

Python Assignment 1: Data Structures - Strings & Tuples

Strings (Concatenation, Slicing and Other methods) :

1. String Concatenation:

Write a Python program that takes two strings i.e string 1 “Hello ”, string 2 get name as input from the user and concatenates them together. Display the concatenated string as the output.

Sample Output:

```
Enter your Name: Zara
Hello Zara
```

Now concatenate string 3 “, welcome to Python programming” to the existing string and display the output string.

Sample Output:

```
Hello Zara, welcome to Python programming
```

2. String Slicing and Indexing:

Write a Python program using the above concatenated string as input and performs the following tasks:

- a. Print the first character of the string.
- b. Print the last character of the string.
- c. Print the first 5 characters of the string.
- d. Print the last 11 characters of the string.
- e. Print the string in reverse.
- f. Use slicing and print the word “Python” from the existing string.

3. String Methods:

Write a Python program that takes a string, `strM = "Python beginner tutorial"` and perform the following tasks:

- a. Convert the sentence to uppercase.
- b. Convert the sentence to lowercase.
- c. Use Capitalize and return the sentence to the original input form.
- d. Count the total number of occurrences of character 't' in the string.
- e. Replace all occurrences of "Python" with "Machine Learning" in the input string
`strM = "Python beginner tutorial"`

Tuples (Creation, Modification and Access) :

Create 1st tuple with values -> (10, 20, 30), 2nd tuple with values -> (40, 50, 60):

- a. Concatenate the two tuples and store it in "t_combine"
- b. Repeat the elements of "t_combine" 3 times
- c. Access the 3rd element from "t_combine"
- d. Access the first three elements from "t_combine"
- e. Access the last three elements from "t_combine"