

# Adding and Deleting elements - set

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Let us see how we can add and delete elements to the set in Python.

- We can add elements to `set` or update existing ones.
  - `add`
  - `update`
  - `union`
- We can delete elements from the `set` using different functions.
  - `pop`
  - `remove`
  - `discard`
  - `clear`

```
s = {1, 2, 3, 3, 3, 4, 4}
```

```
s.add(5)
```

```
s
```

```
{1, 2, 3, 4, 5}
```

```
s.update?
```

```
Docstring: Update a set with the union of itself and others.  
Type: builtin_function_or_method
```

```
s.update({4, 5, 6, 7}) # Updates the set on which update is invoked
```

```
s
```

```
{1, 2, 3, 4, 5, 6, 7}
```

```
s.union?
```

```
Docstring:  
Return the union of sets as a new set.  
  
(i.e. all elements that are in either set.)  
Type: builtin_function_or_method
```

```
s = {1, 2, 3, 4, 5}  
s.union({4, 5, 6, 7}) # Creates new set
```

```
{1, 2, 3, 4, 5, 6, 7}
```

```
s
```

```
{1, 2, 3, 4, 5}
```

```
s.pop?
```

```
Docstring:  
Remove and return an arbitrary set element.  
Raises KeyError if the set is empty.  
Type: builtin_function_or_method
```

```
s.pop()
```

```
1
```

```
s
```

```
{2, 3, 4, 5}
```

```
s.remove?
```

**Docstring:**  
Remove an element from a set; it must be a member.

If the element is not a member, raise a `KeyError`.

**Type:** builtin\_function\_or\_method

```
s.remove(4)
```

```
s
```

```
{2, 3, 5}
```

```
s.remove(6) # 6 does not exist, throws KeyError
```

```
-----
KeyError                                Traceback (most recent call last)
<ipython-input-17-b3638b2cbd97> in <module>
----> 1 s.remove(6) # 6 does not exist, throws KeyError

KeyError: 6
```

```
s = {1, 2, 3, 4, 5}
```

```
s.discard?
```

**Docstring:**  
Remove an element from a set if it is a member.

If the element is not a member, do nothing.

**Type:** builtin\_function\_or\_method

```
s.discard(4)
```

```
s
```

```
{1, 2, 3, 5}
```

```
s.discard(6)
```

```
s
```

```
{1, 2, 3, 5}
```

```
s.clear?
```

**Docstring:** Remove all elements from this set.

**Type:** builtin\_function\_or\_method

```
s.clear()
```

```
s
```

```
set()
```

