CREATE A DICTIONARY

In [4]:
```
mydict = {}
```

In [7]:
```
mydict
```

Out[7]:
```
{}
```

In [9]:
```
mydict = dict()
mydict
```

Out[9]:
```
{}
```

In [11]:
```
mydict = {'A':'one','B':'two','C':'three'}
mydict
```

Out[11]:
```
{'A': 'one', 'B': 'two', 'C': 'three'}
```

In [13]:
```
mydict = dict({'A':'one','B':'two','C':'three'})
mydict
```

Out[13]:
```
{'A': 'one', 'B': 'two', 'C': 'three'}
```

In [15]:
```
mydict = dict({'A':'1','B':'two','3':'THREE'})
mydict
```

Out[15]:
```
{'A': '1', 'B': 'two', '3': 'THREE'}
```

In [17]:
```
mydict.keys()
```

Out[17]:
```
dict_keys(['A', 'B', '3'])
```

In [19]:
```
mydict.values()
```

Out[19]:
```
dict_values(['1', 'two', 'THREE'])
```

In [21]:
```
mydict.items()
```

Out[21]:
```
dict_items([('A', '1'), ('B', 'two'), ('3', 'THREE')])
```

In [23]:
```
mydict = {1:'one' , 2:'two' , 'A':['asif' , 'john' , 'Maria']} # dictionary with
mydict
```

Out[23]:
```
{1: 'one', 2: 'two', 'A': ['asif', 'john', 'Maria']}
```

In [25]:
```
mydict = {'1':'one', 'Two':'2','A':['Asif','John','Maria'],'B':('cat','bat','hat
mydict
```

Out[25]:
```
{'1': 'one',
 'Two': '2',
 'A': ['Asif', 'John', 'Maria'],
 'B': ('cat', 'bat', 'hat')}
```

In [31]:
```
keys = {'a','b','c','d'}
mydict3 = dict.fromkeys(keys)
mydict3
```

Out[31]:
```
{'d': None, 'a': None, 'c': None, 'b': None}
```

In [33]:
```
keys = {'a','b','c','d'}
value = 10
mydict3 = dict.fromkeys(keys,value)
mydict3
```

Out[33]:
```
{'d': 10, 'a': 10, 'c': 10, 'b': 10}
```

In [35]:
```
keys = {'a','b','c','d'}
value = [10,20,30]
mydict3 = dict.fromkeys(keys,value)
mydict3
```

Out[35]:
```
{'d': [10, 20, 30], 'a': [10, 20, 30], 'c': [10, 20, 30], 'b': [10, 20, 30]}
```

In [37]:
```
value.append(40)
mydict3
```

Out[37]:
```
{'d': [10, 20, 30, 40],
 'a': [10, 20, 30, 40],
 'c': [10, 20, 30, 40],
 'b': [10, 20, 30, 40]}
```

acessing items

In [40]:
```
mydict = {1:'one' , 2:'two' , 3:'three' , 4:'four'}
mydict
```

Out[40]:
```
{1: 'one', 2: 'two', 3: 'three', 4: 'four'}
```

In [42]:
```
mydict[1]
```

Out[42]:
```
'one'
```

In [44]:
```
mydict.get(1)
```

Out[44]:
```
'one'
```

In [46]:
```
mydict1 = {'Name':'Asif' , 'ID': 74123 , 'DOB': 1991 , 'job' :'Analyst'}
mydict1
```

Out[46]:
```
{'Name': 'Asif', 'ID': 74123, 'DOB': 1991, 'job': 'Analyst'}
```

In [48]:
```
mydict1['Name']
```

Out[48]:
```
'Asif'
```

In [52]:
```
mydict1.get('job')
```

Out[52]:
```
'Analyst'
```

Add,remove,change items

In [83]:
```
mydict1 = {'Name':'Ramesh' , 'ID': 12345 , 'DOB': 1998 , 'Address' : 'Hilsinki'}
mydict1
```

Out[83]:
```
{'Name': 'Ramesh', 'ID': 12345, 'DOB': 1998, 'Address': 'Hilsinki'}
```

In [85]:
```
mydict1['DOB'] = 1992 # Changing Dictionary Items
mydict1['Address'] = 'Delhi'
mydict1
```

Out[85]:
```
{'Name': 'Ramesh', 'ID': 12345, 'DOB': 1992, 'Address': 'Delhi'}
```

In [87]:
```
dict1 = {'DOB':1995}
mydict1.update(dict1)
mydict1
```

Out[87]:
```
{'Name': 'Ramesh', 'ID': 12345, 'DOB': 1995, 'Address': 'Delhi'}
```

In [89]:
```
mydict1['Job'] = 'Analyst' # Adding items in the dictionary
mydict1
```

Out[89]:
```
{'Name': 'Ramesh',
 'ID': 12345,
 'DOB': 1995,
 'Address': 'Delhi',
 'Job': 'Analyst'}
```

In [93]:
```
mydict1.pop('Job') # Removing items in the dictionary using Pop method
mydict1
```

Out[93]:
```
{'Name': 'Ramesh', 'ID': 12345, 'DOB': 1995, 'Address': 'Delhi'}
```

In [97]:
```
mydict1.popitem()
```

Out[97]:
```
('Address', 'Delhi')
```

In [99]:
```
mydict1
```

Out[99]:
```
{'Name': 'Ramesh', 'ID': 12345, 'DOB': 1995}
```

In [101…
```
del[mydict1['ID']] # Removing item using del method
mydict1
```

Out[101…
```
{'Name': 'Ramesh', 'DOB': 1995}
```

In [103…
```
mydict1.clear() # Delete all items of the dictionary using clear method
mydict1
```

Out[103…
```
{}
```

In [105…
```
del mydict1 # Delete the dictionary object
mydict1
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[105], line 2
      1 del mydict1 # Delete the dictionary object
----> 2 mydict1

NameError: name 'mydict1' is not defined
```

Copy dictionary

In [108…
```
mydict = {'Name':'Asif' , 'ID': 12345 , 'DOB': 1991 , 'Address' : 'Hilsinki'}
mydict
```

Out[108…
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Hilsinki'}
```

In [110…
```
mydict1 = mydict # Create a new reference "mydict1"
```

In [112…
```
id(mydict) , id(mydict1) # The address of both mydict & mydict1 will be the same
```

Out[112…
```
(2623622661184, 2623622661184)
```

In [114…
```
mydict2 = mydict.copy() # Create a copy of the dictionary
```

In [116…
```
mydict['Address'] = 'Mumbai'
```

In [118…
```
mydict
```

Out[118…
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Mumbai'}
```

In [120…
```

mydict1 # mydict1 will be also impacted as it is pointing to the same dictionary
```

Out[120…
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Mumbai'}
```

In [122…
```
mydict2 # Copy of list won't be impacted due to the changes made in the original
```

Out[122…
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Hilsinki'}
```

Loop through dictionary

In [125…
```
mydict = {'Name':'Asif' , 'ID': 12345 , 'DOB': 1991 , 'Address' : 'Hilsinki'}
mydict
```

Out[125…
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Hilsinki'}
```

In [129…
```

for i in mydict1:
    print(i , ':' , mydict1[i]) # Key & value pair
```

```
Name : Asif
ID : 12345
DOB : 1991
Address : Mumbai
```

In [131…
```
for i in mydict1:
    print(mydict1[i]) # Dictionary items
```

```
Asif
12345
1991
Mumbai
```

Dictionary Membership

In [134…
```
mydict = {'Name':'Asif' , 'ID': 12345 , 'DOB': 1991 , 'Address' : 'Hilsinki'}
mydict
```

Out[134…
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Hilsinki'}
```

In [136…
```
'Name' in mydict1 # Test if a key is in a dictionary or not.
```

Out[136…
```
True
```

In [138…
```
'Asif' in mydict1 # Membership test can be only done for keys
```

Out[138…
```
False
```

In [142…
```
'ID' in mydict1
```

Out[142…
```
True
```

In [144…
```
'Address' in mydict1
```

Out[144…
```
True
```

All / Any

The all() method returns:

True - If all all keys of the dictionary are true

False - If any key of the dictionary is false

The any() function returns True if any key of the dictionary is True. If not, any() returns False.

In [148…
```
mydict1 = {'Name':'Asif' , 'ID': 12345 , 'DOB': 1991 , 'Job': 'Analyst'}
mydict1
```

Out[148…
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Job': 'Analyst'}
```

In [150…
```
all(mydict1) # Will Return false as one value is false (Value 0)
```

Out[150…
```
True
```

In [ ]: