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Tuple concept

1. Python program to Find the size of a Tuple

```
t=(10,20,30,40)
x=len(t)
print(x)
```

```
4
```

2. Python – Maximum and Minimum K elements in Tuple

```
t=tuple(map(int,input("Enter tuple: ").split(',')))
print("Maximum element:",max(t))
print("Minimum element:",min(t))
```

```
Enter tuple: 2,34,32,56,22,89
Maximum element: 89
Minimum element: 2
```

3. Create a list of tuples from given list having number and its cube in each tuple

```
l1=[1,2,3,4,5]
for i in l1:
  ti=(l1[i-1],l1[i-1]*l1[i-1]*l1[i-1])
  print("t%d = "%i,ti)
```

```
t1 =  (1, 1)
t2 =  (2, 8)
t3 =  (3, 27)
t4 =  (4, 64)
t5 =  (5, 125)
```

4. Python – Adding Tuple to List and vice – versa

```
l=list(map(int,input("Enter a list: ").split(',')))
t=tuple(map(int,input("Enter a tuple: ").split(',')))
#to add a tuple to a list
l.append(t)
print("Adding tuple to list:",l)
#to add list to a tuple
t+=tuple(l)
print("Adding list to a tuple:",t)
```

```
Enter a list: 10,20,30
Enter a tuple: 40,50,60
Adding tuple to list: [10, 20, 30, (40, 50, 60)]
Adding list to a tuple: (40, 50, 60, 10, 20, 30, (40, 50, 60))
```

5. Python – Sum of tuple elements

```
l=tuple(map(int,input("Enter a list: ").split(',')))
sum=0
for i in l:
  sum+=i
print("Sum:",sum)
```

```
Enter a list: 2,3,4,5,86
Sum: 100
```

6. Python – Modulo of tuple elements

```
t=tuple(map(int,input("Enter a tuple: ").split(',')))
r=int(input("Enter the element you want to divide with: "))
modulo=tuple(i % r for i in t)
print("Module of tuple element:",modulo)
```

```
Enter a tuple: 34,45,632,60,84
Enter the element you want to divide with: 5
Module of tuple element: (4, 0, 2, 0, 4)
```

Double-click (or enter) to edit

7. Python – Row-wise element Addition in Tuple Matrix

```
t=((1,2,3),(4,5,6),(7,8,9))
for row in t:
  sum=0
  for i in row:
    sum+=i
  print(sum)
```

```
6
15
24
```

8. Python – Update each element in tuple list

```
t=[(1,2),(4,3),(2,5)]
for i in range(len(t)):
  a,b=t[i]
  t[i]=(a+1,b+1)
print(t)
```

```
[(2, 3), (5, 4), (3, 6)]
```

9. Python – Multiply Adjacent elements

```
 t=(1,2,3,4,5)
result=[]
for i in range(len(t)-1):
  result.append(t[i]*t[i+1])
print(result)
```

```
[2, 6, 12, 20]
```

10. Python – All pair combinations of 2 tuples

```
t1=(1,2,3)
t2=('a','b','c')
result=[]
for i in t1:
  for j in t2:
    result.append((i,j))
print(result)
```

```
[(1, 'a'), (1, 'b'), (1, 'c'), (2, 'a'), (2, 'b'), (2, 'c'), (3, 'a'), (3, 'b'), (3, 'c')]
```

11. Python – Remove Tuples from the List having every element as None

```
t1=[(),(1,2,3),(),(4,5,6,7)]
for i in t1:
  if len(i)!=0:
    print(str(i))
```

```
(1, 2, 3)
(4, 5, 6, 7)
```

12. Python – Remove Tuples of Length K

```
t1=[(1,2,3),(2,35,43,3,5),(435,3,6,3,46),(8,4,6,3)]
n=int(input("Enter length of string you want to remove: "))
for i in t1:
  if len(i)!=n:
    print(str(i))
```

```
Enter length of string you want to remove: 5
(1, 2, 3)
(8, 4, 6, 3)
```

13. Elements frequency in tuple

```
t=(1,2,3,1,5,2,6)
n=int(input("Enter the element you want to count: "))
t1=t.count(n)
print(t1)
```

```
Enter the element you want to count: 1
2
```

14. Join Tuples if similar initial element

```
t=(1,2,3,4,5,6)
t1=(1,4,2,5,6)
if(t[0]==t1[0]):
  t2=t+t1
print(t2)
```

```
(1, 2, 3, 4, 5, 6, 1, 4, 2, 5, 6)
```

15. WAP to sort a list of tuples by second item

```
t1=[(1,2),(4,6),(3,5)]
t1.sort(key=lambda a: a[1])
print("The sorted tuple: ",t1)
```

```
The sorted tuple:  [(1, 2), (3, 5), (4, 6)]
```

Start coding or generate with AI.