Objectives:

* Using the while and for loops
* **There are 5 challenge exercises, each worth 20%**

Please submit this document for grading when completed… Please work in-groups.

This lab class exercise is based on Chapter 4 Loops.

**CONCEPT**: A repetition structure causes a statement or set of statements to execute repeatedly.

**Project #1** (here is a program that will ask to enter the sales with commission 3x, without a loop)

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**CONCEPT**: A condition-controlled loop causes a statement or set of statements to repeat if a condition is true. In Python, you use the while statement to write a condition-controlled loop.

**Project #2** (Here is the same program but using the while loop)

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**Project #3** (using the while loop for temp)

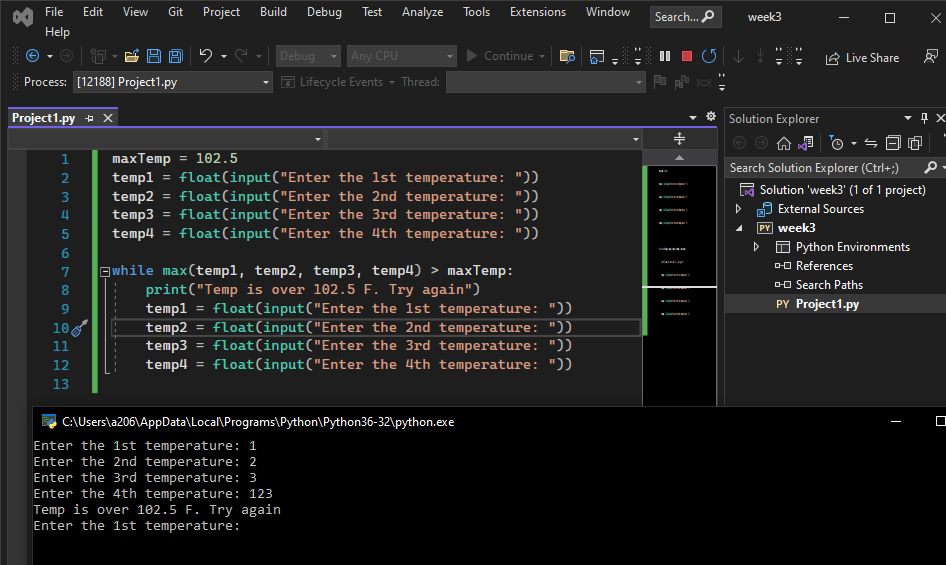
Text

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**Challenge Exercise #1:** create a program with a **while** loop, that will ask the user to enter 4 sets of temps under 102.5 and then get the sum and average of the four temps when the user enter a temp over 102.5

Data set test: enter 60, 70, 80 and 90

**#1 print screen the output with code below here.**



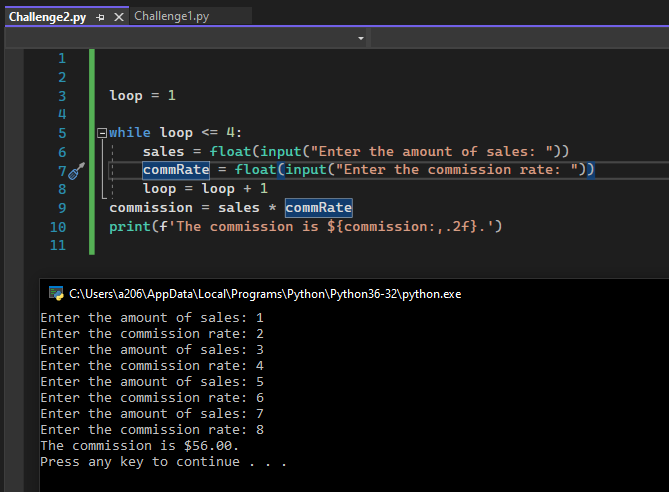
**Project #4** (example of an infinite loop), a loop that never stops

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**Challenge Exercise #2:** create a program with a **while** loop, that will ask the user to enter the sales with commission four times, and on the 4th, time will sum the sales and commission.

**#2 print screen the output with code below here.**



**CONCEPT**: A count-controlled loop iterates a specific number of times. In Python, you use the for statement to write a count-controlled loop.

**Project #5** (using the for loop to print 1-5)

A picture containing graphical user interface

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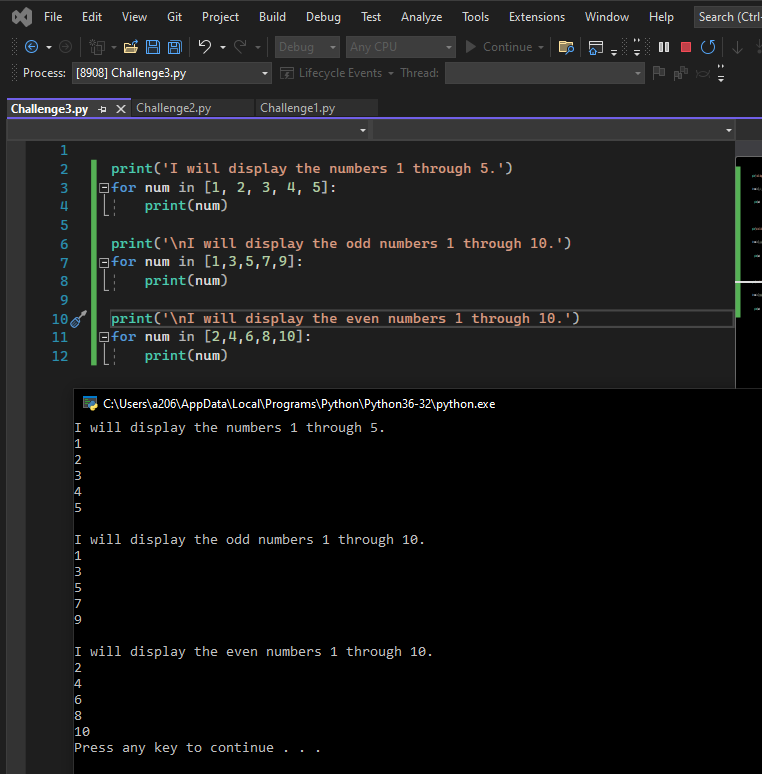
**Challenge Exercise #3:** continuing with project #5, print odd and even number to a maximum of 10

**Project #6 (**Looping strings)

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**#3 print screen the outputs with code below here.**

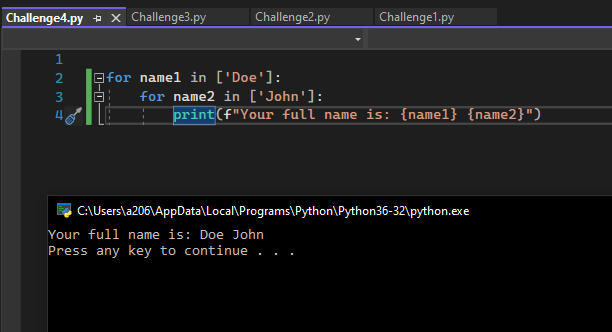


**Challenge Exercise #4:** continuing from project #6, delete the names in the array and add your first and last name using a parallel for loops (use two for loops). The first for loop will loop through your last name, and the second for loop will print your first name. See example below.

Text

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**#4 print screen the outputs with code below here.**



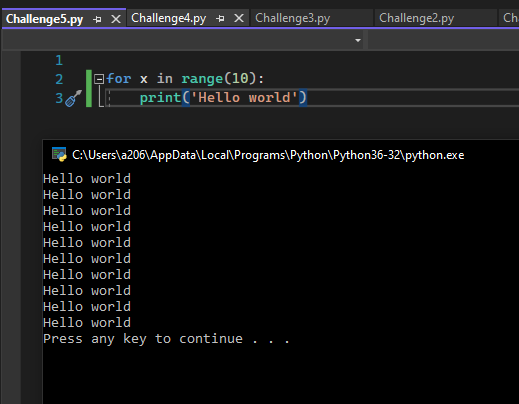
**Project #7 (**Looping through a range of #’s)

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**Challenge Exercise #5:** Continuing with project #7, display the hello world message 10x

**#5 print screen the outputs with code below here.**



**Project #8 (**Looping and getting the square root of a number)

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**Submit this document to Module 3 class exercise.**