set operations

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

In [2]:
```
a
```

Out[2]: {2, 3, 4, 6, 8}

In [3]:
```
b
```

Out[3]: {2, 3, 5, 6}

In [4]:
```
c
```

Out[4]: {1, 2, 4, 7, 9}

In [5]:
```
type(a)
```

Out[5]: set

Union

In [6]:
```
a|b
```

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

In [7]:
```
b|c
```

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

In [8]:
```
a|c
```

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

Intersection

In [9]:
```
a&b
```

Out[9]: {2, 3, 6}

In [10]:
```
b&c
```

Out[10]: {2}

In [11]:
```
a&c
```

Out[11]: {2, 4}

Difference

In [12]:
```
a-b
```

Out[12]: {4, 8}

In [13]:
```
a-c
```

Out[13]: {3, 6, 8}

In [14]:
```
b-a
```

Out[14]: {5}

In [15]:
```
b-c
```

Out[15]: {3, 5, 6}

In [16]:
```
a-b-c
```

Out[16]: {8}

In [17]:
```
print(a)
print(b)
print(c)
```

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

In [18]:
```
a.symmetric_difference(b)
```

Out[18]: {4, 5, 8}

In [19]:
```
b.symmetric_difference(c)
```

Out[19]: {1, 3, 4, 5, 6, 7, 9}

In [21]:
```
a.symmetric_difference(c)
```

Out[21]: {1, 3, 6, 7, 8, 9}

In [22]:
```
c.symmetric_difference(a)
```

Out[22]: {1, 3, 6, 7, 8, 9}

In [23]:
```
a.symmetric_difference_update(b)
```

In [24]:
```
a
```

Out[24]: {4, 5, 8}

In [25]:
```
b.symmetric_difference_update(a)
```

In [26]:
```
b
```

Out[26]: {2, 3, 4, 6, 8}

In [27]:
```
b.symmetric_difference_update(c)
```

In [28]:
```
b
```

Out[28]:
```
{1, 3, 6, 7, 8, 9}
```

In [29]:
```
print(a)
print(b)
print(c)
```

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

In [30]:
```
a.symmetric_difference_update(b)
```

In [31]:
```
a
```

Out[31]:
```
{1, 3, 4, 5, 6, 7, 9}
```

In [32]:
```
b.symmetric_difference_update(a)
```

In [33]:
```
b
```

Out[33]:
```
{4, 5, 8}
```

In [34]:
```
c.symmetric_difference_update(b)
```

In [35]:
```
c
```

Out[35]:
```
{1, 2, 5, 7, 8, 9}
```

In [36]:
```
a^b
```

Out[36]:
```
{1, 3, 6, 7, 8, 9}
```

Superset, Subset,Disjoint

In [37]:
```
s1={1,2,3,4,5,6,8,7,9}
s2={2,5,7,9,4,1}
s3={10,15,24,52}
```

In [38]:
```
print(s1)
print(s2)
print(s3)
```

```
{1, 2, 3, 4, 5, 6, 7, 8, 9}
{1, 2, 4, 5, 7, 9}
{24, 10, 52, 15}
```

In [39]:
```
s1.issubset(s2)
```

Out[39]:
```
False
```

In [40]:
```
s2.issubset(s1)
```

Out[40]:
```
True
```

In [41]:
```
s1.issuperset(s2)
```

Out[41]: True

In [42]:
```
s3.issubset(s1)
```

Out[42]: False

In [43]:
```
s3.issubset(s2)
```

Out[43]: False

In [44]:
```
s3.isdisjoint(s1)
```

Out[44]: True

In [45]:
```
s3.isdisjoint(s2)
```

Out[45]: True

In [46]:
```
s2.isdisjoint(s1)
```

Out[46]: False

In [47]:
```
s2.isdisjoint(s3)
```

Out[47]: True

In [49]:
```
s4={2,3,4,5,6}
s5={10,34,23,56}
s6={45,54,67,89}
```

In [51]:
```
s4.issubset(s5)
```

Out[51]: False

In [52]:
```
s6.issubset(s4)
```

Out[52]: False

In [53]:
```
s4.isdisjoint(s5)
```

Out[53]: True

In [54]:
```
s4.isdisjoint(s6)
```

Out[54]: True

Dictionary

In [55]:
```
d={}
d
```

Out[55]: {}

In [56]:
```
type(d)
```

Out[56]:
```
dict
```

In [58]:
```
d1={30:'swapna',35:'sridhar',13:'sreecharan',10:'mokshith'}
```

In [59]:
```
d1
```

Out[59]:
```
{30: 'swapna', 35: 'sridhar', 13: 'sreecharan', 10: 'mokshith'}
```

In [61]:
```
d2={2:'two',4:'four','six':6,'2': [2,3,4]}
```

In [63]:
```
d1.keys()
```

Out[63]:
```
dict_keys([30, 35, 13, 10])
```

In [64]:
```
d1.values()
```

Out[64]:
```
dict_values(['swapna', 'sridhar', 'sreecharan', 'mokshith'])
```

In [65]:
```
d2.keys()
```

Out[65]:
```
dict_keys([2, 4, 'six', '2'])
```

In [66]:
```
d2.values()
```

Out[66]:
```
dict_values(['two', 'four', 6, [2, 3, 4]])
```

In [67]:
```
d1.items()
```

Out[67]:
```
dict_items([(30, 'swapna'), (35, 'sridhar'), (13, 'sreecharan'), (10, 'mokshit
h')])
```

In [70]:
```
d1.pop(30)
```

Out[70]:
```
'swapna'
```

In [71]:
```
d1
```

Out[71]:
```
{35: 'sridhar', 13: 'sreecharan', 10: 'mokshith'}
```

In [72]:
```
d1.update()
```

In [73]:
```
d1
```

Out[73]:
```
{35: 'sridhar', 13: 'sreecharan', 10: 'mokshith'}
```

In [74]:
```
10 in d1
```

Out[74]:
```
True
```

In [75]:
```
20 in d1
```

Out[75]:
```
False
```

RANGE

In [1]:
```
range(10)
```

Out[1]:
```
range(0, 10)
```

In [2]:
```
range(10,20)
```

Out[2]:
```
range(10, 20)
```

In [4]:
```
range(10, 5,20)
```

Out[4]:
```
range(10, 5, 20)
```

In [5]:
```
list(range(10))
```

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

In [7]:
```
list(range(10,20))
```

Out[7]:
```
[10, 11, 12, 13, 14, 15, 16, 17, 18, 19]
```

In [8]:
```
list(range(10,20,5))
```

Out[8]:
```
[10, 15]
```

In [10]:
```
list(range(5,20,2))
```

Out[10]:
```
[5, 7, 9, 11, 13, 15, 17, 19]
```

In [ ]:
```

```