Question No 1: Consider the following Python string:

str = 'X-DSPAM-Confidence:**0.8475**'

Use **string slicing** to extract the portion of the string after the colon character and then use the float function to convert the extracted string into a floating-point number. Afterward, add 10 to it and print the final number

Question No 2: Consider the following Python list:

data = [10,20,30,40,50,60,10,20]

Use **type casting (to proper structure)** to create a final list without duplicate items and display the last the two elements.

Question No 3: We want to keep the following information for each student

1. Student Name
2. Student Age
3. Number of enrolled courses

What data structure you would select? And create an instance of your data model for three students.

[hint: think of nesting dict and list]

Question No 4: Write a pay computation program that gives employees 1.5 times their hourly rate for hours worked above 40.

Enter Hours: 45
Enter Rate: 10
Pay: 475.0

Question No 5: Define a list of numbers as below:

data = [10,20,30,40,50,60,5,20]

Write python code to find minimum and maximum number from the defined list.

Output:

The min number is: 5
The max number is: 60

Question No 6: Write a Python program that takes text input from the user, and then prints the same content back to the user on screen. When a user types "#" the system should not display anything and prompt the user to enter text, however, if a user enters "done" then the program should stop.

Text reader:
> hi
hi
> how are you?
how are you?
> #
> ah, nice
ah, nice
> done
Done!

[hint: infinite loop, continue & break statement]

Question No 7: Write a function that that take list as parameter and count different types of values in the given list. Further, the function should all these multiple values and return to the calling function. For example, for the following defined list,

data= [12,3,4.6,1, True, "Jhon", 124, "Diamond", 4.5]

the function will display the following result.

Integer data: 4
Float data: 2
Bool data: 1
String data: 2
Total Element: 9

Question No 8: Write a function that take n (for example, 4 or 5) number of integer values, and it should find the min, max, and sum of the given values. For example, for the following defined list of values:

10,20,30,40,50,60,5,20

The function should generate the following output:

Max: 60
Min: 5
Total Sum: 235

Question No 9: Write a function that appends a given value to the existing list, the system should display the list each time new value is inserted.

Enter a value? or done to exit > qw

['qw']

Enter a value? or done to exit > we

['qw', 'we']

Enter a value? or done to exit > r

['qw', 'we', 'r']

Enter a value? or done to exit > done

final list: ['qw', 'we', 'r']

Question No. 10:

In this exercise, you need to create a notebook file and try to perform the following task at minimum.

1- Install pandas if it is not installed then import it in your notebook.
2- Read CSV file (https://raw.githubusercontent.com/ywchiu/riii/master/data/house-prices.csv)
3- After loading CSV file, set Home as an Index of the data frame.
    a. (You can use this command: hprices = hprices.set_index('Home'))
4- Extract prices of two-bedroom houses
5- Extract a house with a maximum price.
6- Perform slicing using loc or iloc, e.g., extract prices of houses along with Bedrooms,Bathrooms, and Neighborhood details.
7- Check if there are any null values in the data.