

Assignment 3 – Largest, Smallest, and Average Number

Goals

- While loops

Requirements

- Your new file must begin with comments in the following format (replace the name and email with your actual information and write text for the description):
`# Name, USC email`
`# ITP 115, Spring 2020`
`# Assignment 3`
`# Description:`
`# Describe what this program does.`
- Have the user input integers (greater than or equal to 0). To end the list of numbers, have the user enter a sentinel value of -1. To do this, you will need to use a **while** loop since we do not know how many integers the user will enter.

```
Input an integer greater than or equal to 0 (-1 to quit)
>
```

- Determine the largest number entered and the smallest number entered. Also calculate the sum and number (or count) of integers entered. Think about creating extra variables to hold data such as the current largest number and current smallest number.
- When the user enters -1, print out the largest and smallest numbers and the average of all the numbers entered. To calculate the average, remember that $\text{average} = \text{sum} / \text{count of numbers}$.
- Solve this assignment **without** using lists.
- After finding the largest, smallest, and average numbers, ask the user if they would like to start over again or if they would like to quit.
 - Hint: How many while loops do you need to complete this part?

Sample Output

```
Input an integer greater than or equal to 0 (-1 to quit)
```

```
> 1
> 8
> 34
> 9
> -1
```

```
The largest number is 34
```

The smallest number is 1

The average number is 13.0

Would you like to enter another set of numbers? (y/n): y

Input an integer greater than or equal to 0 (-1 to quit)

> 7

> 2

> 3

> 2

> 2

> -1

The largest number is 7

The smallest number is 2

The average number is 3.2

Would you like to enter another set of numbers? (y/n): N

Goodbye!

Deliverables and Submission Instructions

- Create a folder on your computer called **ITP115_A3_LastName_FirstName** (replace *LastName* with your last/family name and *FirstName* with your first name).
- Inside the folder, put your python source code.
- Compress the folder (make a zip file). This cannot be done within PyCharm. Find the folder on your computer and compress it.
 - a. Windows:
 1. Using File Explorer, select your lab file
 2. Right click
 3. Send to ->
 4. Compressed (zipped) folder
 - b. Mac OSX:
 1. Using Finder, select your lab file
 2. Right click
 3. Compress "FileName"
- Upload the zip file to your Blackboard section:
 1. On Blackboard, click on the Assignments item in the course menu on the left.
 2. Click on the specific item for this assignment (starts with A and a number).
 3. Click on the Browse My Computer button and select your zip file.
 4. Click the Submit button.

- Assignments that do not run are subject to 50% penalty.

Grading

Item	Points
Continue loop	5
Average number	5
Smallest number	5
Largest number	5
Total*	20

** Points will be deducted for poor code style, lack of error checking, improper submission.*