Sets

Union

In [5]:

```
a={1,2,3}
b={4,5,6}
c={7,8,9,10}
d=a.union(b,c)
d
```

Out[5]:

```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

In [3]:

```
a={1,2,3}
b={4,5,6}
c={7,8,9,10}
a|b|c
```

Out[3]:

```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

In [9]:

```
a={1,2,3}
b={4,5,6}
c={7,8,9,10}
a.update(b,c)
print(a)
print(b)
print(c)
```

```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
{4, 5, 6}
{8, 9, 10, 7}
```

Intersection

In [10]:

```
a={1,2,3,4,5}
b={4,5,3,6,7}
a&b
```

Out[10]:

```
{3, 4, 5}
```

In [14]:

```
a={1,2,3,4,5}
b={4,5,3,6,7}
a.intersection(b)
```

Out[14]:

```
{3, 4, 5}
```

In [15]:

```
a={1,2,3,4,5}
b={4,5,3,6,7}
print(a)
print(b)
```

```
{1, 2, 3, 4, 5}
{3, 4, 5, 6, 7}
```

Intersection_update

In [19]:

```
a={1,2,3,4,5}
b={4,5,3,6,7}
a.intersection_update(b)
print(a)
print(b)
```

```
{3, 4, 5}
{3, 4, 5, 6, 7}
```

Difference

In [25]:

```
a={1,2,3,4,5}
b={4,5,3,6,7}
print(a-b)
print(b-a)
```

```
{1, 2}
{6, 7}
```

In [22]:

```
a={1,2,3,4,5}
b={4,5,3,6,7}
a.difference(b)
```

Out[22]:

```
{1, 2}
```

In [23]:

```
a={1,2,3,4,5}
b={4,5,3,6,7}
b.difference(a)
```

Out[23]:

```
{6, 7}
```

Difference_update

In [30]:

```
a={1,2,3,4,11,23}
b={4,5,6,7,12,11,23}
a.difference_update(b)
a
```

Out[30]:

```
{1, 2, 3}
```

In [29]:

```
a={1,2,3,4,11,23}
b={4,5,6,7,12,11,23}
b.difference_update(a)
b
```

Out[29]:

```
{5, 6, 7, 12}
```

symmetric difference

In [32]:

```
a={1,2,3,4,11,23}
b={4,5,6,7,12,11,23}
a^b
```

Out[32]:

```
{1, 2, 3, 5, 6, 7, 12}
```

In [36]:

```
a={1,2,3,4,11,23}
b={4,5,6,7,12,11,23}
a.symmetric_difference(b)
```

Out[36]:

```
{1, 2, 3, 5, 6, 7, 12}
```

In [37]:

```
a={1,2,3,4,11,23}
b={4,5,6,7,12,11,23}
b.symmetric_difference(a)
```

Out[37]:

```
{1, 2, 3, 5, 6, 7, 12}
```

symmetric difference_update

In [40]:

```
a={1,2,3,4,11,23}
b={4,5,6,7,12,11,23}
a.symmetric_difference_update(b)
a
```

Out[40]:

```
{1, 2, 3, 5, 6, 7, 12}
```

isdisjoint()

In [42]:

```
a={1,2,3,4}
b={4,5,6,7}
c=a.isdisjoint(b)
c
```

Out[42]:

```
False
```

In [43]:

```
a={1,2,3,4}
b={5,6,7,9}
c=a.isdisjoint(b)
c
```

Out[43]:

```
True
```

issubset()

In [45]:

```
a={1,2,3,4}
b={4,5,6,7}
c=a.issubset(b)
c
```

Out[45]:

```
False
```

In [47]:

```
a={1,2,3,4}
b={1,2,3,4,5,6,7}
c=a.issubset(b)
c
```

Out[47]:

```
True
```

issuperset

In [48]:

```
a={1,2,3,4}
b={1,2,3,4,5,6,7}
c=a.issuperset(b)
c
```

Out[48]:

```
False
```

In [50]:

```
a={1,2,3,4,5,6,7}
b={5,6,7}
c=a.issuperset(b)
c
```

Out[50]:

```
True
```

Frozenset

In [51]:

```
a={1,2,3,4,5,6,7}
f=frozenset(a)
type(f)
```

Out[51]:

```
frozenset
```

Dictionory

Dictionory empty space

In [52]:

```
d1={}
d1
```

Out[52]:

```
{}
```

In [53]:

```
type(d1)
```

Out[53]:

```
dict
```

In [54]:

```
d2=dict()
d2
```

Out[54]:

```
{}
```

In [55]:

```
type(d2)
```

Out[55]:

```
dict
```

In [57]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
d3
```

Out[57]:

```
{'name': ['lingesh', 'bhavani', 'reena'],
 'mark': [100, 90, 29],
 'class': [8, 9, 10]}
```

In [58]:

```
d3.values()
```

Out[58]:

```
dict_values([['lingesh', 'bhavani', 'reena'], [100, 90, 29], [8, 9, 10]])
```

In [61]:

```
d3['mark'][1]
```

Out[61]:

```
90
```

In [62]:

```
d3['name']
```

Out[62]:

```
['lingesh', 'bhavani', 'reena']
```

In [1]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
x=d3.get('name')
x
```

Out[1]:

```
['lingesh', 'bhavani', 'reena']
```

Create dictionory from a sequnce of mixed keys

In [69]:

```
N={'a','b','c'}
d=dict.fromkeys(N)
d
```

Out[69]:

```
{'c': None, 'a': None, 'b': None}
```

In [68]:

```
N={'a','b','c'}
l=90
d=dict.fromkeys(N,l)
d
```

Out[68]:

```
{'c': 90, 'a': 90, 'b': 90}
```

In [70]:

```
N={'a','b','c'}
l=[10,20,30]
d=dict.fromkeys(N,l)
d
```

Out[70]:

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

In [71]:

```
N={'a','b','c'}
l=[10,20,30]
l.append(40)
d=dict.fromkeys(N,l)
d
```

Out[71]:

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

sort a dictionary by value

In [13]:

```
n={'lingesh','arun','vignesh'}
v={'cse'}
x=dict.fromkeys(n,v)
sorted(n)
x
```

Out[13]:

```
{'arun': {'cse'}, 'lingesh': {'cse'}, 'vignesh': {'cse'}}
```

In [14]:

```
n={'lingesh','arun','vignesh'}
v={'cse'}
x=dict.fromkeys(n,v)
x.sort()
x
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
<ipython-input-14-93b69cc2b6aa> in <module>
      2 v={'cse'}
      3 x=dict.fromkeys(n,v)
----> 4 x.sort()
      5 x

AttributeError: 'dict' object has no attribute 'sort'
```

Change item in dictionory

In [15]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
d3['mark']=100,90,30
d3
```

Out[15]:

```
{'name': ['lingesh', 'bhavani', 'reena'],
 'mark': (100, 90, 30),
 'class': [8, 9, 10]}
```

Add key value in dictionory

In [16]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
d3['dep']='cse'
d3
```

Out[16]:

```
{'name': ['lingesh', 'bhavani', 'reena'],
 'mark': [100, 90, 29],
 'class': [8, 9, 10],
 'dep': 'cse'}
```

remove value in dictionory

In [17]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
d3.pop('class')
d3
```

Out[17]:

```
{'name': ['lingesh', 'bhavani', 'reena'], 'mark': [100, 90, 29]}
```

In [18]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
d3.popitem()
d3
```

Out[18]:

```
{'name': ['lingesh', 'bhavani', 'reena'], 'mark': [100, 90, 29]}
```

del

In [19]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
del[d3['name']]
d3
```

Out[19]:

```
{'mark': [100, 90, 29], 'class': [8, 9, 10]}
```

In [20]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
d3.clear()
d3
```

Out[20]:

```
{}
```

In [22]:

```
d3={'name':['lingesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
del d3
```

Copy dict

In [32]:

```
d={'name':['vignesh','bhavani','reena'],'mark':[100,90,29],'class':[8,9,10]}
dict(d)
c=d.copy()
print(c)
```

```
{'name': ['vignesh', 'bhavani', 'reena'], 'mark': [100, 90, 29], 'class':
[8, 9, 10]}
```

In [ ]:

```

```