

Dictionaries, Tuples, Sets

January 3, 2022

1 Dictionary

```
[1]: # unordered mappings for storing objects in key:value pairing method
```

```
[2]: my_dict = {'key1':'value1','key2':'value2'}
```

```
[3]: my_dict['key1']
```

```
[3]: 'value1'
```

```
[4]: prices = {'apples':100,'oranges':60,'grapes':120}  
prices['apples']
```

```
[4]: 100
```

```
[7]: # lists can present inside a dictionary  
dict1 = {'k1':12,'k2':[1,2,3],'k3':{'insidekey':100}}  
  
dict1['k3']
```

```
[7]: {'insidekey': 100}
```

```
[8]: dict1['k2']
```

```
[8]: [1, 2, 3]
```

```
[9]: dict1['k1']
```

```
[9]: 12
```

```
[10]: dict1['k3']['insidekey']
```

```
[10]: 100
```

```
[14]: d = {'k1':['a','b','c']}  
d['k1'][0].upper()
```

```
[14]: 'A'
```

```
[15]: d1 = {'k1':100,'k2':200}
```

```
[16]: d1['k3'] = 300
```

```
[17]: d1
```

```
[17]: {'k1': 100, 'k2': 200, 'k3': 300}
```

```
[18]: d1['k1'] = 'NEW VALUE'
d1
```

```
[18]: {'k1': 'NEW VALUE', 'k2': 200, 'k3': 300}
```

```
[19]: d1.keys()
```

```
[19]: dict_keys(['k1', 'k2', 'k3'])
```

```
[20]: d1.values()
```

```
[20]: dict_values(['NEW VALUE', 200, 300])
```

```
[21]: d1.items()
```

```
[21]: dict_items([('k1', 'NEW VALUE'), ('k2', 200), ('k3', 300)])
```

2 Tuples

```
[23]: # Tuples are similar to list. But lists are immutable.
      # Once an element is inside a tuple, it cannot be reassigned.
```

```
[24]: t = (1,2,3)
t
```

```
[24]: (1, 2, 3)
```

```
[25]: t[0] = 4 # not allowed
```

```
-----
TypeError                                Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_8180\1825765778.py in <module>
----> 1 t[0] = 4

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

```
[28]: t = ('a','a','b','b','c','c')
      t.count('a')
```

[28]: 2

```
[29]: t.index('b') # returns the first occurrence
```

[29]: 2

```
[30]: t.index('c')
```

[30]: 4

```
[ ]: # these are the only 2 methods supported by tuple
```

3 Sets

```
[31]: # Unordered collections of unique elements
```

```
[32]: myset = set()
```

```
[34]: myset.add(1)
myset
```

[34]: {1}

```
[35]: myset.add(2)
myset
```

[35]: {1, 2}

```
[36]: myset.add(3)
myset
```

[36]: {1, 2, 3}

```
[37]: my_list = [1,1,2,2,3,4,5,5,6,6,7,7]
set(my_list)
```

[37]: {1, 2, 3, 4, 5, 6, 7}

```
[39]: list1 = (8,0,0,2,2,1,1,9,9,4,4)
set(list1)
```

[39]: {0, 1, 2, 4, 8, 9}

```
[40]: myset = {2,2,1,1,5,5,3,3}
set(myset)
```

[40]: {1, 2, 3, 5}