* ***addAll***

public boolean addAll([Collection](https://docs.oracle.com/javase/8/docs/api/java/util/Collection.html)<? extends [E](https://docs.oracle.com/javase/8/docs/api/java/util/AbstractCollection.html)> c)

Adds all of the elements in the specified collection to this collection (optional operation). The behavior of this operation is undefined if the specified collection is modified while the operation is in progress. (This implies that the behavior of this call is undefined if the specified collection is this collection, and this collection is nonempty.)

This implementation iterates over the specified collection, and adds each object returned by the iterator to this collection, in turn.

Note that this implementation will throw an UnsupportedOperationException unless add is overridden (assuming the specified collection is non-empty).

**Specified by:**

[addAll](https://docs.oracle.com/javase/8/docs/api/java/util/Collection.html#addAll-java.util.Collection-) in interface [Collection](https://docs.oracle.com/javase/8/docs/api/java/util/Collection.html)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/AbstractCollection.html)>

**Parameters:**

c - collection containing elements to be added to this collection

**Returns:**

true if this collection changed as a result of the call

**Throws:**

[UnsupportedOperationException](https://docs.oracle.com/javase/8/docs/api/java/lang/UnsupportedOperationException.html) - if the addAll operation is not supported by this collection

[ClassCastException](https://docs.oracle.com/javase/8/docs/api/java/lang/ClassCastException.html) - if the class of an element of the specified collection prevents it from being added to this collection

[NullPointerException](https://docs.oracle.com/javase/8/docs/api/java/lang/NullPointerException.html) - if the specified collection contains a null element and this collection does not permit null elements, or if the specified collection is null

[IllegalArgumentException](https://docs.oracle.com/javase/8/docs/api/java/lang/IllegalArgumentException.html) - if some property of an element of the specified collection prevents it from being added to this collection

[IllegalStateException](https://docs.oracle.com/javase/8/docs/api/java/lang/IllegalStateException.html) - if not all the elements can be added at this time due to insertion restrictions

**See Also:**

[add(Object)](https://docs.oracle.com/javase/8/docs/api/java/util/AbstractCollection.html#add-E-)

* ***add***

public boolean add([E](https://docs.oracle.com/javase/8/docs/api/java/util/HashSet.html) e)

Adds the specified element to this set if it is not already present. More formally, adds the specified element e to this set if this set contains no element e2 such that (e==null ? e2==null : e.equals(e2)). If this set already contains the element, the call leaves the set unchanged and returns false.

**Specified by:**

[add](https://docs.oracle.com/javase/8/docs/api/java/util/Collection.html#add-E-) in interface [Collection](https://docs.oracle.com/javase/8/docs/api/java/util/Collection.html)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/HashSet.html)>

**Specified by:**

[add](https://docs.oracle.com/javase/8/docs/api/java/util/Set.html#add-E-) in interface [Set](https://docs.oracle.com/javase/8/docs/api/java/util/Set.html)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/HashSet.html)>

**Overrides:**

[add](https://docs.oracle.com/javase/8/docs/api/java/util/AbstractCollection.html#add-E-) in class [AbstractCollection](https://docs.oracle.com/javase/8/docs/api/java/util/AbstractCollection.html" \o "class in java.util)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/HashSet.html)>

**Parameters:**

e - element to be added to this set

**Returns:**

true if this set did not already contain the specified element