

## Dictionaries

```
In [1]: f=[1,2,3]  
        f[0]
```

```
Out[1]: 1
```

```
In [7]: dict1={'key':"keerthi"}
```

```
In [8]: dict1['key']
```

```
Out[8]: 'keerthi'
```

```
In [9]: d={1:12,2:34}
```

```
In [10]: d[1]
```

```
Out[10]: 12
```

```
In [12]: d.keys()
```

```
Out[12]: dict_keys([1, 2])
```

```
In [13]: dir(dict)
```

```
Out[13]: ['__class__',
          '__contains__',
          '__delattr__',
          '__delitem__',
          '__dir__',
          '__doc__',
          '__eq__',
          '__format__',
          '__ge__',
          '__getattribute__',
          '__getitem__',
          '__gt__',
          '__hash__',
          '__init__',
          '__init_subclass__',
          '__iter__',
          '__le__',
          '__len__',
          '__lt__',
          '__ne__',
          '__new__',
          '__reduce__',
          '__reduce_ex__',
          '__repr__',
          '__setattr__',
          '__setitem__',
          '__sizeof__',
          '__str__',
          '__subclasshook__',
          'clear',
          'copy',
          'fromkeys',
          'get',
          'items',
          'keys',
          'pop',
          'popitem',
          'setdefault',
          'update',
          'values']
```

## Dictionary methods

-get()

```
In [27]: d={'k1':1, 'k2':2, 'k3':3}
         d.get('k2')
```

```
Out[27]: 2
```

- d.keys() -print the keys in dictionary
- d.values() - print the values in dictionary
- d.items() - print the items both keys and values in dictionary

```
In [20]: d.values()
```

```
Out[20]: dict_values([1, 2, 3])
```

```
In [21]: d.keys()
```

```
Out[21]: dict_keys(['k1', 'k2', 'k3'])
```

```
In [22]: d.items()
```

```
Out[22]: dict_items([('k1', 1), ('k2', 2), ('k3', 3)])
```

- update()
- set default()
- copy()

```
In [28]: student={'name':'keerthi','pin':140079,'branch':'ece','age':20}
```

```
In [29]: student['age']=19
```

```
In [30]: student
```

```
Out[30]: {'name': 'keerthi', 'pin': 140079, 'branch': 'ece', 'age': 19}
```

```
In [35]: student.update({'age':20,'gender':'female','cell':123})
```

```
In [36]: student
```

```
Out[36]: {'name': 'keerthi',  
          'pin': 140079,  
          'branch': 'ece',  
          'age': 20,  
          'gender': 'female',  
          'cell': 123}
```

```
In [53]: student.setdefault('name','keerthi')
```

```
Out[53]: 'bharth'
```

```
In [54]: student
```

```
Out[54]: {'name': 'bharth',  
          'pin': 140079,  
          'branch': 'ece',  
          'age': 20,  
          'gender': 'female',  
          'cell': 123}
```

```
In [47]: s=student.copy()
```

```
In [48]: s
```

```
Out[48]: {'name': 'bharth',  
          'pin': 140079,  
          'branch': 'ece',  
          'age': 20,  
          'gender': 'female',  
          'cell': 123}
```

- popitem()
- pop()
- clear()

```
In [56]: s.popitem()
```

```
Out[56]: ('cell', 123)
```

```
In [57]: s
```

```
Out[57]: {'name': 'bharth',  
          'pin': 140079,  
          'branch': 'ece',  
          'age': 20,  
          'gender': 'female'}
```

```
In [58]: s.pop('name')
```

```
Out[58]: 'bharth'
```

```
In [59]: s
```

```
Out[59]: {'pin': 140079, 'branch': 'ece', 'age': 20, 'gender': 'female'}
```

```
In [60]: s.clear()
```

```
In [61]: s
```

```
Out[61]: {}
```

```
In [80]: a={'name1':'g','name2':'h','name3':'i'}  
b={'pin1':12,'pin2':13,'pin3':14}  
c={3:34,4:45}  
d={'w':34,'t':54}  
e={}  
for i in a,b,c,d:  
    e.update(i)  
print(e)
```

```
{'name1': 'g', 'name2': 'h', 'name3': 'i', 'pin1': 12, 'pin2': 13, 'pin3': 14,  
3: 34, 4: 45, 'w': 34, 't': 54}
```

```
In [81]: # Python program to build a contacts application
```

```
In [2]: contacts={}
def addcontacts(name,phone):
    if name not in contacts:
        contacts[name]=phone
        print(name,'contact is added')
    else:
        print('already existed')
    return
addcontacts('keer',1234)
b=input()
if b in contacts:
    print('existed')
else:
    print('not existed')
```

keer contact is added  
bharath  
not existed

```
In [11]: students={1:['anu','cse'],2:['madhu','ece']}
for i in students:
    print(i,':',students[i])
```

1 : ['anu', 'cse']  
2 : ['madhu', 'ece']

```
In [16]: students={1:['anu','cse'],2:['madhu','ece']}
for i,j in students.items():
    print(i,':',j)
```

1 : ['anu', 'cse']  
2 : ['madhu', 'ece']

```
In [20]: d={}
for i in range(1,11):
    d[i]=i+3
print(d)
```

{1: 4, 2: 5, 3: 6, 4: 7, 5: 8, 6: 9, 7: 10, 8: 11, 9: 12, 10: 13}

```
In [31]: d1={'n1':100,'n2':200,'n3':300}
s=0
c=0
for i in d1.values():
    s=s+i
    c=c+1
print(s/c)
```

200.0

```
In [29]: l = [10,20]
sum(l)
```

Out[29]: 30

```
In [39]: d1={'n1':100,'n2':200,'n3':400}
          s=0
          c=0
          print(sum(d1.values())/len(d1))
```

233.33333333333334

In [ ]: