   - The number of gallons of gas in the tank
   - The fuel efficiency in miles per gallon
   - The price of gas per gallon

   Then print the cost per 100 miles and how far the car can go with the gas in the tank. Make sure the output has identifying labels for readability.

Exercise Instructions:

- Download the file **`WEX-1.py`** from Blackboard.
- Edit the file to place the code to solve the problems above.
- Run and test your code to make sure it works correctly.
- Upload the file **`WEX-1.py`** on Blackboard by midnight of due date.