

# Working of Dictionaries

```
In [1]: #Creating empty dictionary
d={}
print(type(d))    # d is an instance of class dict

<class 'dict'>
```

```
In [2]: d=dict()    #using constructor dict() with zero args
print(type(d))    # d is an instance of class dict

<class 'dict'>
```

```
In [3]: #Populate the dictionary
d["Tom"]=2345
d["Jerry"]=5678
print(d)    # Prints the dictionary with 2 key/value pairs

{'Tom': 2345, 'Jerry': 5678}
```

```
In [4]: len(d)    #Returns the length i.e., number of key/value pairs
```

```
Out[4]: 2
```

```
In [5]: print(d["Jerry"]))    # prints the value associated with "Jerry"

File "<ipython-input-5-b8cbdddcf754>", line 1
    print(d["Jerry"]))    # prints the value associated with "Jerry"
            ^
SyntaxError: invalid syntax
```

```
In [6]: print(d["Jerry"])    # prints the value associated with "Jerry"

5678
```

```
In [7]: print(d["Donald"])    # Error

-----
KeyError                                Traceback (most recent call last)
<ipython-input-7-954eb3203613> in <module>
----> 1 print(d["Donald"])    # Error

KeyError: 'Donald'
```

```
In [8]: d.get("Tom")
```

```
Out[8]: 2345
```

```
In [9]: d.get("donald") # return None
```

```
In [10]: print(d.get("donald")) # return None
```

```
None
```

```
In [11]: print(d)
```

```
{'Tom': 2345, 'Jerry': 5678}
```

```
In [12]: d["Tom"]=3456 #Dictionary are mutable
```

```
In [13]: print(d)
```

```
{'Tom': 3456, 'Jerry': 5678}
```

```
In [14]: d["Donald"]=3456 #creates a new key/value pair
```

```
In [15]: print(d)
```

```
{'Tom': 3456, 'Jerry': 5678, 'Donald': 3456}
```

```
In [16]: res=d.pop("Tom") #pop() method and res contains 3456
```

```
In [17]: print(d)
print(res)
```

```
{'Jerry': 5678, 'Donald': 3456}
3456
```

```
In [18]: res=d.pop("Mickey")
```

```
-----
KeyError                                Traceback (most recent call la
<ipython-input-18-8b2a03f23ba0> in <module>
----> 1 res=d.pop("Mickey")

KeyError: 'Mickey'
```

```
In [19]: del d["Jerry"]
```

In [20]: `print(d)`

```
{'Donald': 3456}
```

In [21]: `d["Tom"]=3456`  
`d["Jerry"]=56768`

In [22]: `print(d)`  
`res=d.popitem() #popitem removes random element in the dictionary`  
`print(d)`

```
{'Donald': 3456, 'Tom': 3456, 'Jerry': 56768}  
{'Donald': 3456, 'Tom': 3456}
```

In [23]: `d.clear() # empty the dictionary`

In [24]: `print(d)`

```
{}
```

In [25]: `d={'Donald': 3456, 'Tom': 3456, 'Jerry': 56768}`  
`del d`  
`print(d) #NameError`

```
-----  
NameError                                Traceback (most recent call la  
<ipython-input-25-b2ca46cae230> in <module>  
      1 d={'Donald': 3456, 'Tom': 3456, 'Jerry': 56768}  
      2 del d  
----> 3 print(d) #NameError  
  
NameError: name 'd' is not defined
```

In [ ]: