Dictionary

In [1]:
```
mydict=dict()  # empty dictionary
mydict
```

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

In [3]:
```
type(mydict)
```

Out[3]:
```
dict
```

In [12]:
```
mydict={1:'one',2:'two',3:'there'}
mydict
```

Out[12]:
```
{1: 'one', 2: 'two', 3: 'there'}
```

In [13]:
```
mydict=dict({1:'one',2:'two',3:'there'})
mydict
```

Out[13]:
```
{1: 'one', 2: 'two', 3: 'there'}
```

In [20]:
```
mydict1={'A':'shop','B':'buyer','C':'money'}
mydict1
```

Out[20]:
```
{'A': 'shop', 'B': 'buyer', 'C': 'money'}
```

In [21]:
```
mydict
```

Out[21]:
```
{1: 'one', 2: 'two', 3: 'there'}
```

In [22]:
```
print(mydict)
print(mydict1)
```

```
{1: 'one', 2: 'two', 3: 'there'}
{'A': 'shop', 'B': 'buyer', 'C': 'money'}
```

In [23]:
```
mydict.keys()     # here there is only printing the keys
```

Out[23]:
```
dict_keys([1, 2, 3])
```

In [24]:
```
mydict.values()  #here the values() is used to print values
```

Out[24]:
```
dict_values(['one', 'two', 'there'])
```

In [25]:
```
mydict1.keys()
```

Out[25]:
```
dict_keys(['A', 'B', 'C'])
```

In [28]:
```
mydict1.values()
```

Out[28]:
```
dict_values(['shop', 'buyer', 'money'])
```

In [34]:
```
mydict={1:'one',2:'two','A':['asif','join','marai'],'B':('bit','cat','hat')}
```

```
mydict    #here we add the index inside index
```

Out[34]:
```
{1: 'one',
 2: 'two',
 'A': ['asif', 'join', 'marai'],
 'B': ('bit', 'cat', 'hat')}
```

In [38]:
```
keys={'a','b','c','d'}
mydict3=dict.fromkeys(keys)    # creating a dictionary from a sequence of keys
mydict3
```

Out[38]:
```
{'c': None, 'b': None, 'a': None, 'd': None}
```

In [40]:
```
keys={'a','b','c','d'}
value=10
mydict4=dict.fromkeys(keys,value)  # sequence with keys and value
mydict4
```

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

In [41]:
```
keys={'a','b','c','d'}
value=[10,20,30]
mydict5=dict.fromkeys(keys,value)  # sequence with keys and value
mydict5
```

Out[41]:
```
{'c': [10, 20, 30], 'b': [10, 20, 30], 'a': [10, 20, 30], 'd': [10, 20, 30]}
```

In [45]:
```
value.append(60)
mydict5
```

Out[45]:
```
{'c': [10, 20, 30, 40, 40, 40, 60],
 'b': [10, 20, 30, 40, 40, 40, 60],
 'a': [10, 20, 30, 40, 40, 40, 60],
 'd': [10, 20, 30, 40, 40, 40, 60]}
```

Accessing Items

In [46]:
```
mydict={1:'okati',2:'rendu',3:'muduu',4:'nalagu'}
mydict
```

Out[46]:
```
{1: 'okati', 2: 'rendu', 3: 'muduu', 4: 'nalagu'}
```

In [47]:
```
mydict[1]    # access item using key
```

Out[47]:
```
'okati'
```

In [48]:
```
mydict.get(1)   #access item using get method
```

Out[48]:
```
'okati'
```

In [50]:
```
mydict1={'name':'vinay','id':57345,'DOB': 2000,'job':'datascience'}
mydict1
```

Out[50]:
```
{'name': 'vinay', 'id': 57345, 'DOB': 2000, 'job': 'datascience'}
```

In [51]:
```
mydict1['name']
```

Out[51]: 'vinay'

In [55]:
```
mydict1.get('job')
```

Out[55]: 'datascience'

Add, Remove & change items

In [56]:
```
mydict1
```

Out[56]: {'name': 'vinay', 'id': 57345, 'DOB': 2000, 'job': 'datascience'}

In [65]:
```
mydict1['dob']=1992 # changing Dictionary items
mydict1['job']='datascience'
mydict1
```

Out[65]: {'Dob': 1995, 'dob': 1992, 'job': 'datascience'}

In [66]:
```
dict1={'Dob':1995}
mydict1.update(dict1)
mydict1
```

Out[66]: {'Dob': 1995, 'dob': 1992, 'job': 'datascience'}

In [67]:
```
mydict1
```

Out[67]: {'Dob': 1995, 'dob': 1992, 'job': 'datascience'}

In [68]:
```
mydict1.pop('job')   # removing the items by using the pop() method
mydict1
```

Out[68]: {'Dob': 1995, 'dob': 1992}

In [69]:
```
mydict1
```

Out[69]: {'Dob': 1995, 'dob': 1992}

In [70]:
```
mydict.popitem() # A random item is removed
```

Out[70]: (4, 'nalagu')

In [73]:
```
del [mydict5['id']]
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[73], line 1
----> 1 del [mydict5['id']]

KeyError: 'id'
```

In [74]:
```
mydict.clear()  # Delete Dictionary object
mydict
```

Out[74]: {}

In [76]:
```
mydict()
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[76], line 1
----> 1 mydict()

TypeError: 'dict' object is not callable
```

In [81]:
```
mydict={'name':'vinay','id':12345,'dob':1991,'Adress':'hilsinki'}
mydict
```

Out[81]:
```
{'name': 'vinay', 'id': 12345, 'dob': 1991, 'Adress': 'hilsinki'}
```

In [82]:
```
dict1=mydict  # create a new reference "mydict1
dict1
```

Out[82]:
```
{'name': 'vinay', 'id': 12345, 'dob': 1991, 'Adress': 'hilsinki'}
```

In [83]:
```
id(mydict1),id(dict1)
```

Out[83]:
```
(1643191918784, 1643196685056)
```

In [85]:
```
dict2=dict1.copy()
dict2
```

Out[85]:
```
{'name': 'vinay', 'id': 12345, 'dob': 1991, 'Adress': 'hilsinki'}
```

In [86]:
```
id(dict2)
```

Out[86]:
```
1643196867072
```

In [87]:
```
dict2['adress']='mumbai'
dict2
```

Out[87]:
```
{'name': 'vinay',
 'id': 12345,
 'dob': 1991,
 'Adress': 'hilsinki',
 'adress': 'mumbai'}
```

In [88]:
```
mydict1={'name':'asif','id':12345,'dob':1991,'adress':'hilsinki'}
mydict1
```

Out[88]:
```
{'name': 'asif', 'id': 12345, 'dob': 1991, 'adress': 'hilsinki'}
```

In [90]:
```
for i in dict1:       # here it takes the value dict in only values
    print(dict1[i])
```

```
vinay
12345
1991
hilsinki
```

In [92]:
```
for i in dict1:      # it will store in the key and value pair
    print(i , ':',dict1[i])
```

```
name : vinay
id : 12345
dob : 1991
Adress : hilsinki
```

In [93]:
```
dict1
```

Out[93]:
```
{'name': 'vinay', 'id': 12345, 'dob': 1991, 'Adress': 'hilsinki'}
```

In [94]:
```
'name' in dict1
```

Out[94]:
```
True
```

In [99]:
```
'identy' in dict1   # member ship is the test can be only done for keys
```

Out[99]:
```
False
```

In [97]:
```
'Adress' in dict1
```

Out[97]:
```
True
```

In [98]:
```
'id'in dict1
```

Out[98]:
```
True
```

In [ ]:
```

```