CS 5007 Individual Project Assignment 1 (100 Points)

Due: 11:59 p.m. on 09/24/2021

Project Objective: The goal of this project is to:

1. Be comfortable with programming in the PyCharm-like IDE
2. Learn about the basic data types and operations
3. Learn the strings, lists, loops, decisions, and exception handling structures.

Project Deliverables:

1. Submit your **.py** file to Canvas.
2. Title the file "**lastName_firstName_assignment1.py**".
3. Provide the clear **comment documentations** to your code.

Note:

(1) This project is to be done by each student individually. No help besides the textbook, materials, and the instructor should be taken. Copying any answers or part of answers from other sources (including your classmates) will earn you a grade of zero.
(2) All programming conventions mentioned in class should be followed.
(3) You should test your program before submitting.
(4) Your program must be developed and implemented in the PyCharm-like IDE, or 10% of the graded score is deducted.
(5) Assignments are accepted in their assigned Canvas drop box without penalty if they are received by 11:59PM EST on the due date, or 10% of the graded score is deducted for the late submission per day. Work submitted after one week of its original due date will not be accepted.

Task: Write and run a python program that can input any number of students and their any number of exam scores to compute each of their average, highest, and lowest scores among all the scores entered for those students. Please use the **high-level steps of program development** discussed in Lecture 3 as a guide to help you complete this program. Your program should be able to generate the following sample outputs on the screen. Note that **-1** means no more input score for the student.

Sample 1

Please enter Student 1's score (-1: Exit): **77**
Please enter Student 1's score (-1: Exit): **68**
Please enter Student 1's score (-1: Exit): **-1**

Any more student? (Yes or No): **yes**

Please enter Student 2's score (-1: Exit): **96**
Please enter Student 2's score (-1: Exit): **87**
Please enter Student 2's score (-1: Exit): **89**
Please enter Student 2's score (-1: Exit): -1

Any more student? (Yes or No): **yes**

Please enter Student 3's score (-1: Exit): **70**
Please enter Student 3's score (-1: Exit): **90**
Please enter Student 3's score (-1: Exit): **86**
Please enter Student 3's score (-1: Exit): **81**
Please enter Student 3's score (-1: Exit): **-1**

Any more student? (Yes or No): **no**

Student 1 took 2 exams.
Average Score: 72.5
Highest Score: 77.0
Lowest Score: 68.0

Student 2 took 3 exams.
Average Score: 90.67
Highest Score: 96.0
Lowest Score: 87.0

Student 3 took 4 exams.
Average Score: 81.75
Highest Score: 90.0
Lowest Score: 70.0

 # The program stops after the above summary is displayed.

Sample 2

Please enter Student 1's score (-1: Exit): **Ben**
The score entered is not a number. Please enter it again.

Please enter Student 1's score (-1: Exit): **77**
Please enter Student 1's score (-1: Exit): **Ben**
The score entered is not a number. Please enter it again.

Please enter Student 1's score (-1: Exit): **68**
Please enter Student 1's score (-1: Exit): **-1**

Any more student? (Yes or No): **yes**

Please enter Student 2's score (-1: Exit): **96**
Please enter Student 2's score (-1: Exit): **Sam**
The score entered is not a number. Please enter it again.

Please enter Student 2's score (-1: Exit): **87**
Please enter Student 2's score (-1: Exit): **Sam**
The score entered is not a number. Please enter it again.

Please enter Student 2's score (-1: Exit): **89**
Please enter Student 2's score (-1: Exit): -1

Any more student? (Yes or No): **yes**

Please enter Student 3's score (-1: Exit): **70**
Please enter Student 3's score (-1: Exit): **90**
Please enter Student 3's score (-1: Exit): **86**
Please enter Student 3's score (-1: Exit): **81**
Please enter Student 3's score (-1: Exit): **-1**

Any more student? (Yes or No): **no**

Student 1 took 2 exams.
Average Score: 72.5
Highest Score: 77.0
Lowest Score: 68.0

Student 2 took 3 exams.
Average Score: 90.67
Highest Score: 96.0
Lowest Score: 87.0

Student 3 took 4 exams.
Average Score: 81.75
Highest Score: 90.0
Lowest Score: 70.0

 # The program stops after the above summary is displayed.

Sample 3

Please enter Student 1's score (-1: Exit): **-1**

Any more student? (Yes or No): **yes**

Please enter Student 2's score (-1: Exit): **96**
Please enter Student 2's score (-1: Exit): **87**
Please enter Student 2's score (-1: Exit): **Sam**
The score entered is not a number. Please enter it again.

Please enter Student 2's score (-1: Exit): **89**
Please enter Student 2's score (-1: Exit): **-1**

Any more student? (Yes or No): **yes**

Please enter Student 3's score (-1: Exit): **-1**

Any more student? (Yes or No): **no**

Student 1 took 0 exams.
Average Score: 0
Highest Score: 0
Lowest Score: 0

Student 2 took 3 exams.
Average Score: 90.67
Highest Score: 96.0
Lowest Score: 87.0

Student 3 took 0 exams.
Average Score: 0
Highest Score: 0
Lowest Score: 0

 # The program stops after the above summary is displayed.

Grading Criteria:

Checkpoint:	**Possible Points**
Proper Naming Conventions	5
Lists and Strings	10
Program Documentation	10
Decision Structures	15
Loop Structures	15
Exception Handling	15
Correct Above Sample Program Outputs	30
Total	100