

## Set Union

```
In [1]: #Duplicates not allowed in Union  
a= {1,2,3,4,5}  
b={4,5,6,7,8}  
c= {8,9,10}
```

```
In [2]: a|b
```

```
Out[2]: {1, 2, 3, 4, 5, 6, 7, 8}
```

```
In [3]: b|c
```

```
Out[3]: {4, 5, 6, 7, 8, 9, 10}
```

```
In [4]: a.union(b)
```

```
Out[4]: {1, 2, 3, 4, 5, 6, 7, 8}
```

```
In [5]: b.union(a,c)
```

```
Out[5]: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

```
In [6]: a1 ={'a','b'}  
b1 = {'c','d'}
```

```
In [7]: a1.union(b1)
```

```
Out[7]: {'a', 'b', 'c', 'd'}
```

## Update

```
In [8]: c.update(b)
```

```
In [9]: c
```

```
Out[9]: {4, 5, 6, 7, 8, 9, 10}
```

```
In [10]: len(c)
```

```
Out[10]: 7
```

## Intersection

```
In [12]: print(a)  
print(b)  
print(c)
```

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

```
In [13]: a&b
```

```
Out[13]: {4, 5}
```

```
In [14]: b&c
```

```
Out[14]: {4, 5, 6, 7, 8}
```

```
In [15]: c.intersection(b)
```

```
Out[15]: {4, 5, 6, 7, 8}
```

```
In [16]: a.intersection_update(b)
```

```
In [17]: a
```

```
Out[17]: {4, 5}
```

## Difference

```
In [18]: a2 = {1,2,3,4,5}  
         b2 = {4,5,6,7,8}  
         c2 = {8,9,10}
```

```
In [19]: a2-b2
```

```
Out[19]: {1, 2, 3}
```

```
In [20]: a2-c2
```

```
Out[20]: {1, 2, 3, 4, 5}
```

```
In [21]: b2.difference(c2)
```

```
Out[21]: {4, 5, 6, 7}
```

```
In [22]: b2.difference_update(a2)
```

```
In [23]: b2
```

```
Out[23]: {6, 7, 8}
```

```
In [24]: b2.add(4)  
         b2.add(5)
```

```
In [25]: b2
```

Out[25]: {4, 5, 6, 7, 8}

## Symmetric Difference

In [26]: *#common values will not print*  
print(a2)  
print(b2)  
print(c2)

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

In [27]: a2.symmetric\_difference(b2)

Out[27]: {1, 2, 3, 6, 7, 8}

## Superset, Subset Disjoint

In [28]: a3 = {1,2,3,4,5,6,7,8,9}  
b3 = {3,4,5,6,7,8}  
c3 = {10,20,30}

In [29]: b3.issubset(a3)

Out[29]: True

In [30]: a3.issubset(b3)

Out[30]: False

In [31]: c3.isdisjoint(a3)

Out[31]: True

In [32]: c3.issubset(a3)

Out[32]: False

In [33]: a5 = {10,20}  
b5 = {30,40,50,60}  
c5 = {70,80,90}

In [34]: a5.issuperset(b5)

Out[34]: False

In [35]: b5.issubset(a5)

Out[35]: False

```
In [36]: a6 = {1,2,3,4,5,6,7,8,9}
```

```
In [37]: a6
```

```
Out[37]: {1, 2, 3, 4, 5, 6, 7, 8, 9}
```

```
In [38]: max(a6)
```

```
Out[38]: 9
```

```
In [39]: min(a6)
```

```
Out[39]: 1
```

```
In [40]: list(enumerate(a6))
```

```
Out[40]: [(0, 1), (1, 2), (2, 3), (3, 4), (4, 5), (5, 6), (6, 7), (7, 8), (8, 9)]
```

## Dict

```
In [42]: my_dict = dict()
```

```
In [43]: my_dict
```

```
Out[43]: {}
```

```
In [44]: my_dict = {1:'one',2:'Two',3:'three',4:'four'}
```

```
In [45]: my_dict
```

```
Out[45]: {1: 'one', 2: 'Two', 3: 'three', 4: 'four'}
```

```
In [46]: my_dict.keys()
```

```
Out[46]: dict_keys([1, 2, 3, 4])
```

```
In [47]: my_dict.values()
```

```
Out[47]: dict_values(['one', 'Two', 'three', 'four'])
```

```
In [48]: my_dict.items()
```

```
Out[48]: dict_items([(1, 'one'), (2, 'Two'), (3, 'three'), (4, 'four')])
```

```
In [49]: len(my_dict)
```

```
Out[49]: 4
```

```
In [50]: for i in my_dict:  
         print(i)
```

1  
2  
3  
4

In [ ]: