SET OPERATIONS and FUnctions

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

In [4]:
```
print(type(a))
print(type(b))
print(type(c))
```

```
<class 'set'>
<class 'set'>
<class 'set'>
```

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

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

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

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

In [12]:
```
a.union(b)
```

Out[12]: {1, 2, 3, 4, 5, 6, 7, 8}

In [14]:
```
a.union(b,c)
```

Out[14]: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

In [18]:
```
a1 = {'a','b','c'}
b1 = {'c','d'}
a1.union(b1)
```

Out[18]: {'a', 'b', 'c', 'd'}

In [20]:
```
a
```

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

In [22]:
```
b
```

Out[22]: {4, 5, 6, 7, 8}

In [24]:
```
c
```

Out[24]: {8, 9, 10}

In [26]:
```
c.update(b)
```

In [28]:
```
c
```

Out[28]: {4, 5, 6, 7, 8, 9, 10}

In [30]:
```
b
```

Out[30]: {4, 5, 6, 7, 8}

In [38]:
```
len(c)
```

Out[38]: 7

In [40]:
```
a
```

Out[40]: {1, 2, 3, 4, 5}

In [44]:
```
b
```

Out[44]: {4, 5, 6, 7, 8}

In [46]:
```
a&b
```

Out[46]: {4, 5}

In [48]:
```
c.intersection(b)
```

Out[48]: {4, 5, 6, 7, 8}

In [50]:
```
c.intersection_update(a)
```

In [52]:
```
c
```

Out[52]: {4, 5}

In [54]:
```
a
```

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

In [56]:
```
b
```

Out[56]: {4, 5, 6, 7, 8}

In [60]:
```
c = {8,9,10}
```

In [63]:
```
c
```

Out[63]: {8, 9, 10}

In [65]:
```
d = {}
```

In [67]:
```
type(d)
```

Out[67]: dict

In [69]:
```
d = set()
```

In [71]:
```
type(d)
```

Out[71]: set

In [75]:
```
d.issubset(a)
```

Out[75]: True

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

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

DIFFERENCE

In [80]:
```
a2 = {1,2,3,4,5}
b2 = {4,5,6,7,8}
c2 = {8,9,10}
```

In [82]:
```
a2 - b2
```

Out[82]: {1, 2, 3}

In [84]:
```
a2.difference(b)
```

Out[84]: {1, 2, 3}

In [86]:
```
a2.difference(c)
```

Out[86]: {1, 2, 3, 4, 5}

In [96]:
```
d2 = set()
d2 = a2.difference_update(b2)
```

In [100…
```
a2
```

Out[100… {1, 2, 3}

a2.

In [102…
```
a2.add(0)
```

In [104…
```
a2
```

Out[104… {0, 1, 2, 3}

In [110…
```
a2.add(3)
```

In [112…
```
a2
```

Out[112… {0, 1, 2, 3}

In [114…
```
a2
```

Out[114… {0, 1, 2, 3}

In [116…
```
print(a2)
print(b2)
print(c2)
print(d2)
```

```
{0, 1, 2, 3}
{4, 5, 6, 7, 8}
{8, 9, 10}
None
```

In [118…
```
a2.symmetric_difference(b2)
```

Out[118… {0, 1, 2, 3, 4, 5, 6, 7, 8}

In [120…
```
b2.symmetric_difference(c2)
```

Out[120… {4, 5, 6, 7, 9, 10}

In [122…
```
# Symentric displays only the Non Common elements
```

In [128…
```
a3 = {1,2,3,4,5}
b3 = {4,5,6,7,8}
c3 = {8,9,10}
d3 = {3,4}
b3.issubset(a3)
```

Out[128… False

In [130…
```
d3
```

Out[130… {3, 4}

In [132…
```
d3.issubset(a3)
```

Out[132… True

In [134…
```
a5 = {1,2}
b5 = {3,4,5}
c5 = {6,7,8}
```

In [140…
```
b5.issubset(a5)
```

Out[140… False

In [138…
```
a5.issuperset(b5)
```

Out[138… False

In [142…
```
sum(a5)
```

Out[142… 3

In [144…
```
max(a5)
```

Out[144… 2

In [146…
```
list(enumerate(a5))
```

Out[146… [(0, 1), (1, 2)]

In [148…
```
a5[:]
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[148], line 1
----> 1 a5[:]

TypeError: 'set' object is not subscriptable
```

In [ ]: