Set Operations

In [3]:
```
a = {1,2,3,4,5}
b = {4,5,6,7,8}
c = {8,9,10,11,12}
d = {12,'nit',14.8,15}
```

In [70]:
```
print(d)
```

```
{'nit', 12, 14.8, 15}
```

In [50]:
```
c.update(b)
c
```

Out[50]: {4, 5, 6, 7, 8, 9, 10, 11}

In [51]:
```
len(c)
```

Out[51]: 8

In [52]:
```
a | b
a
```

Out[52]: {1, 2, 3, 4, 5}

In [53]:
```
b | a
b
```

Out[53]: {4, 5, 6, 7, 8}

In [54]:
```
b.update(a)    #union operator
b
```

Out[54]: {1, 2, 3, 4, 5, 6, 7, 8}

In [55]:
```
a|c
a
```

Out[55]: {1, 2, 3, 4, 5}

In [56]:
```
print(a)
```

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

In [60]:
```
d | c
d
```

Out[60]: {12, 13, 14, 15}

In [76]:
```
e = a | b
e
```

Out[76]: {1, 2, 3, 4, 5, 6, 7, 8}

In [71]:
```
a.difference(b)
```

Out[71]: {1, 2, 3}

In [74]:
```
a.difference(e)
```

Out[74]: set()

In [77]:
```
a
```

Out[77]: {1, 2, 3, 4, 5}

In [78]:
```
a.difference(c)
```

Out[78]: {1, 2, 3, 4, 5}

In [80]:
```
c.difference(d)
```

Out[80]: {8, 9, 10, 11}

In [81]:
```
d - c          #difference operator
```

Out[81]: {14.8, 15, 'nit'}

In [82]:
```
a.symmetric_difference(b)
```

Out[82]: {1, 2, 3, 6, 7, 8}

In [83]:
```
c ^ d       #symmetric_difference operator
```

Out[83]: {10, 11, 14.8, 15, 8, 9, 'nit'}

In [88]:
```
a.symmetric_difference_update(b)
print(a)
```

```
{1, 2, 3, 6, 7, 8}
```

In [91]:
```
print(b)
```

```
{4, 5, 6, 7, 8}
```

In [92]:
```
b.symmetric_difference_update(c)
print(b)
```

```
{4, 5, 6, 7, 10, 9, 11, 12}
```

In [93]:
```
print(c)
```

```
{8, 9, 10, 11, 12}
```

In [94]:
```
c.symmetric_difference_update(d)    #symetric_difference_update
```

In [95]:
```
print(c)
```

```
{14.8, 8, 9, 10, 11, 'nit', 15}
```

In [7]:
```
d.intersection(c)     #intersection
```

Out[7]: {12}

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

Out[8]: {8}

In [9]:
```
b.intersection(d)
```

Out[9]: set()

In [14]:
```
c.intersection_update(b)
```

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

```
{4, 5, 6, 7, 8}
```

In [106…
```
a.issuperset(b)
```

Out[106… False

In [29]:
```
A1 = {1,2,3,4,5,6,7,8}
B1 = {4,5,6,7,8}
C1 = {8,9,10,11,12}
D1= {12,'nit',14.8,15}
```

In [19]:
```
print(A1)
```

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

In [20]:
```
print(B1)
```

```
{4, 5, 6, 7, 8}
```

In [30]:
```
A1.issuperset(B1)
```

Out[30]: True

In [119…
```
A1.issubset(B1)
```

Out[119… False

In [31]:
```
B1.issubset(A1)
```

Out[31]: True

In [32]:
```
min(A1)
```

Out[32]: 1

In [33]:
```
min(D1)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[33], line 1
----> 1 min(D1)

TypeError: '<' not supported between instances of 'str' and 'int'
```

In [34]:
```
max(B1)
```

Out[34]: 8

In [35]:
```
sum(C1)
```

Out[35]: 50

In [ ]:
```

```