Dictionary

In [1]:
```
mydict = dict()
mydict
```

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

In [2]:
```
mydict = {}
mydict
```

Out[2]:
```
{}
```

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

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

In [4]:
```
mydict = {'A':'one' , 'B':'two' , 'C':'three'} # dictionary with character keys
mydict
```

Out[4]:
```
{'A': 'one', 'B': 'two', 'C': 'three'}
```

In [5]:
```
mydict.keys()
```

Out[5]:
```
dict_keys(['A', 'B', 'C'])
```

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

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

In [7]:
```
mydict.keys()
```

Out[7]:
```
dict_keys(['A', 'B', 'C'])
```

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

Out[8]:
```
dict_items([('A', 'one'), ('B', 'two'), ('C', 'three')])
```

In [9]:
```
mydict = {1:'one' , 2:'two' , 'A':['Janhavi' , 'Ketkii' , 'Krutika']} # dictionary with
mydict
```

Out[9]:
```
{1: 'one', 2: 'two', 'A': ['Janhavi', 'Ketkii', 'Krutika']}
```

In [13]:
```
ct = {1:'one' , 2:'two' , 'A':{'Name':'Janhavi' , 'Age' :22}, 'B':('Intelligent' , 'Smart','Beautiful')}
ct
```

Out[13]:
```
{1: 'one',
 2: 'two',
 'A': {'Name': 'Janhavi', 'Age': 22},
 'B': ('Intelligent', 'Smart', 'Beautiful')}
```

In [18]:
```
keys = {'a','b','c','d'}
mydict3 = dict.fromkeys(keys)
mydict3
```

Out[18]:
```
{'c': None, 'b': None, 'd': None, 'a': None}
```

In [20]:
```
keys = {'a','b','c','d'}
value = 10
mydict3 = dict.fromkeys(keys, value)
mydict3
```

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

In [21]:
```
keys = {'a' , 'b' , 'c' , 'd'}
value = [10,20,30]
mydict3 = dict.fromkeys(keys , value)
mydict3
```

Out[21]:
```
{'c': [10, 20, 30], 'b': [10, 20, 30], 'd': [10, 20, 30], 'a': [10, 20, 30]}
```

In [22]:
```
value.append(40)
mydict3
```

Out[22]:
```
{'c': [10, 20, 30, 40],
 'b': [10, 20, 30, 40],
 'd': [10, 20, 30, 40],
 'a': [10, 20, 30, 40]}
```

Accessing Items

In [23]:
```
mydict = {1:'one' , 2:'two' , 3:'three' , 4:'four'}
mydict
```

Out[23]:
```
{1: 'one', 2: 'two', 3: 'three', 4: 'four'}
```

In [24]:
```
mydict[1]
```

Out[24]:
```
'one'
```

In [25]:
```
mydict.get(1)
```

Out[25]:
```
'one'
```

In [26]:
```
mydict1 = {'Name':'Janhavi' , 'ID': 71234 , 'DOB': 2002 , 'job' :' Data Analyst'}
mydict1
```

Out[26]:
```
{'Name': 'Janhavi', 'ID': 71234, 'DOB': 2002, 'job': ' Data Analyst'}
```

In [27]:
```
mydict1['Name']
```

Out[27]:
```
'Janhavi'
```

In [28]:
```
mydict1.get('job')
```

Out[28]:
```
' Data Analyst'
```

Add, Remove & Change Items

In [32]:
```
mydict1 = {'Name':'Janhavi' , 'ID': 12345 , 'DOB': 2002 , 'Address' : 'Mumbai'}
mydict1
```

Out[32]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Mumbai'}
```

In [33]:
```
mydict1['DOB'] = 2000 # Changing Dictionary Items
mydict1['Address'] = 'Pune'
mydict1
```

Out[33]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2000, 'Address': 'Pune'}
```

In [35]:
```
dict1 = {'DOB':2004}
mydict1.update(dict1)
mydict1
```

Out[35]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2004, 'Address': 'Pune'}
```

In [36]:
```
mydict1['Job'] = ' Data Analyst' # Adding items in the dictionary
mydict1
```

Out[36]:
```
{'Name': 'Janhavi',
 'ID': 12345,
 'DOB': 2004,
 'Address': 'Pune',
 'Job': ' Data Analyst'}
```

In [37]:
```
mydict1.pop('Job') # Removing items in the dictionary using Pop method
mydict1
```

Out[37]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2004, 'Address': 'Pune'}
```

In [38]:
```
mydict1.popitem() # A random item is removed
```

Out[38]:
```
('Address', 'Pune')
```

In [39]:
```
mydict1
```

Out[39]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2004}
```

In [40]:
```
del[mydict1['ID']]
mydict1
```

Out[40]:
```
{'Name': 'Janhavi', 'DOB': 2004}
```

In [41]:
```
mydict1.clear()
mydict1
```

Out[41]:
```
{}
```

Copy Dictionary

In [52]:
```
mydict = {'Name':'Janhavi' , 'ID': 12345 , 'DOB': 2002 , 'Address' : 'Mumbai'}
mydict
```

Out[52]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Mumbai'}
```

In [53]:
```
mydict1 = mydict
```

In [54]:
```
id(mydict) , id(mydict1)
```

Out[54]:
```
(1899004409408, 1899004409408)
```

In [55]:
```
mydict2 = mydict.copy()
```

In [56]:
```
id(mydict2)
```

Out[56]:
```
1899021765696
```

In [57]:
```
mydict['Address'] = 'Pune'
```

In [58]:
```
mydict
```

Out[58]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Pune'}
```

In [59]:
```
mydict1
```

Out[59]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Pune'}
```

In [60]:
```
mydict2
```

Out[60]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Mumbai'}
```

Loop through a Dictionary

In [63]:
```
mydict1 = {'Name':'Janhavi' , 'ID': 12345 , 'DOB': 2002 , 'Address' : 'Mumbai'}
mydict1
```

Out[63]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Mumbai'}
```

In [66]:
```
for i in mydict1:
    print(i , ':' , mydict1[i])
```

```
Name : Janhavi
ID : 12345
DOB : 2002
Address : Mumbai
```

In [68]:
```
for i in mydict1:
    print(mydict1[i])
```

```
Janhavi
12345
2002
Mumbai
```

Dictionary Membership

In [69]:
```
mydict1 = {'Name':'Janhavi' , 'ID': 12345 , 'DOB': 2002 , 'Address' : 'Mumbai'}
mydict1
```

Out[69]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Mumbai'}
```

In [70]:
```
'Name' in mydict1
```

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

In [71]:
```
'Janhavi' in mydict1
```

Out[71]:
```
False
```

In [73]:
```
'ID' in mydict1
```

Out[73]:
```
True
```

In [74]:
```
'Address' in mydict1
```

Out[74]:
```
True
```

All/Any

In [75]:
```
mydict1 = {'Name':'Janhavi' , 'ID': 12345 , 'DOB': 2002 , 'Address' : 'Mumbai'}
mydict1
```

Out[75]:
```
{'Name': 'Janhavi', 'ID': 12345, 'DOB': 2002, 'Address': 'Mumbai'}
```

In [76]:
```
all(mydict1)
```

Out[76]:
```
True
```

In [77]:
```
any(mydict1)
```

Out[77]:
```
True
```