27/10/2025----

SET OPERATIONS

In [1]:
```
a={1,2,3,4,5,6}
b={4,5,6,7,8}
c={4,3,1,8,9,10}
```

In [2]:
```
type(c)
```

Out[2]:
```
set
```

In [4]:
```
a|b|c          #common elements are considered as one
```

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

In [5]:
```
a.intersection(b)
```

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

SYMMETRIC DIFFERENCE ---> "^"

In [6]:
```
a={1,2,3,4,5,6}
b={4,5,6,7,8}
c={4,3,1,8,9,10}
```

In [7]:
```
a.symmetric_differnce(b)
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Input In [7], in <cell line: 1>()
----> 1 a.symmetric_differnce(b)

AttributeError: 'set' object has no attribute 'symmetric_differnce'
```

In [8]:
```
a.symmetric_difference(c)
```

Out[8]:
```
{2, 5, 6, 8, 9, 10}
```

In [9]:
```
a^c
```

Out[9]:
```
{2, 5, 6, 8, 9, 10}
```

In [12]:
```
a.symmetric_difference_update(c)              # common elements are skip
a
```

Out[12]:
```
{2, 5, 6, 8, 9, 10}
```

superset

subset

disjoint

In [30]:
```
# superset--------> method is "issuperset()"
# subset  --------> "issubset()"
# disjoint---------> "isdisjoint()"
```

In [14]:
```
s1={1,2,3,4,5,6,7,8,9}
s2={3,4,5,6,7,8}
s3={10,20,30,40}
```

In [19]:
```
s1.issuperset(s2) ## all ele in s2 are available in s1
```

Out[19]: True

In [17]:
```
 s1.issubset(s2)
```

Out[17]: False

In [18]:
```
s1.isdisjoint(s2)
```

Out[18]: False

In [20]:
```
s4={1,2,3,4,5,6,7,8,9}
s5={30,40,50,60,70,80}
s6={10,20,30,40}
```

In [21]:
```
s4.issuperset(s5)
```

Out[21]: False

In [22]:
```
s5.issuperset(s6)
```

Out[22]: False

In [23]:
```
s6.issuperset(s5)
```

Out[23]: False

In [24]:
```
s6.issubset(s5)
```

Out[24]: False

In [28]:
```
s6.isdisjoint(s5) ##two or more sets have no elements in common; their in
```

Out[28]: False

In [27]:
```
1 s5.issubset(s6)
```

Out[27]:
```
False
```

In [ ]:
```
1
```