

#Question 1 A-B

A-What is the significance of using functions in python programming?

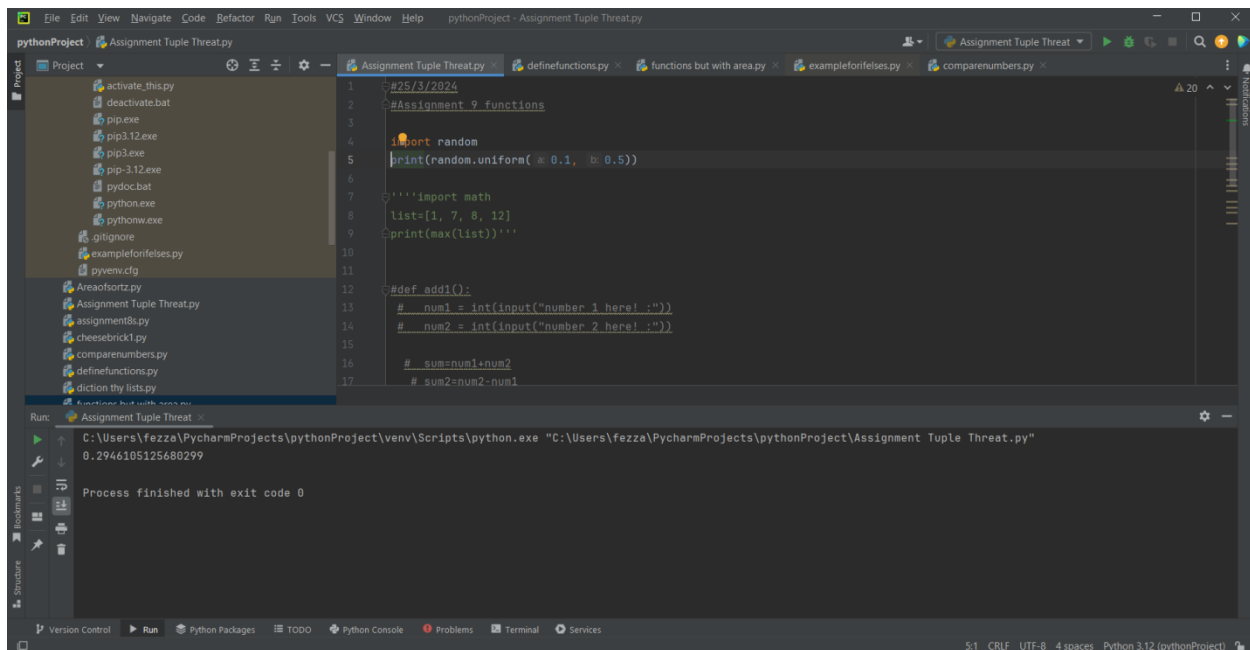
The usage of functions allows the code to be modular and reuseable, allowing for easier use and prevents the repetition of writing unique lines of code for a project.

B-What does this do?

```
Import_random
```

```
print(random.uniform(0.1, 0.5))
```

This command generates a random float number point between 0.1 and 0.5.



The screenshot shows the PyCharm IDE interface. The main editor window displays a Python file named 'Assignment Tuple Threat.py'. The code in the file is as follows:

```
1 #25/3/2024
2 #Assignment 9 functions
3
4 import random
5 print(random.uniform(a=0.1, b=0.5))
6
7 '''import math
8 lists=[1, 7, 8, 12]
9 print(max(list))'''
10
11
12 #def add1():
13 #    num1 = int(input("number 1 here! :"))
14 #    num2 = int(input("number 2 here! :"))
15
16 #    sum=num1+num2
17 #    sum2=num2-num1
```

The left sidebar shows the project structure with various files and folders. The bottom panel shows the 'Run' output, indicating that the program executed successfully and produced the output '0.2946105125680299'. The status bar at the bottom indicates the file encoding is UTF-8, there are 4 spaces, and the Python version is 3.12.

#Question 2 A-B

A-What is difference between list, Tuple and Dictionary in python?

A list is comprised of a changeable string of characters in brackets and is most often used to index items for later use. Lists can be comprised of both letters and numbers.

Dictionaries are considered an ordered set of items, with indexed objects within the dictionary given a Key-value pair, with each key connected to a value present. It should be noted that although dictionaries can be changed, no two items can have the same key.

The indexed items within tuples are unable to be modified later in the future, being immutable as a result. In addition, they use round brackets to index the items within

B-What is tuple in python? Explain with an example. The Tuple, much like a list. It is a container that uses parentheses to index any type of content within them, it should be noted that although they are immutable and the materials within them cannot be changed, they exchange this for much better efficiency and accessibility.

An example of a tuple would look like this:

```
Y= ('Blue', 'Grey', 'Black', 'White')
```

```
Print(Y [3])
```

```
'White'
```

C-What is a module in python? How would you access a module in python?

Explain with an example.

Modules are a special type of file that contains code that can perform various types of computation depending on what is needed. To access a module within a python release, typing in the `–import` command and a specified module will load it in for use.

An example of this is `–Import math`

```
list=[1, 7, 8, 12]
```

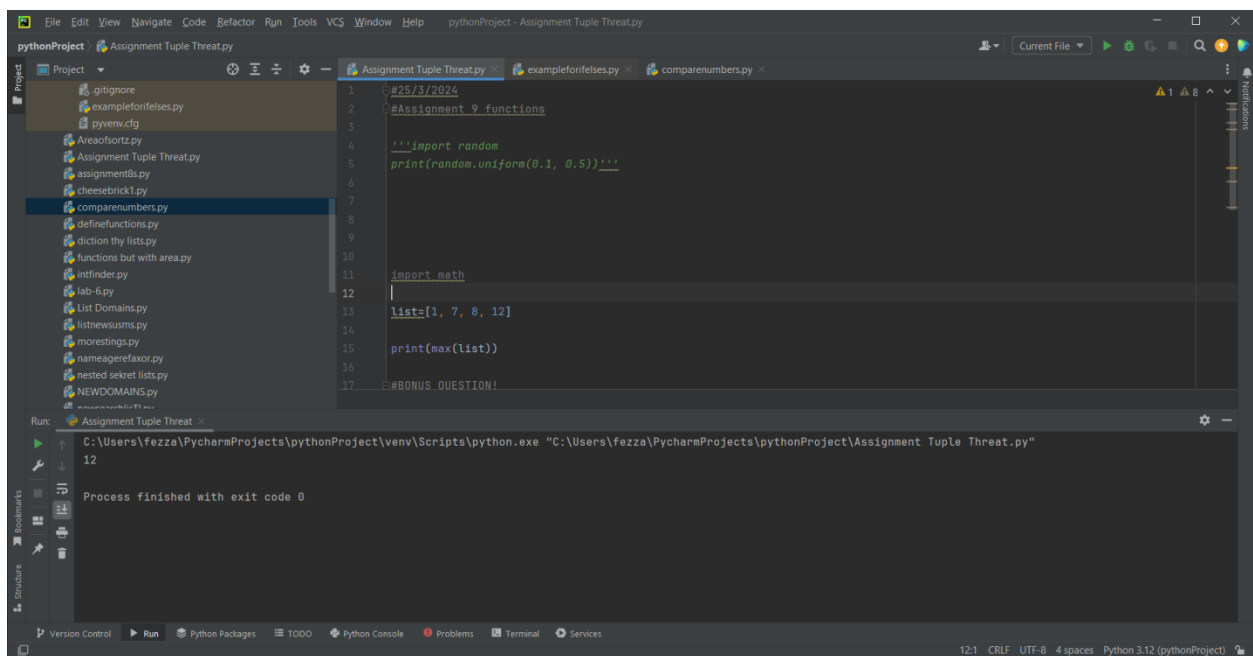
```
print(max(list))'''
```

The imported module above allows the system to numerically sort the list out.

#Question 3 A-B

A-Using/importing “math” library/module, use the built-in function (You need to explore the function online) to find the largest item from a given list.

Please submit the screenshot for your code and its output.



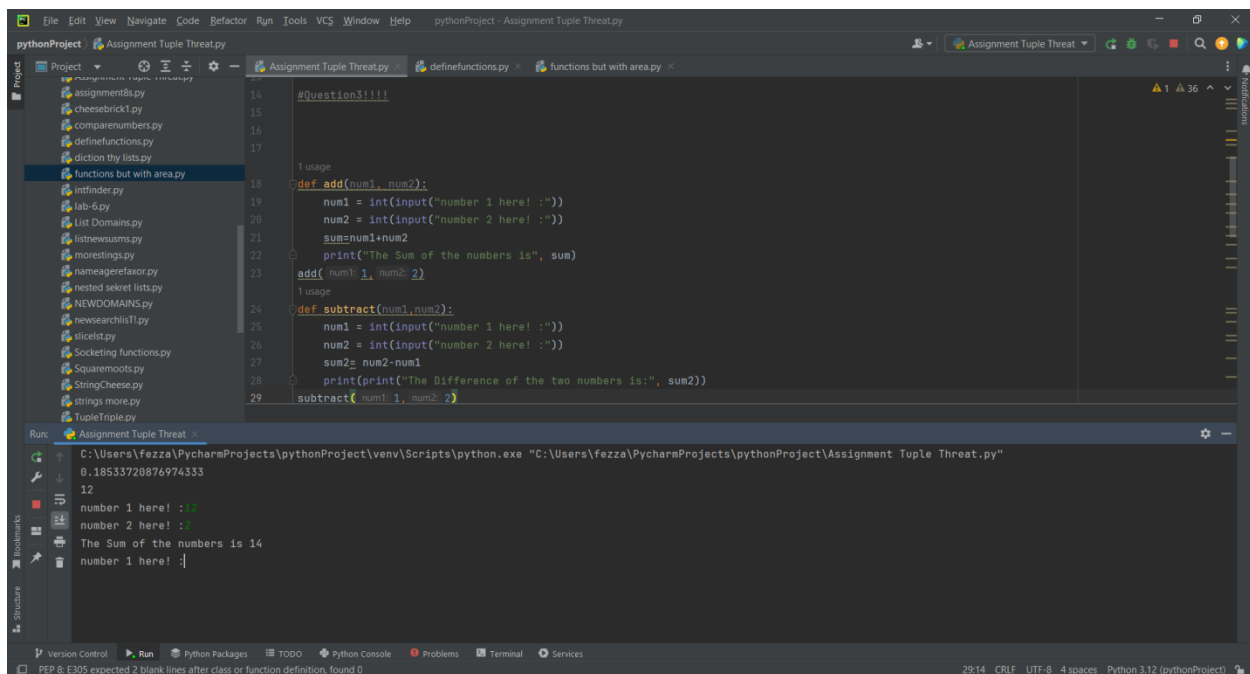
The screenshot shows the PyCharm IDE interface. The left sidebar displays a project tree with various files, including 'comparenumbers.py'. The main editor window shows the code for 'Assignment Tuple Threat.py'. The code includes a date comment, a function comment, an import statement for 'random', and a print statement for a random number. Below this, it imports the 'math' module, defines a list 'list=[1, 7, 8, 12]', and prints the maximum value using 'print(max(list))'. A comment at the bottom indicates a bonus question. The bottom panel shows the 'Run' output, which displays the number '12' and the message 'Process finished with exit code 0'.

```
1 #25/3/2024
2 #Assignment 9 functions
3
4 '''import random
5 print(random.uniform(0.1, 0.5))'''
6
7
8
9
10
11 import math
12
13 list=[1, 7, 8, 12]
14
15 print(max(list))
16
17 #BONUS QUESTION!
```

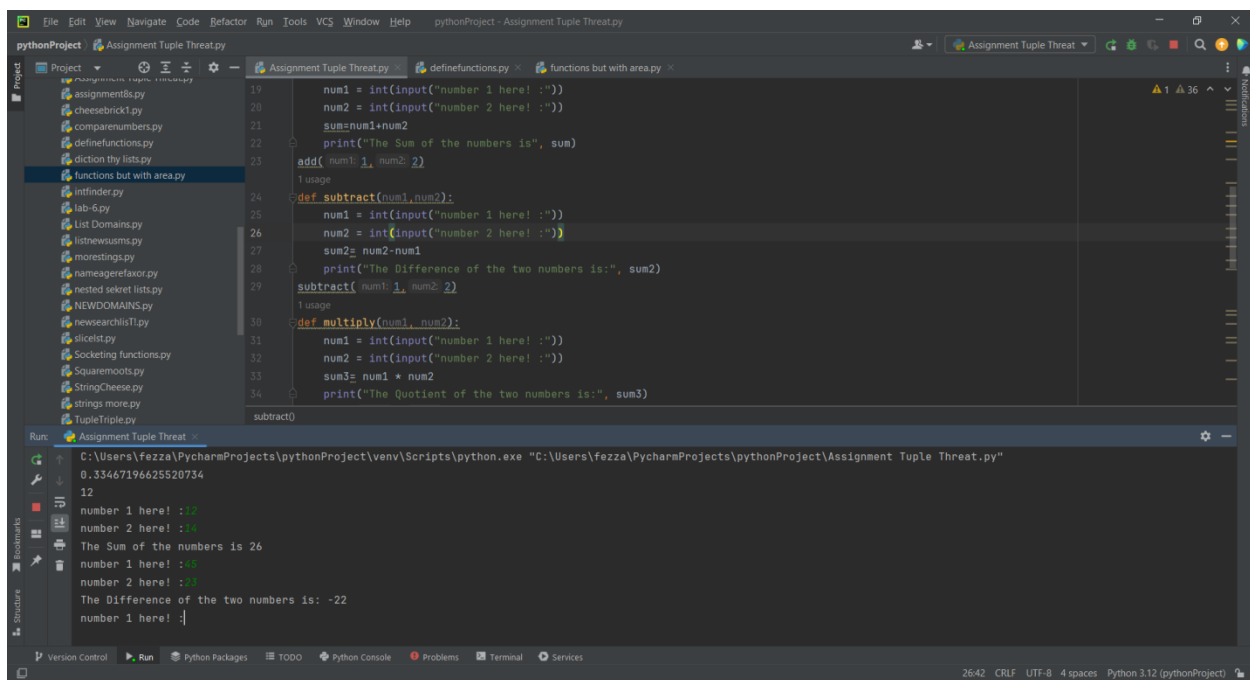
Run: Assignment Tuple Threat
C:\Users\fezza\PycharmProjects\pythonProject\venv\Scripts\python.exe "C:\Users\fezza\PycharmProjects\pythonProject\Assignment Tuple Threat.py"
12
Process finished with exit code 0

B-Write a function in python, that should do the following:

-add(num1, num2): Returns the sum of two numbers num1 and num2.

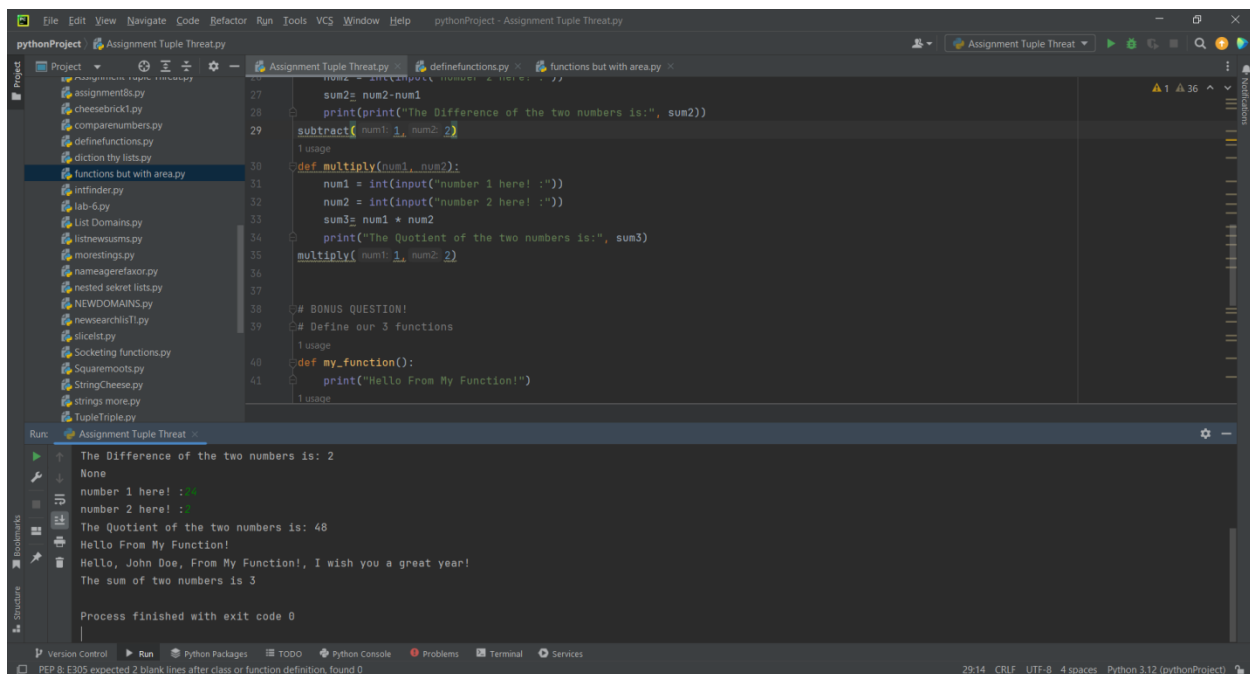


-subtract(num1, num2): Returns the result of subtracting num2 from num1.



-multiply(num1, num2): Returns the product of two numbers num1 and num2.

Please submit the screenshot for your code and its output.



#Bonus Questions:

