

# Python Cheat Sheet: Set Methods

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| Method   | Description  | Example   |
|--|--|---|
| <code>set.add(x)</code>                        | Add an element to this set   | <pre>&gt;&gt;&gt; s = {1, 2, 3} &gt;&gt;&gt; s.add(4)      # {1, 2, 3, 4}</pre>                                   |
| <code>set.clear()</code>                       | Remove all elements from this set  | <pre>&gt;&gt;&gt; s = {1, 2, 3} &gt;&gt;&gt; s.clear()    # set()</pre>   |
| <code>set.copy()</code>                        | Create and return a flat copy of this set  | <pre>&gt;&gt;&gt; s = {1, 2, 'Alice'} &gt;&gt;&gt; s.copy()      # Returns: {1, 2, 'Alice'}</pre>                 |
| <code>set.difference(x)</code>                 | Return a new set with elements of this set except the ones in the given set arguments.   | <pre>&gt;&gt;&gt; (1, 2, 3).difference({1, 2}) {3}</pre>  |
| <code>set.difference_update(iter)</code>       | Remove all elements from this set that are members of any of the given set arguments.  | <pre>&gt;&gt;&gt; s = {1, 2, 3} &gt;&gt;&gt; s.difference_update({1, 2}) # s == {3}</pre>                         |
| <code>set.discard(x)</code>                    | Remove an element from this set if it is a member, otherwise do nothing.   | <pre>&gt;&gt;&gt; s = {'Alice', 'Bob', 'Cloe'} &gt;&gt;&gt; s.discard('Bob') # s == {'Alice', 'Cloe'}</pre>       |
| <code>set.intersection()</code>                | Return a new set of elements that are members of this and the set argument(s).   | <pre>&gt;&gt;&gt; {1, 2, 3, 4}.intersection({3, 4, 5}) {3, 4}</pre>   |
| <code>set.intersection_update()</code>         | Removes all elements from this set that are not members in all other specified sets.   | <pre>&gt;&gt;&gt; s = {1, 2, 3, 4} &gt;&gt;&gt; s.intersection_update({3, 4, 5}) # s == {3, 4}</pre>              |
| <code>set.isdisjoint(x)</code>                 | Return True if their intersection is the empty set.  | <pre>&gt;&gt;&gt; (1, 2, 3, 4).isdisjoint({'Alice', 'Bob'}) True</pre>  |
| <code>set.issubset()</code>                    | Return True if all elements of this set are members of the specified set argument.   | <pre>&gt;&gt;&gt; t = {'Alice', 'Bob', 'Carl', 'Liz'} &gt;&gt;&gt; {'Alice', 'Bob'}.issubset(t) True</pre>        |
| <code>set.issuperset()</code>                  | Return True if all elements of the specified set argument are members of this set.   | <pre>&gt;&gt;&gt; {'Alice', 'Bob', 'Carl'}.issuperset({'Alice'}) True</pre>                                       |
| <code>set.pop()</code>                         | Remove and return a random element from this set. KeyError if set is empty.  | <pre>&gt;&gt;&gt; s = {'Alice', 'Bob', 'Carl'} &gt;&gt;&gt; s.pop() 'Alice'</pre>                                 |
| <code>set.remove()</code>                      | Remove and return a specific element from this set as defined in the argument. If the set doesn't contain element, raise KeyError. | <pre>&gt;&gt;&gt; s = {'Alice', 'Bob', 'Cloe'} &gt;&gt;&gt; s.remove('Bob') # s == {'Alice', 'Cloe'}</pre>        |
| <code>set.symmetric_difference()</code>        | Return new set with elements in either this or the specified set argument, but not both.   | <pre>&gt;&gt;&gt; (1, 2, 3).symmetric_difference({2, 3, 4}) {1, 4}</pre>  |
| <code>set.symmetric_difference_update()</code> | Replace this set with the symmetric difference, i.e., elements in either this set or the specified set argument, but not both.     | <pre>&gt;&gt;&gt; s = {1, 2, 3} &gt;&gt;&gt; s.symmetric_difference_update({2, 3, 4}) &gt;&gt;&gt; s {1, 4}</pre> |
| <code>set.union()</code>                       | Create and return new set with all elements in this or any of the specified sets.  | <pre>&gt;&gt;&gt; (1, 2, 3, 4).union({3, 4, 5}) {1, 2, 3, 4, 5}</pre>   |
| <code>set.update()</code>                      | Update this set with all elements that are in this or any of the specified set arguments.  | <pre>&gt;&gt;&gt; s = {1, 2, 3, 4} &gt;&gt;&gt; s.update({3, 4, 5}) # s == {1, 2, 3, 4, 5}</pre>                  |