

Dictionaries & Tuples in Python



Outlines

- What is Dictionary?
- Tuples
- Difference between list and tuple

What is Dictionary?

Dictionary allows you to store key, value pairs.

```
In [1]: d={"tom":7326568452,'rob':73259865247,'joe':73201985649}
        d
```

```
Out[1]: {'tom': 7326568452, 'rob': 73259865247, 'joe': 73201985649}
```

```
In [2]: # how to access a vlue in dictionary
        d['tom']
```

```
Out[2]: 7326568452
```

```
In [4]: d.keys()
```

```
Out[4]: dict_keys(['tom', 'rob', 'joe'])
```

```
In [6]: d.values()
```

```
Out[6]: dict_values([7326568452, 73259865247, 73201985649])
```

```
In [7]: # how to add a new telephone number into the dictionary
        d['sam']=73295684712
        d
```

```
Out[7]: {'tom': 7326568452, 'rob': 73259865247, 'joe': 73201985649, 'sam': 73295684712}
```

order of element in dictionary is not important

```
In [ ]: # how to delet element in dictionary
```

```
In [8]: del d['sam']  
d
```

```
Out[8]: {'tom': 7326568452, 'rob': 73259865247, 'joe': 73201985649}
```

```
In [10]: # how to print all the keys and values in dictionary  
for key in d:  
    print('key: ',key,'value: ',d[key])
```

```
key: tom value: 7326568452  
key: rob value: 73259865247  
key: joe value: 73201985649
```

```
In [11]: # how to print all the keys and values in dictionary(second method)  
for k,v in d.items():  
    print('key: ',key,'value: ',v)
```

```
key: joe value: 7326568452  
key: joe value: 73259865247  
key: joe value: 73201985649
```

```
In [12]: # how to check a specific name is in the dictionary or not?(use in operator)  
'tom' in d
```

```
Out[12]: True
```

```
In [13]: 'samir' in d
```

```
Out[13]: False
```

```
In [15]: # clear all the elements in dictionary  
d.clear()  
d
```

```
Out[15]: {}
```

Tuples

Tuple is a list of values grouped together.

```
In [16]: # xpoint = 5 , ypoint=9  
point = (5,9)
```

```
In [17]: point[0]
```

```
Out[17]: 5
```

```
In [18]: point[1]
```

```
Out[18]: 9
```

Difference between list and tuple:

List: All values have similar meaning(Homogeneous) Tuple: All values have different meaning(Heterogeneous)

5 in point is X cordinate while 9 in point is Y cordinate.

```
In [20]: expense_list = [2300,2500,2900,6700]
expense_list
```

```
Out[20]: [2300, 2500, 2900, 6700]
```

All the values in the expense_list are expenses

The second difference between lists and tuples is that list are mutable while tuples are immutable

```
In [21]: point[0]=4
```

```
-----
TypeError                                Traceback (most recent call last)
<ipython-input-21-a044cda827a0> in <module>
----> 1 point[0]=4
```

TypeError: 'tuple' object does not support item assignment

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