```
Dictionary
In [3]:
              d = dict() # empty dictionary
           2
              print(d)
           {}
In [4]:
              d1 = {} # empty dictionary
              print(d1)
           {}
In [7]:
              d = {1:'one' , 2:'two' , 3:'three'}
           2
           3
           {1: 'one', 2: 'two', 3: 'three'}
In [12]:
              e = {1:'one', (1+2j):9, 'hi':'welcome', 'A':['asif', 'john', 'Maria']}
           2
              е
           {1: 'one', (1+2j): 9, 'hi': 'welcome', 'A': ['asif', 'john', 'Maria']}
In [13]:
              e.keys()
           dict_keys([1, (1+2j), 'hi', 'A'])
In [14]:
              e.values()
           1
           dict_values(['one', 9, 'welcome', ['asif', 'john', 'Maria']])
In [15]:
              e.items()
           dict_items([(1, 'one'), ((1+2j), 9), ('hi', 'welcome'), ('A', ['asif', 'john', 'Maria'])])
```

```
In [1]:
              keys = {'a', 'b', 'c', 'd'}
              value = [10, 20, 30]
              mydict3 = dict.fromkeys(keys , value) # Create a dictionary from a sequence
              mydict3
          {'b': [10, 20, 30], 'c': [10, 20, 30], 'd': [10, 20, 30], 'a': [10, 20, 30]}
           operations
In [14]:
           1 m = {'Name':'Sruthi', 'ID': 12345, 'DOB': 1999, 'Address': 'Delhi'}
           2
              m
           {'Name': 'Sruthi', 'ID': 12345, 'DOB': 1999, 'Address': 'Delhi'}
In [15]:
              m1 = m
In [4]:
              m['DOB'] = 2000
              m['ID'] = 65789
           3
              m
           {'Name': 'Sruthi', 'ID': 65789, 'DOB': 2000, 'Address': 'Delhi'}
In [7]:
              a = {'Address' : 'Mumbai'}
           2
              m.update(a)
           3
              m
           {'Name': 'Sruthi', 'ID': 65789, 'DOB': 2000, 'Address': 'Mumbai'}
In [8]:
              m['job'] = 'Analyst'
           2
              m
           {'Name': 'Sruthi',
           'ID': 65789,
           'DOB': 2000,
           'Address': 'Mumbai',
           'job': 'Analyst'}
```

```
In [9]:
              m.pop('ID')
            2
               m
           {'Name': 'Sruthi', 'DOB': 2000, 'Address': 'Mumbai', 'job': 'Analyst'}
In [10]:
              m.popitem() #random item
           ('job', 'Analyst')
In [11]:
               del[m['DOB']] # Removing item using del method
            2
            3
           {'Name': 'Sruthi', 'Address': 'Mumbai'}
In [13]:
              m.clear()
            2
               m
           {}
In [17]:
               for i in m1:
                   print(i,':', m1[i])
            2
           Name : Sruthi
           ID : 12345
           DOB : 1999
           Address : Delhi
In [18]:
               'Name' in m1
           True
In [19]:
               'Sruthi' in m1 #only keys are tested
           False
```