Certificate Programme in Python Programming

Fundamentals of Programming

Assignment 2

(25% of the Total Score)

Instructions

- Please submit your assignment to Moodle on or before the submission deadline set in Moodle.
- Please submit your answer document named "Assignment 2 Answer_your Full Name" in .docx format and all the Python files in .py format and zip them into a .zip file named "Assignment 2_ your Full Name".
- For example, if your name is Chan Tai Man, the names of the answer document and zipped file should be "Assignment 2 Answer_Chan Tai Man.docx" and "Assignment 2_Chan Tai Man.zip" respectively.
- Marks may be deducted for late submission or inappropriate file formats.

Question 1 – 7 marks

Create a python file called Ass2_Q1.py and complete the follow task.

Ask the user to input the real numbers until the user input "End" while the input is no case-sensitive. Store the input item in a list called numberList. Show the list and find the maximum value within the list and average value of the list.

Sample Output

```
Enter the number (Input "End" to end the input): 22
Enter the number (Input "End" to end the input): 45
Enter the number (Input "End" to end the input): 35
Enter the number (Input "End" to end the input): 50
Enter the number (Input "End" to end the input): 8
Enter the number (Input "End" to end the input): end
-------Input List-------
[22.0, 45.0, 35.0, 50.0, 8.0]
------------------------
Maximum value in the list: 50.0
Average value in the list: 32.0
```

Question 2 – 9 marks

Create a python file called Ass2_Q2.py and complete the follow task.

Ask the user to input a sentence. Assume the words in uppercase and lowercase count as the same word. The program should be able to count the occurrences of each word in the sentences and display the results.

Hints:

- You may consider to use the dictionary for storing the results.
- You may make use of **split()** method for the String. For more details, you may refer to the Python documentation: https://docs.python.org/3/library/stdtypes.html

Sample Output

```
Input a sentence: WE are learning Python programs. Python
programs are interesting and we are eager to learn more.
---------Result---------
{'WE': 2, 'ARE': 3, 'LEARNING': 1, 'PYTHON': 2, 'PROGRAMS.':
1, 'PROGRAMS': 1, 'INTERESTING': 1, 'AND': 1, 'EAGER': 1,
'TO': 1, 'LEARN': 1, 'MORE.': 1}
```

Question 3 – 9 marks

Create a python file called Ass2_Q3.py and complete the follow task.

Design a guessing game as shown below. Ask users for their input to guess a secret integer between 1 and 25. Display corresponding messages for the cases of guessing the secret number correctly, having a larger guessing number or a smaller guessing number. Use can input the word "Secret" to show the secret number and the game ends.

Sample Output

```
-----------------Rules-----------------
1. Guess the secret number between 1 and 25.
2. Input "Secret" to show the secret number if you want.
-----------------------------------------
Guessing number from you>>> 10
Secret number should be larger
Guessing number from you>>> 20
```

```
Secret number should be larger
Guessing number from you>>> 25
Secret number should be smaller
Guessing number from you>>> 23
Nice! Secret number = 23
```

Sample Output

```
-----------------Rules-----------------
1. Guess the secret number between 1 and 25.
2. Input "Secret" to show the secret number if you want.
-----------------------------------------
Guessing number from you>>> 15
Secret number should be smaller
Guessing number from you>>> 1
Secret number should be larger
Guessing number from you>>> 10
Secret number should be smaller
Guessing number from you>>> secret
Secret number is 4
```

-------- End of Assignment 2 --------