LAB 3d - List

1. Create a Python program that uses user prompts to input ten elements, storing them in a list. Then, utilize a loop to display the elements from the list on the screen.

2. Create a Python program that utilizes a list to achieve the following:

   a. Prompt the user to enter the size of the list (number of elements).
   b. Ask the user to input integer elements into the list.
   c. Display all the elements in the list.
   d. Calculate and display the sum of all elements in the list..

3. Develop a program that interacts with the user as follows:
   a. Ask the user to input the number of students in a class.
   b. Prompt the user to enter the name of each student one by one.
   c. Append each student's name to a list.
   d. Once all names have been entered, sort the list in alphabetical order.
   e. Display the sorted list of names on the screen.

   Ensure to provide clear instructions to the user throughout the program and utilize descriptive variable names in your code for improved readability.

4. Develop a program that performs the following tasks:
   a. Create a numeric list containing the numbers: 65, 75, 85, 95, 105.
   b. Prompt the user to input a numeric number.
   c. Check if the input number exists in the list.
   d. If the number is found, display a message indicating that the number was found.
   e. If the number is not found, display a message indicating that the number was not found.
   f. Ensure to provide clear instructions to the user throughout the program and use descriptive variable names in your code for improved readability.

5. Develop a Python program that performs the following tasks:
   a. Prompt the user to input the number of students.
   b. Utilize a loop to prompt the user to input the score for each student and append it to a list.
   c. Calculate the average of the scores using the formula: total_score/number_of_students.
   d. Convert the calculated average to an integer using the int() function.
   e. Display the average score to the user as an integer value.

   Make sure to provide clear instructions to the user throughout the program and use descriptive variable names in your code for improved readability.

   Example Output:
   Enter the number of students: 5
   Enter the score for student 1: 70
   Enter the score for student 2: 85
   Enter the score for student 3: 90
   Enter the score for student 4: 75

Enter the score for student 5: 80
The average score is: 80

6. Develop a program that interacts with the user as follows:
   a. Prompt the user to input the name and TP number of a student.
   b. Ask the user to input the subject marks for a semester, which should be stored in a list. You may fix the number of subjects.
   c. Compute the total marks and percentage (average) of the student.
   d. Determine the student's grade for the semester based on the following scale:

Range of marks	Grade
80 – 100	A
70 – 79	B
60 – 69	C
50 – 59	D
0 – 49	F

   e. Display the student's name, TP number, total marks, percentage, and grade.

   Make sure to provide clear instructions to the user throughout the program and use descriptive variable names in your code for improved readability.

   Example Input/Output:
   Enter the student's name: John
   Enter the student's TP number: TP12345
   Enter the marks for Subject 1: 85
   Enter the marks for Subject 2: 75
   Enter the marks for Subject 3: 65
   Enter the marks for Subject 4: 90
   Enter the marks for Subject 5: 80

   Student Name: John
   TP Number: TP12345
   Total Marks: 395
   Percentage: 79.0%
   Grade: A