

# DICTIONARY

```
In [1]: d={}
        d
```

```
Out[1]: {}
```

```
In [2]: type(d)
```

```
Out[2]: dict
```

```
In [3]: d1={1:'one',2:'two',3:'three'}
        d1
```

```
Out[3]: {1: 'one', 2: 'two', 3: 'three'}
```

```
In [4]: d2={'one':1,'two':2,'three':3}
```

```
In [5]: d2
```

```
Out[5]: {'one': 1, 'two': 2, 'three': 3}
```

## keys()

```
In [6]: d2.keys()
```

```
Out[6]: dict_keys(['one', 'two', 'three'])
```

## values()

```
In [7]: d2.values()
```

```
Out[7]: dict_values([1, 2, 3])
```

## items()

```
In [8]: d2.items()
```

```
Out[8]: dict_items([('one', 1), ('two', 2), ('three', 3)])
```

## len

```
In [9]: len(d2)
```

```
Out[9]: 3
```

```
In [10]: d3={1:'one',2:'two', 'A':{'Name':'Nirvan', 'age':4}, 'B':{'Name':'Ranaveer', 'age':
```

```
In [11]: d3
```

```
Out[11]: {1: 'one',
          2: 'two',
          'A': {'Name': 'Nirvan', 'age': 4},
          'B': {'Name': 'Ranaveer', 'age': 6}}
```

## fromkeys()

```
In [12]: keys={'a','b','c','d'}
```

```
In [13]: type(keys)
```

```
Out[13]: set
```

```
In [14]: d4=dict.fromkeys(keys)
```

```
In [15]: d4
```

```
Out[15]: {'d': None, 'b': None, 'c': None, 'a': None}
```

```
In [16]: keys={'a','b','c','d'}
         value=10
         d5=dict.fromkeys(keys,value)
         d5
```

```
Out[16]: {'d': 10, 'b': 10, 'c': 10, 'a': 10}
```

```
In [17]: keys={'a','b','c','d'}
         value=[10,20,30]
         d6=dict.fromkeys(keys,value)
         d6
```

```
Out[17]: {'d': [10, 20, 30], 'b': [10, 20, 30], 'c': [10, 20, 30], 'a': [10, 20, 30]}
```

## Accessing Items

```
In [19]: d1
```

```
Out[19]: {1: 'one', 2: 'two', 3: 'three'}
```

```
In [21]: d1[2]
```

```
Out[21]: 'two'
```

## get()

```
In [22]: d1.get(1)
```

Out[22]: 'one'

In [24]: `d7={'name':'okula','ID':12345,'DOB':12345678,'job':'Analyst'}`

In [26]: `d7['ID']`

Out[26]: 12345

In [27]: `d7.get('job')`

Out[27]: 'Analyst'

## Add, remove and change items

In [28]: `d7`

Out[28]: {'name': 'okula', 'ID': 12345, 'DOB': 12345678, 'job': 'Analyst'}

### updating item

In [29]: `d7['DOB']=1990`

In [30]: `d7`

Out[30]: {'name': 'okula', 'ID': 12345, 'DOB': 1990, 'job': 'Analyst'}

In [34]: `type(d7)`

Out[34]: dict

### updating item using update()

In [38]: `dict1={'ID':1291}`  
`d7.update(dict1)`  
`d7`

Out[38]: {'name': 'okula', 'ID': 1291, 'DOB': 1990, 'job': 'Analyst'}

### adding items in the dictionary

In [39]: `d7['address']='hyderabad'`

In [40]: `d7`

Out[40]: {'name': 'okula',  
          'ID': 1291,  
          'DOB': 1990,  
          'job': 'Analyst',  
          'address': 'hyderabad'}

## removing items using pop()

```
In [41]: d7.pop('job')
```

```
Out[41]: 'Analyst'
```

```
In [42]: d7
```

```
Out[42]: {'name': 'okula', 'ID': 1291, 'DOB': 1990, 'address': 'hyderabad'}
```

```
In [43]: d7.pop(3)
```

```
-----  
KeyError                                Traceback (most recent call last)  
Cell In[43], line 1  
----> 1 d7.pop(3)  
KeyError: 3
```

## popitem() --- a random item will be deleted

```
In [44]: d7.popitem()
```

```
Out[44]: ('address', 'hyderabad')
```

```
In [45]: d7
```

```
Out[45]: {'name': 'okula', 'ID': 1291, 'DOB': 1990}
```

## remove item using del method

```
In [46]: del[d7['ID']]
```

```
In [47]: d7
```

```
Out[47]: {'name': 'okula', 'DOB': 1990}
```

```
In [48]: d7.clear()
```

```
In [49]: d7
```

```
Out[49]: {}
```

## delete the dictionary object

```
In [50]: del d7
```

```
In [51]: d7
```

```
-----  
NameError                                Traceback (most recent call last)  
Cell In[51], line 1  
----> 1 d7  
  
NameError: name 'd7' is not defined
```

## copy dictionary

```
In [53]: mydict={'name':'okula','id':1234,'job':'analyst'}
```

```
In [54]: mydict1=mydict
```

```
In [55]: id(mydict1)==id(mydict)
```

```
Out[55]: True
```

## copy()

```
In [56]: mydict2=mydict.copy()
```

```
In [57]: id(mydict2)==id(mydict)
```

```
Out[57]: False
```

```
In [59]: mydict['address']='hyderabad'
```

```
In [60]: mydict
```

```
Out[60]: {'name': 'okula', 'id': 1234, 'job': 'analyst', 'address': 'hyderabad'}
```

```
In [61]: mydict1
```

```
Out[61]: {'name': 'okula', 'id': 1234, 'job': 'analyst', 'address': 'hyderabad'}
```

```
In [62]: mydict2
```

```
Out[62]: {'name': 'okula', 'id': 1234, 'job': 'analyst'}
```

## Loop through dictionary

```
In [64]: for i in mydict:  
         print(i,':', mydict[i])
```

```
name : okula  
id : 1234  
job : analyst  
address : hyderabad
```

## dictionary membership

```
In [65]: mydict
```

```
Out[65]: {'name': 'okula', 'id': 1234, 'job': 'analyst', 'address': 'hyderabad'}
```

```
In [66]: 'name' in mydict
```

```
Out[66]: True
```

```
In [67]: 'okula' in mydict
```

```
Out[67]: False
```

```
In [68]: 'AsIf' in mydict
```

```
Out[68]: False
```

## All/Any

```
In [69]: all(mydict)
```

```
Out[69]: True
```

```
In [70]: any(mydict)
```

```
Out[70]: True
```

```
In [ ]:
```

```
In [ ]:
```

```
In [ ]:
```

```
In [ ]:
```