March 10th, 2025 - Set and Dict

- superset
- subset
- disjoint

In [2]:
```
s11 = {1,2,3,4,5,6,7,8,9}
s12 = {3,4,5,6,7,8}
s13 = {10,20,30,40}
```

In [4]:
```
s12.issubset(s11)
```

Out[4]: True

In [8]:
```
s11.issubset(s12)
```

Out[8]: False

In [10]:
```
s11.issuperset(s12)
```

Out[10]: True

In [12]:
```
s11 = {1,2,3,4,5,6,7,8,9}
s12 = {3,4,5,6,7,8}
s13 = {10,20,30,40}
```

In [14]:
```
s13.isdisjoint(s12)
```

Out[14]: True

In [16]:
```
s13.isdisjoint(s11)
```

Out[16]: True

In [18]:
```
s12 = {1,2,3,4,5}
s13 = {10,20,30}
s14 = {15,25,35}
```

In [20]:
```
s13.issubset(s12)
```

Out[20]: False

In [22]:
```
s12.issuperset(s13)
```

Out[22]: False

In [24]:
```
s14.isdisjoint(s12)
```

Out[24]: True

In [26]:
```
s14.isdisjoint(s13)
```

Out[26]: True

In [28]:
```
s15 = {1,2,3,4,5,6}
s16 = {4,5,6}
s17 = {10,20}
```

In [30]:
```
s16.issubset(s15)
```

Out[30]: True

In [32]:
```
s17.isdisjoint(s15)
```

Out[32]: True

In [34]:
```
s17.isdisjoint(s16)
```

Out[34]: True

In [36]:
```
s15
```

Out[36]: {1, 2, 3, 4, 5, 6}

In [38]:
```
for i in s15:
    print(i)
```

```
1
2
3
4
5
6
```

In [40]:
```
for i in enumerate(s15):
    print(i)
```

```
(0, 1)
(1, 2)
(2, 3)
(3, 4)
(4, 5)
(5, 6)
```

In [42]:
```
s15
```

Out[42]: {1, 2, 3, 4, 5, 6}

In [44]:
```
sum(s15)
```

Out[44]: 21

In [46]:
```
min(s15)
```

Out[46]: 1

In [48]:
```
max(s15)
```

Out[48]: 6

Dictionary

In [52]:
```
d = {}
d
```

Out[52]:
```
{}
```

In [54]:
```
type(d)
```

Out[54]:
```
dict
```

In [56]:
```
d1 = {1 : 'one', 2 : 'two', 3: 'three'}
d1
```

Out[56]:
```
{1: 'one', 2: 'two', 3: 'three'}
```

In [58]:
```
d1.keys()
```

Out[58]:
```
dict_keys([1, 2, 3])
```

In [60]:
```
d1.values()
```

Out[60]:
```
dict_values(['one', 'two', 'three'])
```

In [62]:
```
d2 = d1.copy()
d2
```

Out[62]:
```
{1: 'one', 2: 'two', 3: 'three'}
```

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

Out[64]:
```
dict_items([(1, 'one'), (2, 'two'), (3, 'three')])
```

In [66]:
```
d1[1]
```

Out[66]:
```
'one'
```

In [68]:
```
keys = {'ram' , 'b' , 'c' , 'd'}
value = [10,20,30]
mydict3 = dict.fromkeys(keys , value) # Create a dictionary from a sequence of
mydict3
```

Out[68]:
```
{'c': [10, 20, 30], 'b': [10, 20, 30], 'd': [10, 20, 30], 'ram': [10, 20, 30]}
```

In [70]:
```
value.append(50)
mydict3
```

Out[70]:
```
{'c': [10, 20, 30, 50],
 'b': [10, 20, 30, 50],
 'd': [10, 20, 30, 50],
 'ram': [10, 20, 30, 50]}
```

In [72]:
```
range(10)
```

Out[72]: range(0, 10)

In [74]:
```
list(range(0,10))
```

Out[74]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

In [76]:
```
list(range(10,20))
```

Out[76]: [10, 11, 12, 13, 14, 15, 16, 17, 18, 19]

In [78]:
```
list(range(10,20,3))
```

Out[78]: [10, 13, 16, 19]

In [80]:
```
list(range(10,20,3,4))
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[80], line 1
----> 1 list(range(10,20,3,4))

TypeError: range expected at most 3 arguments, got 4
```

In [82]:
```
r = range(1,10)
r
```

Out[82]: range(1, 10)

In [84]:
```
for i in r:
    print(i)
```

```
1
2
3
4
5
6
7
8
9
```

In [ ]:
```

```