



```
In [1]: s1=set()  
s1
```

```
Out[1]: set()
```

```
In [2]: type(s1)
```

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

```
In [3]: s1.add(20)  
s1
```

```
Out[3]: {20}
```

```
In [4]: s1.add(10)  
s1.add(100)  
s1.add(30)  
s1.add(25)  
s1
```

```
Out[4]: {10, 20, 25, 30, 100}
```

```
In [5]: s2={2,4,1,5,3}  
s2
```

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

```
In [6]: len(s1)
```

```
Out[6]: 5
```

```
In [7]: s1
```

```
Out[7]: {10, 20, 25, 30, 100}
```

```
In [8]: s1[0]
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[8], line 1  
----> 1 s1[0]  
  
TypeError: 'set' object is not subscriptable
```

```
In [ ]: s1[:]
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[9], line 1  
----> 1 s1[:]  
  
TypeError: 'set' object is not subscriptable
```

```
In [ ]: s1.add([1,2,3])
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[10], line 1  
----> 1 s1.add([1,2,3])  
  
TypeError: unhashable type: 'list'
```

```
In [ ]: s3={10,1.2,1+3j,'nit',True}  
s3
```

```
Out[ ]: {(1+3j), 1.2, 10, True, 'nit'}
```

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

```
{1, 2, 3, 4, 5}  
{100, 10, 20, 25, 30}
```

```
In [ ]: id(s1)==id(s2)
```

```
Out[ ]: False
```

```
In [ ]: s4=s3.copy()  
s4
```

```
Out[ ]: {(1+3j), 1.2, 10, True, 'nit'}
```

```
In [ ]: s3
```

```
Out[ ]: {(1+3j), 1.2, 10, True, 'nit'}
```

```
In [ ]: id(s4)==id(s3)
```

```
Out[ ]: False
```

```
In [ ]: s3.pop()
```

```
Out[ ]: 1.2
```

```
In [ ]: s3.pop()
```

```
Out[ ]: True
```

```
In [ ]: print(s2)  
print(s3)  
print(s4)
```

```
{1, 2, 3, 4, 5}  
{'nit', (1+3j), 10}  
{1.2, True, 'nit', (1+3j), 10}
```

```
In [ ]: s3.remove(1+2j)
s3
```

```
-----
KeyError                                Traceback (most recent call last)
Cell In[31], line 1
----> 1 s3.remove(1+2j)
      2 s3

KeyError: (1+2j)
```

```
In [ ]: s3.discard(10000)
```

```
In [ ]: s3.discard(True)
s3
```

```
Out[ ]: {(1+3j), 10, 'nit'}
```

```
In [ ]: s1
```

```
Out[ ]: {10, 20, 25, 30, 100}
```

```
In [ ]: for i in s1:
        print(i)
```

```
100
10
20
25
30
```

```
In [ ]: for i in enumerate(s1):
        print(i)
```

```
(0, 100)
(1, 10)
(2, 20)
(3, 25)
(4, 30)
```

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

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

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

```
In [ ]: b.union(c)
```

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

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

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

In []: `a&b`

Out[]: {4, 5}

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

{1, 2, 3, 4, 5}
{4, 5, 6, 7, 8}
{8, 9, 10}

In []: `b&c`

Out[]: {8}

In []: `a1={1,2,3,4,5,6,7,8,9}`
`b1={3,4,5,6,7,8}`
`c1={10,20,30,40}`

In []: `b1.isdisjoint(c1)`

Out[]: True

In []: `b1.issubset(a1)`

Out[]: True

In []: `a1.issuperset(c1)`

Out[]: False

In []: `a1.issuperset(b1)`

Out[]: True

In []: `a1`

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

In []: `sum(a1)`

Out[]: 45

In []: `max(a1)`

Out[]: 9

```
In [ ]: min(a1)
```

```
Out[ ]: 1
```

```
In [ ]: len(a1)
```

```
Out[ ]: 9
```

```
In [ ]: list(enumerate(a1))
```

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

```
In [ ]: d=sorted(a1,reverse=True)  
d
```

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

```
In [ ]: sorted(d)
```

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