Question-1 [10 points]: What is the difference between a while loop and a for loop in Python?
A while loop repeats a given statement until a condition is no longer met.
They will keep going/iterating until the condition comes back false or is no longer met.

A for loop is used when you know the number of times the statement will iterate. This is used when you are looping over a known object such as a defined list or sequence.

Question-2 [5 points] (Research Question): What does "while True" mean in python?

This will cause a block of code to loop or go on indefinitely. Typically it will have a way to break the loop or cancel it. "While true" essentially means to run indefinitely until false or another input is entered that cancels the while true statement.

Question-3 [5 points]: What is the significance of flowcharts in Programming? [NOTE: You may use online resources to research this question]

Flowcharts can make it easier to visually picture what is occurring within the block of code. It can ensure that you are following the proper syntax or order of operations. It can also allow you to go back in and figure out where in the sequence the code is having an issue. It can help plan out the structure and flow of a block of code or program.

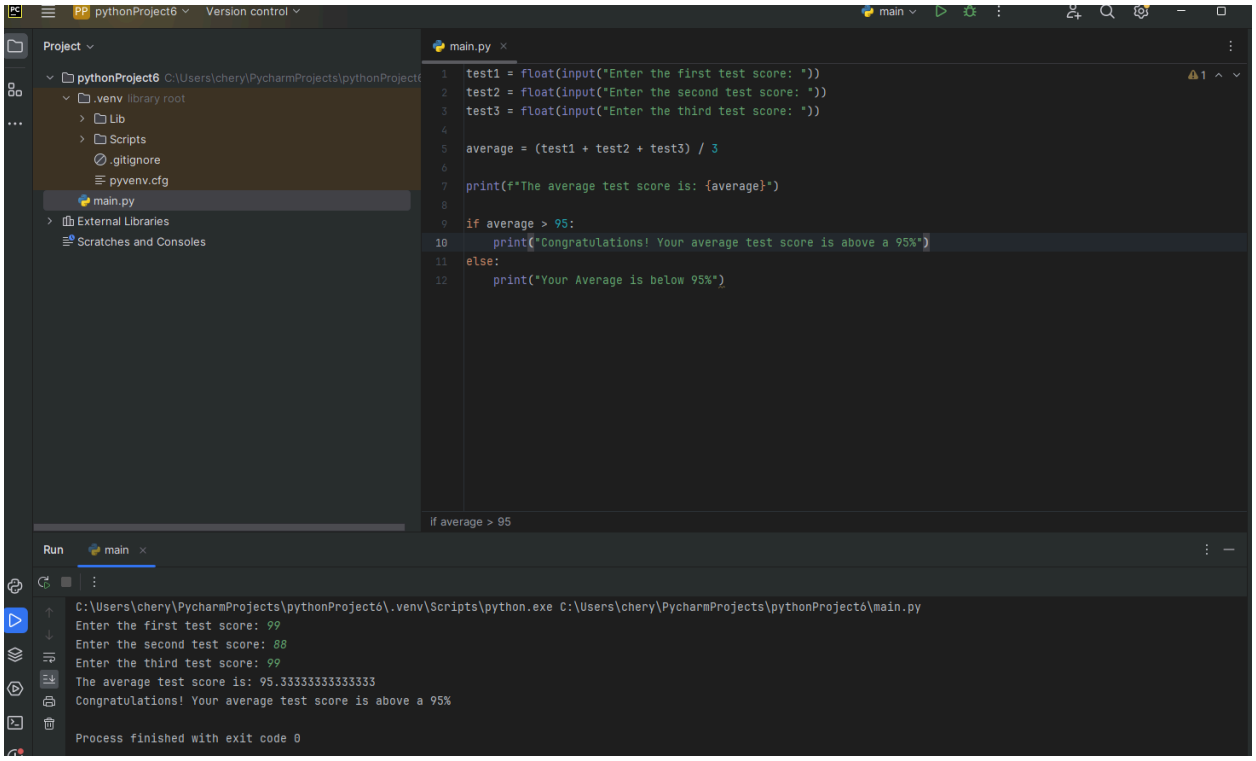
Question-4 [5 points]: Define the following terms in one or two sentence(s):
1. Iteration variable - the variable that tracks the amount that a program should or has iterated. This can be used to set limits or a set amount of times a program should iterate before it stops. If no variable is defined it will go on forever.

2. Finite loop - This loop has a set amount of iterations and once that limit is reached it will stop. No more iterations will occur once it reaches the predefined limit.

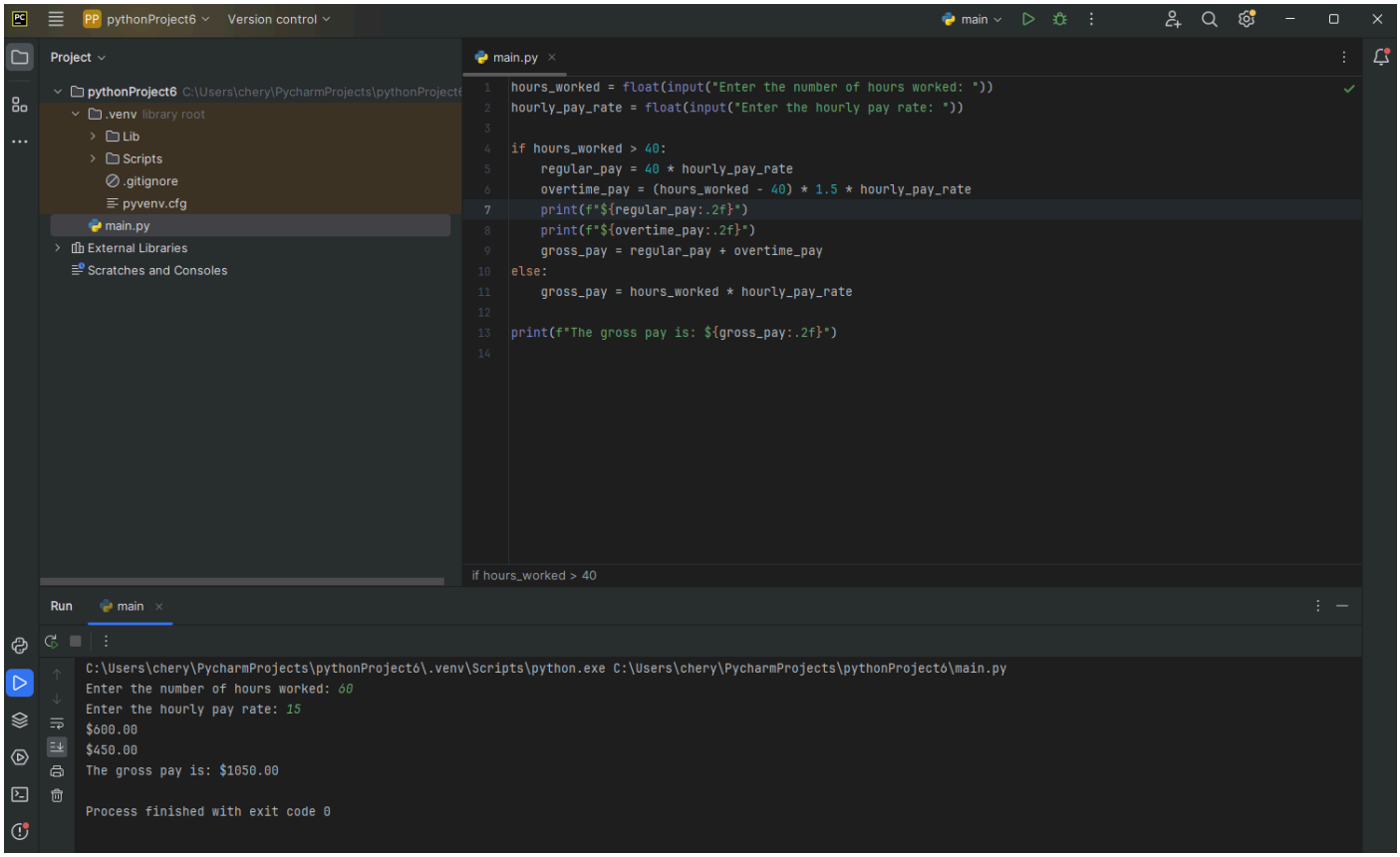
3. Infinite loop - This loop will go on forever. This could be because no limit was set or no statement to cancel the loop is defined.

4. Iteration or pass-pass is used as a placeholder statement. It signifies that no operations should occur. This is used when you don't want to put a statement or limit in a place that has to have an input. Pass will tell the interpreter to do nothing.

Question -5 (15 points)
write a program to calculate the average test score for a student.
Your program should also congratulate the student enthusiastically if the average is greater than 95.
Here is the algorithm in pseudocode:
• Get the first test score
• Get the second test score
• Get the third test score
• Calculate the average
• Display the average
• If the average is greater than 95, congratulate the user
Write a python program for the above pseudocode.
NOTE: You need to submit the screenshot of the executed code with the output.



Question -6 (15 points)
Chris owns an auto repair business and has several employees. If any employee works over 40
hours a week, he pays them 1.5 times their regular hourly pay rates for all hours over 40.



Extra Credit flow chart ---