**Assignment -5**

(List and Tuple)

1. Write a Python program to create a tuple

t=(1,2,3)

print(t)

**Output:**

(1, 2, 3)

1. Write a Python program to create a tuple with different data types.

t=(1,'silicon',False)

print(t)

**Output:**

(1, 'silicon', False)

1. Write a Python program to unpack a tuple in several variables.

t=(1,'silicon',False)

(one,two,three)=t

print(one)

print(two)

print(three)

**Output:**

1

silicon

False

1. Write a Python program to add an item in a tuple.

t=(1,'silicon',False)

t2=t+(5,6,7);

print(t2)

**Output:**

(1, 'silicon', False, 5, 6, 7)

1. Write a Python program to convert a tuple to a string.

t=(1,'silicon',False)

l=str(t)

print(l)

print(type(l))

**Output:**

(1, 'silicon', False)

<class 'str'>

1. Write a Python program to get the 4th element and 4th element from last of a tuple.

t=(1,2,3,4,6,7,9,64,65,35,347,8,9,7654,7,64)

print("4th element from the start:",t[3])

print("4th element from the last:",t[-4])

**Output:**

4th element from the start: 4

4th element from the last: 9

1. Write a Python program to find the repeated items of a tuple.

t=(1,2,3,4,53,5,4,3,6,3,1)

l=[]

for i in t:

if t.count(i)> 1 and i not in l:

print(i)

l.append(i)

**Output:**

1

3

4

1. Write a Python program to check whether an element exists within a tuple.

t=(1,2,3,4,5)

n=int(input("Enter a number "))

if(n in t):

print("Exist")

else:

print("Not exist")

**Output:**

Enter a number 4

Exist

1. Write a Python program to slice a tuple.

t=(1,2,3,4,5)

print(t[1:4])

**Output:**

(2, 3, 4)

1. Write a Python program to find the index of an item of a tuple.

t=(1,2,3,4,5)

print(t.index(4))

**Output:**

3

1. Write a Python program to find the length of a tuple.

t=(1,2,3,4,5)

print("The length of the tuple is",len(t))

**Output:**

The length of the tuple is 5

1. Write a Python program to reverse a tuple.

t=(1,2,3,5,6)

t1=t[::-1]

print(t1)

**Output:**

(6, 5, 3, 2, 1)

1. Write a Python program to print a tuple with string formatting.  
   Sample tuple : (100, 200, 300)  
   Output : This is a tuple (100, 200, 300)

t=(100,200,300)

print("This is a tuple",t)

**Output:**

This is a tuple (100, 200, 300)

1. Write a Python program to replace last value of tuples in a list.  
   Sample list: [(10, 20, 40), (40, 50, 60), (70, 80, 90)]  
   Expected Output: [(10, 20, 100), (40, 50, 100), (70, 80, 100)]

t=[(10,20,30),(40,50,60),(70,80,90)]

t[2]=(70,80,100)

print(t)

**Output:**

[(10, 20, 30), (40, 50, 60), (70, 80, 100)]

1. Write a Python program to sort a tuple by its float element.  
   Sample data: [('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')]  
   Expected Output: [('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20')]

t= [('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')]

t.sort(reverse=True)

print(t)

**Output:**

[('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20')]

1. Write a Python program to count the elements in a list until an element is a tuple.

l=[1,2,3,5,('a','n','c'),6,67,9,4,3]

i=0;

t=()

count=0;

n=len(l)

while(i<n):

if type(t)==type(l[i]):

break

i+=1

print(i)

**Output:**

4