

SET

```
In [1]: s = {}  
s
```

```
Out[1]: {}
```

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

```
Out[2]: dict
```

```
In [3]: s1 = set()  
s1
```

```
Out[3]: set()
```

```
In [4]: type(s1)
```

```
Out[4]: set
```

```
In [5]: s1.add(20)
```

```
In [6]: s1
```

```
Out[6]: {20}
```

```
In [7]: s1.add(10)  
s1.add(100)  
s1.add(25)
```

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

```
Out[8]: {10, 20, 25, 100}
```

```
In [9]: s1.add(10)
```

```
In [10]: s1
```

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

```
In [12]: s2 = set()  
s2
```

```
Out[12]: set()
```

```
In [13]: s2.add(10)
s2.add(1.2)
s2.add(1+2j)
s2.add(True)
s2.add('nit')
```

```
In [14]: s2
```

```
Out[14]: {(1+2j), 1.2, 10, True, 'nit'}
```

```
In [15]: print(s1)
print(s2)
```

```
{100, 25, 10, 20}
{1.2, True, (1+2j), 'nit', 10}
```

```
In [16]: id(s1) == id(s2)
```

```
Out[16]: False
```

```
In [17]: s3 = s2.copy()
s3
```

```
Out[17]: {(1+2j), 1.2, 10, True, 'nit'}
```

```
In [18]: s3
```

```
Out[18]: {(1+2j), 1.2, 10, True, 'nit'}
```

```
In [19]: s2 == s3
```

```
Out[19]: True
```

```
In [20]: print(s1)
print(s2)
print(s3)
```

```
{100, 25, 10, 20}
{1.2, True, (1+2j), 'nit', 10}
{1.2, True, (1+2j), 'nit', 10}
```

```
In [21]: s2
```

```
Out[21]: {(1+2j), 1.2, 10, True, 'nit'}
```

```
In [22]: s2.pop()
```

```
Out[22]: 1.2
```

```
In [23]: s2
```

```
Out[23]: {(1+2j), 10, True, 'nit'}
```

In [24]: s1

Out[24]: {10, 20, 25, 100}

In [25]: s2

Out[25]: {(1+2j), 10, True, 'nit'}

In [26]: s

Out[26]: {}

In [27]: s3

Out[27]: {(1+2j), 1.2, 10, True, 'nit'}

In [28]: s3.remove((1+2j))

In [29]: s3

Out[29]: {1.2, 10, True, 'nit'}

In [30]: s3.discard(1000)

In [31]: s3.discard(True)

In [32]: s3

Out[32]: {1.2, 10, 'nit'}

In [33]: print(s1)
print(s2)
print(s3)

{100, 25, 10, 20}
{True, (1+2j), 'nit', 10}
{1.2, 'nit', 10}

In [34]: for i in s1:
print(i)

100
25
10
20

In [35]: for i in enumerate(s1):
print(i)

(0, 100)
(1, 25)
(2, 10)
(3, 20)

```
In [36]: a = {1,2,3,4,5}
        b = {4,5,6,7,8}
        c = {8,9,10}
```

```
In [37]: a.union(b)
```

```
Out[37]: {1, 2, 3, 4, 5, 6, 7, 8}
```

```
In [38]: a | c
```

```
Out[38]: {1, 2, 3, 4, 5, 8, 9, 10}
```

```
In [39]: a = {1,2,3,4,5}
        b = {4,5,6,7,8}
        c = {8,9,10}
```

```
In [40]: b | c
```

```
Out[40]: {4, 5, 6, 7, 8, 9, 10}
```

```
In [41]: a | b | c
```

```
Out[41]: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

```
In [42]: print(a)
        print(b)
        print(c)
```

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

```
In [43]: a.difference(b)
```

```
Out[43]: {1, 2, 3}
```

```
In [44]: a.difference(c)
```

```
Out[44]: {1, 2, 3, 4, 5}
```

```
In [45]: c.difference(a)
```

```
Out[45]: {8, 9, 10}
```

```
In [46]: c.difference(b)
```

```
Out[46]: {9, 10}
```

```
In [47]: c.difference(c)
```

```
Out[47]: set()
```

