```
In [1]: D={}
 Out[1]: {}
 In [3]: type(D)
 Out[3]: dict
 In [5]: D={1:'one',2:'two',3:'three'}
 Out[5]: {1: 'one', 2: 'two', 3: 'three'}
In [9]: D.keys()
Out[9]: dict_keys([1, 2, 3])
In [11]: D.values()
Out[11]: dict_values(['one', 'two', 'three'])
In [13]: D.items()
Out[13]: dict_items([(1, 'one'), (2, 'two'), (3, 'three')])
In [25]: d1={1:'one',2:'two',3:'three',4:['vaishu','shiny'],5:'five'}
Out[25]: {1: 'one', 2: 'two', 3: 'three', 4: ['vaishu', 'shiny'], 5: 'five'}
In [27]: d1.keys()
Out[27]: dict_keys([1, 2, 3, 4, 5])
In [29]: d1.values()
Out[29]: dict_values(['one', 'two', 'three', ['vaishu', 'shiny'], 'five'])
In [31]: keys='a','b','c','d'
         d2=dict.fromkeys(keys)
Out[31]: {'a': None, 'b': None, 'c': None, 'd': None}
In [35]: keys='a','b','c','d'
         d2=dict.fromkeys(keys,value)
         d2
Out[35]: {'a': 20, 'b': 20, 'c': 20, 'd': 20}
```

```
In [37]: keys='p','q','r'
         value=[10,20,30]
         d3=dict.fromkeys(keys,value)
Out[37]: {'p': [10, 20, 30], 'q': [10, 20, 30], 'r': [10, 20, 30]}
In [39]: value.append(40)
         d3
Out[39]: {'p': [10, 20, 30, 40], 'q': [10, 20, 30, 40], 'r': [10, 20, 30, 40]}
In [53]: d={10:'one',20:'two',30:'three'}
Out[53]: {10: 'one', 20: 'two', 30: 'three'}
In [59]: dict={'name':'vaishnavi','dob':03/03/2002,'Id':33,'job':'data analyst'} #03/03/2002
         dict
          Cell In[59], line 1
            dict={'name':'vaishnavi','dob':03/03/2002,'Id':33,'job':'data analyst'}
        SyntaxError: leading zeros in decimal integer literals are not permitted; use an 0o
         prefix for octal integers
In [79]: dict={'Name':'Vaishu', 'DOB': 2002 , 'job':'Analyst','Id':33}
         dict
Out[79]: {'Name': 'Vaishu', 'DOB': 2002, 'job': 'Analyst', 'Id': 33}
In [67]: mydict1 = {'Name':'Asif' , 'ID': 74123 , 'DOB': 1991 , 'job' :'Analyst'}
         mydict1
Out[67]: {'Name': 'Asif', 'ID': 74123, 'DOB': 1991, 'job': 'Analyst'}
In [73]: dict['Name']
Out[73]: 'Vaishu'
In [75]: d
Out[75]: {10: 'one', 20: 'two', 30: 'three'}
In [77]: d[10]
Out[77]: 'one'
In [83]: dict['job']='data analyst' #change the items
         dict
Out[83]: {'Name': 'Vaishu', 'DOB': 2002, 'job': 'data analyst', 'Id': 33}
```

```
In [85]: dict['Address']='Hyderabad' #adding elements
Out[85]: {'Name': 'Vaishu',
           'DOB': 2002,
           'job': 'data analyst',
           'Id': 33,
           'Address': 'Hyderabad'}
In [87]: d
Out[87]: {10: 'one', 20: 'two', 30: 'three'}
In [95]: d.pop(10)for i
Out[95]: 'one'
In [97]: d
Out[97]: {20: 'two', 30: 'three'}
In [99]: dict
Out[99]: {'Name': 'Vaishu',
           'DOB': 2002,
           'job': 'data analyst',
           'Id': 33,
           'Address': 'Hyderabad'}
In [103... dict.popitem() #popitem will randamly take items , no arg taken
Out[103... ('Address', 'Hyderabad')
In [105... dict
Out[105... {'Name': 'Vaishu', 'DOB': 2002, 'job': 'data analyst', 'Id': 33}
In [107... dict.keys()
Out[107... dict_keys(['Name', 'DOB', 'job', 'Id'])
In [111... dict.get('DOB')
Out[111... 2002
In [115... dict.copy() #no arguments taken
Out[115... {'Name': 'Vaishu', 'DOB': 2002, 'job': 'data analyst', 'Id': 33}
In [117... d=dict.copy()
Out[117... {'Name': 'Vaishu', 'DOB': 2002, 'job': 'data analyst', 'Id': 33}
```

```
In [121... for i in dict:
              print(i,':', dict[i])
        Name : Vaishu
        DOB: 2002
        job : data analyst
        Id : 33
In [127... for i in dict:
              print(dict[i])
        Vaishu
        2002
        data analyst
        33
In [129... dict
Out[129... {'Name': 'Vaishu', 'DOB': 2002, 'job': 'data analyst', 'Id': 33}
In [131... 'Name' in dict #membership
Out[131... True
In [133... 35 in dict
Out[133... False
In [135... all(dict)
Out[135... True
In [137... any(dict)
Out[137... True
In [141... dict['address']='Hyderabad'
          dict
Out[141... {'Name': 'Vaishu',
           'DOB': 2002,
           'job': 'data analyst',
           'Id': 33,
           'address': 'Hyderabad'}
In [143... dict['experience']=0
          dict
Out[143... {'Name': 'Vaishu',
           'DOB': 2002,
           'job': 'data analyst',
            'Id': 33,
           'address': 'Hyderabad',
            'experience': 0}
```

```
In [145... all(dict)
Out[145... True
In [147... any(dict)
Out[147... True
In []:
```