

```
In [1]: t1=(10,20,"ADP",[12,23])
        print(t1) # prints the tuple
```

```
(10, 20, 'ADP', [12, 23])
```

```
In [2]: print(t1[2]) # prints third element of t1
```

```
ADP
```

```
In [3]: print(t1[-3]) # prints second element of t1
```

```
20
```

```
In [4]: t1=(10,20.6,"Hello",[2,3,5])
        t1[0]=23 #Error
```

```
-----
TypeError                                 Traceback (most recent call last)
<ipython-input-4-e6f44c5e0275> in <module>
      1 t1=(10,20.6,"Hello",[2,3,5])
----> 2 t1[0]=23 #Error
```

```
TypeError: 'tuple' object does not support item assignment
```

```
In [5]: t1[3]="heelo" #Error
```

```
-----
TypeError                                 Traceback (most recent call last)
<ipython-input-5-98481bd725de> in <module>
----> 1 t1[3]="heelo" #Error
```

```
TypeError: 'tuple' object does not support item assignment
```

```
In [6]: t1=(10,20.6,"Hello",[2,3,5])
        t1[3][2]=23 # [2,3,5] will become [2,3,23]
```

```
In [7]: print(t1)
```

```
(10, 20.6, 'Hello', [2, 3, 23])
```

```
In [8]: t1[2][1]="E"
```

```
-----  
TypeError                                Traceback (most recent call last  
<ipython-input-8-37dc73fe8d89> in <module>  
----> 1 t1[2][1]="E"
```

```
TypeError: 'str' object does not support item assignment
```

```
In [9]: t1=(10,20,30.5,"ADP")  
t2=t1    # assignment  
print(id(t1))  
print(id(t2))
```

```
2095139374328  
2095139374328
```

```
In [10]: t1=()    #empty tuple  
t2=tuple()    #empty tuple  
print(t1,t2)
```

```
() ()
```

```
In [11]: t2=tuple("Hello")    # passing string to tuple()  
print(t2)    #tuple contains characters of the string
```

```
('H', 'e', 'l', 'l', 'o')
```

```
In [12]: t3=tuple([12,23,45])  
print(t3)    # tuple containing the elements of the list
```

```
(12, 23, 45)
```

```
In [13]: t4=tuple((23,34,45))  
print(t4)    #tuple containing the elements of the tuple
```

```
(23, 34, 45)
```

```
In [14]: t4=tuple(([2,3],[4,5]))  
print(t4)
```

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

```
In [15]: t4=tuple(([2,3],[4,5],"ADP"))  
print(t4)
```

```
([2, 3], [4, 5], 'ADP')
```

```
In [16]: len(t4) # Length of the tuple is 3
```

```
Out[16]: 3
```

```
In [17]: t1=(12,23,34)
t2=([12,3], "ADP")
#Concatenation of tuples using '+' operator
t3=t1+t2
print(t3)
#Replication Operation
t4=t1*2
print(t4)
```

```
(12, 23, 34, [12, 3], 'ADP')
(12, 23, 34, 12, 23, 34)
```

```
In [18]: t=("Mango","Pineapple","Orange")
t1=("Kiwi",)+t[1:] #slicing operator for tuples
print(t)
print(t1)
```

```
('Mango', 'Pineapple', 'Orange')
('Kiwi', 'Pineapple', 'Orange')
```

```
In [19]: t=("Mango","Pineapple","Orange")
t1=("Kiwi",)+t[1:] #slicing operator for tuples
print(t)
print(t1)
```

```
-----
TypeError                                Traceback (most recent call last)
<ipython-input-19-8c39d09c714b> in <module>
      1 t=("Mango","Pineapple","Orange")
----> 2 t1=("Kiwi",)+t[1:] #slicing operator for tuples
      3 print(t)
      4 print(t1)
```

TypeError: can only concatenate str (not "tuple") to str

```
In [20]: t=(1,2,3)
del t[2] # Error
```

```
-----
TypeError                                Traceback (most recent call last)
<ipython-input-20-c50a5bd2c18f> in <module>
      1 t=(1,2,3)
----> 2 del t[2] # Error
```

TypeError: 'tuple' object doesn't support item deletion

```
In [21]: print(t)
         del t
         print(t)
```

```
(1, 2, 3)
```

```
-----
NameError                                Traceback (most recent call last)
<ipython-input-21-9140215c0778> in <module>
      1 print(t)
      2 del t
----> 3 print(t)

NameError: name 't' is not defined
```

```
In [ ]:
```

