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# Tuple Programs in Python

## Q1 (Tuple) - Create a tuple from user input

Code:

data = tuple(input("Enter elements separated by space: ").split())  
print("Tuple is:", data)

Sample Input/Output:

Enter elements separated by space: 12 cars 1947 orange-juice   
Tuple is: ('12', 'cars', '1947', 'orange-juice')

## Q2 (Tuple) - Access element by index

Code:

data = tuple(input("Enter elements separated by space: ").split())  
index = int(input("Enter index to access: "))  
print("Element at index", index, ":", data[index])

Sample Input/Output:

Enter elements separated by space: 12 cars 1947 orange-juice happy  
Enter index to access: 3  
Element at index 3 : orange-juice

## Q3 (Tuple) - Find length of tuple

Code:

data = tuple(input("Enter elements separated by space: ").split())  
print("Length of tuple:", len(data))

Sample Input/Output:

Enter elements separated by space: 1 2 3 4 5 6 7  
Length of tuple: 7

## Q4 (Tuple) - Count occurrences of an element

Code:

data = tuple(input("Enter elements separated by space: ").split())  
element = input("Enter element to count: ")  
print("Count of", element, ":", data.count(element))

Sample Input/Output:

Enter elements separated by space: 6 9 2 5 4 8 5 7 1 7 4 5 3 6 2 9 8 4 5  
Enter element to count: 6  
Count of 6 : 2

## Q5 (Tuple) - Find index of an element

Code:

data = tuple(input("Enter elements separated by space: ").split())  
element = input("Enter element to find index: ")  
print("Index of", element, ":", data.index(element))

Sample Input/Output:

Enter elements separated by space: 6 9 2 5 4 8 5 7 1 7 4 5 3 6 2 9 8 4 5  
Enter element to find index: 1  
Index of 1 : 8

## Q6 (Tuple) - Check if element exists

Code:

data = tuple(input("Enter elements separated by space: ").split())  
element = input("Enter element to check: ")  
print(element, "exists in tuple?", element in data)

Sample Input/Output:

Enter elements separated by space: 6 9 2 5 4 8 5 7 1 7 4 5 3 6 2 9 8 4 5  
Enter element to check: 7  
7 exists in tuple? True

## Q7 (Tuple) - Convert tuple to list

Code:

data = tuple(input("Enter elements separated by space: ").split())  
converted = list(data)  
print("Converted List:", converted)

Sample Input/Output:

Enter elements separated by space: 6 9 2 5 4 8 5 7 1 7 4 5 3 6 2 9 8 4 5  
Converted List: ['6', '9', '2', '5', '4', '8', '5', '7', '1', '7', '4', '5', '3', '6', '2', '9', '8', '4', '5']

## Q8 (Tuple) - Concatenate two tuples

Code:

data1 = tuple(input("Enter first tuple elements: ").split())  
data2 = tuple(input("Enter second tuple elements: ").split())  
print("Concatenated Tuple:", data1 + data2)

Sample Input/Output:

Enter first tuple elements: 6 9 2 5 4 8 5 7 1 7 4 5 3 6 2 9 8 4 5  
Enter second tuple elements: red blue orange brown pink teal   
Concatenated Tuple: ('6', '9', '2', '5', '4', '8', '5', '7', '1', '7', '4', '5', '3', '6', '2', '9', '8', '4', '5', 'red', 'blue', 'orange', 'brown', 'pink', 'teal')

## Q9 (Tuple) - Repeat a tuple

Code:

data = tuple(input("Enter elements separated by space: ").split())  
times = int(input("How many times to repeat? "))  
print("Repeated Tuple:", data \* times)

Sample Input/Output:

Enter elements separated by space: 6 9 2 5 4 8 5 7 1 7 4 5 3 6 2 9 8 4 5  
How many times to repeat? 4  
Repeated Tuple: ('6', '9', '2', '5', '4', '8', '5', '7', '1', '7', '4', '5', '3', '6', '2', '9', '8', '4', '5', '6', '9', '2', '5', '4', '8', '5', '7', '1', '7', '4', '5', '3', '6', '2', '9', '8', '4', '5', '6', '9', '2', '5', '4', '8', '5', '7', '1', '7', '4', '5', '3', '6', '2', '9', '8', '4', '5', '6', '9', '2', '5', '4', '8', '5', '7', '1', '7', '4', '5', '3', '6', '2', '9', '8', '4', '5')

## Q10 (Tuple) - Find maximum and minimum

Code:

data = tuple(map(int, input("Enter numbers separated by space: ").split()))  
print("Max:", max(data))  
print("Min:", min(data))

Sample Input/Output:

Enter numbers separated by space: 6 9 2 5 4 8 5 7 1 7 4 5 3 6 2 9 8 4 5  
Max: 9  
Min: 1