***BE 1600***

***Introduction to***

***Programming and Computation***

***Python Lab***

**Lab 07**

20 points

**Due by the end of the lab session**

Assignment Objectives:

* To define functions.
* To invoke value-returning functions.

*Solution for this lab will not be posted on Canvas; however, the solution of any of the lab problems can be discussed in the class upon request of a student.*

All labs must be submitted by the Canvas. **No email or hard copy** is accepted. You must follow the following format:

* Submit your file to the Canvas. You must submit your file on time; otherwise, you will receive zero.
* You can upload your file as many times as you like. Only the last attempt counts because the last file you uploaded is the only file your instructor will see.
* There will be several modules on the Canvas. You need to upload your file using the correct module on the Canvas.
* Name the lab file: *Lab (labt number)*
* To upload your file(s):
* In Course Navigation, click the ASSIGNMENTS module.
* Click the title of the assignment.
* Click the **Submit** Assignment button.
* Add **File**. ...
* **Submit** Assignment. ...
* View **Submission**.

*It is your responsibility to make sure that the file is uploaded correctly. If you uploaded a wrong file, you receive zero; files will not be accepted after due date even if you have a prove that the file is created before the due date.*

***Make sure you review the Cheating & Plagiarism policy on Canvas.***

Write a program that takes as input five numbers and outputs the mean (average) and standard deviation of the numbers. If the numbers are x1, x2, x3, x4, and x5, then the mean is

*x = (x1 + x2 + x3 + x4 + x5) / 5*

and the standard deviation is:

Diagram

Description automatically generated with low confidence

Your program must contain at least the following functions:

* a function that calculates and returns the mean.
* a function that calculates the standard deviation.

Your program should allow the user to repeat this calculation as often as the user wishes.

Round numbers to two decimal places. *Save the file as .txt file.*

Enter five numbers: 6.25 8.50 3.75 9.35 2.99

The mean of the numbers is: 6.17

The standard deviation of the numbers is: 2.51

Enter Yes to do another calculation, or No to quit. Yes

Enter five numbers: 11.50 4.40 7.70 1.10 5.80

The mean of the numbers is: 6.10

The standard deviation of the numbers is: 3.46

Enter Yes to do another calculation, or No to quit. No