DICTIONARY

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

Out[1]: {}

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

Out[2]: dict

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

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

In [8]:
```
d = {'A':'one', 'B':'two', 'C':'Three'} #dictionary with character key
d
```

Out[8]: {'A': 'one', 'B': 'two', 'C': 'Three'}

In [12]:
```
d1 = {'A': 'one', 2: 'two', 3: 'Three'} #dictionary with mixed keys
d
```

Out[12]: {'A': 'one', 2: 'two', 3: 'Three'}

In [13]:
```
d1.keys(). #Return dictionary keys using keys() method
```

Out[13]: dict_keys(['A', 2, 3])

In [15]:
```
d1.values() #Return dictionary values using keys() method
```

Out[15]: dict_values(['one', 'two', 'Three'])

In [16]:
```
d1.items()
```

Out[16]: dict_items([('A', 'one'), (2, 'two'), (3, 'Three')])

In [17]:
```
d2 = {1:'one', 2:'two', 'A': ['python', 'stack', 'dataScience'] } #dictio
d2
```

Out[17]: {1: 'one', 2: 'two', 'A': ['python', 'stack', 'dataScience']}

In [20]:
```
d2 = {1:'one', 2:'two', 'A': ['python', 'stack', 'dataScience'] }
d2
```

Out[20]: {1: 'one', 2: 'two', 'A': ['python', 'stack', 'dataScience']}

In [21]:
```
d2
```

Out[21]: {1: 'one', 2: 'two', 'A': ['python', 'stack', 'dataScience']}

In [22]:
```
d2.keys()
```

Out[22]:
```
dict_keys([1, 2, 'A'])
```

In [23]:
```
d2.items()
```

Out[23]:
```
dict_items([(1, 'one'), (2, 'two'), ('A', ['python', 'stack', 'dataScien
ce'])])
```

In [24]:
```
d2.values()
```

Out[24]:
```
dict_values(['one', 'two', ['python', 'stack', 'dataScience']])
```

In [30]:
```
keys = {'a', 'b', 'c', 'd'}
d3 = dict.fromkeys(keys) #keys ki help sai dictionary bnaya hai
d3
```

Out[30]:
```
{'a': None, 'd': None, 'c': None, 'b': None}
```

In [33]:
```
keys = {'a', 'b', 'c', 'd'}  #keys and value put krke dictionary bnaya ha
value = 10
d4 = dict.fromkeys(keys, value)
d4
```

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

In [35]:
```
keys = {'a', 'b', 'c', 'd'}
value = [10, 20, 30, 40]
d5 = dict.fromkeys(keys, value)
d5
```

Out[35]:
```
{'a': [10, 20, 30, 40],
 'd': [10, 20, 30, 40],
 'c': [10, 20, 30, 40],
 'b': [10, 20, 30, 40]}
```

In [37]:
```
value.append(60)
d5
```

Out[37]:
```
{'a': [10, 20, 30, 40, 40, 60],
 'd': [10, 20, 30, 40, 40, 60],
 'c': [10, 20, 30, 40, 40, 60],
 'b': [10, 20, 30, 40, 40, 60]}
```

Accessing items

In [40]:
```
d = {1: 'one', 2: 'two', 3: 'Three'}
d
```

Out[40]:
```
{1: 'one', 2: 'two', 3: 'Three'}
```

In [41]:
```
d[1] #Access item using key(only value will print )
```

Out[41]:
```
'one'
```

In [42]:
```
d[0]
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[42], line 1
----> 1 d[0]

KeyError: 0
```

In [45]:
```
d[3]
```

Out[45]: 'Three'

In [44]:
```
d[4]
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[44], line 1
----> 1 d[4]

KeyError: 4
```

In [46]:
```
d.get(1)
```

Out[46]: 'one'

In [48]:
```
d1 = {'name': 'xyz','ID': 7412,'DOB': 1991, 'job': 'Analyst'}
d1
```

Out[48]: {'name': 'xyz', 'ID': 7412, 'DOB': 1991, 'job': 'Analyst'}

In [49]:
```
d1['name']  #Access item using keys
```

Out[49]: 'xyz'

In [50]:
```
d1.get('job') #Access item using get() method
```

Out[50]: 'Analyst'

Add, Remove and changes items

In [51]:
```
d1
```

Out[51]: {'name': 'xyz', 'ID': 7412, 'DOB': 1991, 'job': 'Analyst'}

In [54]:
```
d1['DOB'] = 2006  #changing dictionary items
d1['job'] = 'DataScienctist'
d1
```

Out[54]: {'name': 'xyz', 'ID': 7412, 'DOB': 2006, 'job': 'DataScienctist'}

In [55]:
```
d1['job'] = 'Analyst'  #Adding items
d1
```

Out[55]:
```
{'name': 'xyz', 'ID': 7412, 'DOB': 2006, 'job': 'Analyst'}
```

In [56]:
```
d1.pop('job') #A random item is removed
d1
```

Out[56]:
```
{'name': 'xyz', 'ID': 7412, 'DOB': 2006}
```

In [61]:
```
del d1['ID']. #Removing items using delete method
d1
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[61], line 1
----> 1 del d1['ID']
      2 #Removing items using delete method
      3 d1

KeyError: 'ID'
```

In [63]:
```
d1.clear()
d1
```

Out[63]:
```
{}
```

Copy dictionary

In [66]:
```
md = {'Name':'Asif' , 'ID': 12345 , 'DOB': 1991 , 'Address' : 'Hilsinki'}
mydict
```

Out[66]:
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Hilsinki'}
```

In [68]:
```
md1 = md #Create a new reference  "md1"
md1
```

Out[68]:
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Hilsinki'}
```

In [69]:
```
id(md), id(md1) #Adress of both the id is same
```

Out[69]:
```
(4741275776, 4741275776)
```

In [70]:
```
md1 = md.copy() #Create a copy of a dictionary
```

In [71]:
```
id(md1)
```

Out[71]:
```
4741460352
```

In [75]:
```
md['Address'] = 'Mumbai'
md
```

Out[75]:
```
{'Name': 'Asif',
 'ID': 12345,
 'DOB': 1991,
 'Address': 'Mumbai',
 'Adress': 'Mumbai'}
```

In [76]:
```
md['Address'] = 'Mumbai'
md
```

Out[76]:
```
{'Name': 'Asif',
 'ID': 12345,
 'DOB': 1991,
 'Address': 'Mumbai',
 'Adress': 'Mumbai'}
```

In [77]:
```
md1
```

Out[77]:
```
{'Name': 'Asif', 'ID': 12345, 'DOB': 1991, 'Address': 'Hilsinki'}
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: