In [2]:
```
#initialize set

s = {1, 2, 3, 1, 3}
print(s)
```

{1, 2, 3}

In [11]:
```
#initialize set with empty set

s = set()
print(type(s))
```

<class 'set'>

In [12]:
```
#adding single data to set

s.add(7)
s.add(5)
s.add(2)
print(s)
```

{2, 5, 7}

In [13]:
```
#adding multiple data to set

s.update([2,  -1,  8])
print(s)
```

{2, 5, 7, 8, -1}

In [15]:
```
#deleting element from set

s.discard(2)
print(s)
```

{5, 7, 8, -1}

In [16]:
```
s.remove(2)
print(s)
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
<ipython-input-16-19f841fb8ee4> in <module>()
----> 1 s.remove(2)
      2 print(s)

KeyError: 2
```

In [17]:
```
# remove and discard both delete an element from set but the major difference
 is, if the element dosen't exist remove function through error.
```

In [18]:
```
#clear function: remove all the elements from set
s.clear()
print(s)
```

set()

In [19]:
```
#Set Operation

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

In [20]:
```
#Set Union

print(a.union(b))
print(a|b)
```

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

In [21]:
```
#Set Intersection

print(a.intersection(b))
print(a & b)
```

{3}
{3}

In [22]:
```
#Set Difference

print(a.difference(b))
print(a-b)
```

{1, 5}
{1, 5}

In [26]:
```
#Set Symmetric Difference

print(a.symmetric_difference(b))
print(a ^ b)

"""symmetric difference between two set is the set difference of their union a
nd intersection"""
```

{1, 2, 4, 5, 6}
{1, 2, 4, 5, 6}

Out[26]: 'symmetric difference between two set is the set difference of their union an
d intersection'

In [27]:
```
#Set subset:

c = {2, 6}

print(c.issubset(a))
print(c.issubset(b))
```

```
False
True
```