

**Set**   **A Set is a Collection of Elements of Different Type**

**It is Un Ordered**

**It is Immutable**

**It is Not Allow Duplicates**

**Symbol**   {   }

## Operations

**Creation**

**Constructor**

**Insertion Operation**

- **add( )**
- **update( )**

**union( )**

## Deletion Operations

**remove( )**

**discard( )**

**pop( )**

**clear( )**

**del**

## **Creation**

### **Syntax**

$$\text{Set-Name} = \{ V1 , V2 , V3 , \dots , Vn \}$$

### **Ex**

$$a = \{ 10 , 20 , 30 , 40 , 50 \}$$



**remove(40)**



**discard(40)**

```
# 0 1 2 3 4 5 6
```

```
print(a)
```

```
# {50, 20, 40, 10, 30}
```

```
# {50, 20, 40, 10, 30}
```

```
print(len(a))#5
```

```
# print(a[2])#No Access
```

```
# 'set' object is not
```

```
# subscriptable
```

```
#a[2]=60
```

```
#print(a)
```

```
# 'set' object
```

```
# does not
```

```
# support item assignment
```

```
b=set((10,20,30))
```

```
print(b)
```

```
# {10, 20, 30}
```

```
b.add(40)
```

```
print(b)  
#{40, 10, 50, 20, 30}  
a.update(b)  
print(a)  
#{70, 40, 10, 80, 50, 20, 30}  
a.union(b)  
print(a)  
#{70, 40, 10, 80, 50, 20, 30}  
print(b)
```

```
print(b)  
#{10, 50, 20, 30}  
b.discard(30)  
print(b)  
#{10, 50, 20}  
b.pop()  
print(b)  
#{50, 20}
```

```
print(b)  
#set()  
del b  
print(b)  
#NameError:  
name 'b'  
# is not defined
```

**Dictionary** A Dictionary is a Collection of Elements in form of **KEY : VALUE** Pair

Sid	Name
101	aaa
102	bbb
103	ccc
104	aaa

Keys

Values


[ 10 , 20 , 30 ]  
( 10 , 20 , 30 )  
{ 10 , 20 , 30 }

10  
20  
30  
40

## Syntax

**Dictionary-Name = { K1 : V1 , K2 : V2 , ... , Kn : Vn }**

**Ex : a = { 1 : 10 , 2 : 20 , 3 : 30 }**



1	10
2	20
3	30



## **Addition**

### **General Method**

## **Remove**

- **pop( )**
- **popitem( )**
- **clear( )**
- **del**

```
a={1:10,2:30,  
   3:30,  
   3:30}  
print(a)  
#{1: 10, 2: 20, 3: 30}  
#{1: 10, 2: 20, 3: 30}  
#{1: 10, 2: 30, 3: 30}  
print(a.keys())  
#dict_keys([1, 2, 3])  
  
print(a.values())  
#dict_values([10, 30, 30])  
a[1]=60  
print(a)  
#{1: 60, 2: 30, 3: 30}  
a[4]=40 # Adding a Value  
print(a)  
#{1: 60, 2: 30, 3: 30, 4: 40}
```

```
a.pop(2)#Key  
print(a)  
#{1: 60, 3: 30, 4: 40}  
a.popitem()  
print(a)  
#{1: 60, 3: 30}
```

```
a.clear()  
print(a)  
#{ }  
del a  
print(a)
```