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org.apache.commons.collections4.list

## Class SetUniqueList<E>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + [org.apache.commons.collections4.collection.AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<E>
    - [org.apache.commons.collections4.list.AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<E>
      * [org.apache.commons.collections4.list.AbstractSerializableListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractSerializableListDecorator.html)<E>
        + org.apache.commons.collections4.list.SetUniqueList<E>
* All Implemented Interfaces: [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true), [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<E>, [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<E>, [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E>  
    
  public class SetUniqueList<E>  
  extends [AbstractSerializableListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractSerializableListDecorator.html)<E>  
  Decorates a List to ensure that no duplicates are present much like a Set.  
  The List interface makes certain assumptions/requirements. This implementation breaks these in certain ways, but this is merely the result of rejecting duplicates. Each violation is explained in the method, but it should not affect you. Bear in mind that Sets require immutable objects to function correctly.  
  The [ListOrderedSet](http://docs.google.com/org/apache/commons/collections4/set/ListOrderedSet.html) class provides an alternative approach, by wrapping an existing Set and retaining insertion order in the iterator.  
  This class is Serializable from Commons Collections 3.1.Since: 3.0 See Also: [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.list.SetUniqueList)

### Constructor SummaryConstructors

|  |  |
| --- | --- |
| * + Modifier | * + Constructor and Description |
| * + protected | * + [SetUniqueList](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#SetUniqueList-java.util.List-java.util.Set-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> list, [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> set) Constructor that wraps (not copies) the List and specifies the set to use. |

### Method SummaryAll Methods Static Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + boolean | * + [add](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#add-E-)([E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) object) Adds an element to the list if it is not already present. |
| * + void | * + [add](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#add-int-E-)(int index, [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) object) Adds an element to a specific index in the list if it is not already present. |
| * + boolean | * + [addAll](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#addAll-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> coll) Adds a collection of objects to the end of the list avoiding duplicates. |
| * + boolean | * + [addAll](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#addAll-int-java.util.Collection-)(int index, [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> coll) Adds a collection of objects a specific index in the list avoiding duplicates. |
| * + [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> | * + [asSet](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#asSet--)() Gets an unmodifiable view as a Set. |
| * + void | * + [clear](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#clear--)() |
| * + boolean | * + [contains](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#contains-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) object) |
| * + boolean | * + [containsAll](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#containsAll-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll) |
| * + protected [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> | * + [createSetBasedOnList](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#createSetBasedOnList-java.util.Set-java.util.List-)([Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> set, [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> list) Create a new [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true) with the same type as the provided set and populate it with all elements of list. |
| * + [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> | * + [iterator](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#iterator--)() |
| * + [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> | * + [listIterator](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#listIterator--)() |
| * + [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> | * + [listIterator](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#listIterator-int-)(int index) |
| * + [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) | * + [remove](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#remove-int-)(int index) |
| * + boolean | * + [remove](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#remove-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) object) |
| * + boolean | * + [removeAll](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#removeAll-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll) |
| * + boolean | * + [removeIf](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#removeIf-java.util.function.Predicate-)([Predicate](https://docs.oracle.com/javase/8/docs/api/java/util/function/Predicate.html?is-external=true)<? super [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> filter) |
| * + boolean | * + [retainAll](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#retainAll-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll) |
| * + [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) | * + [set](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#set-int-E-)(int index, [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) object) Sets the value at the specified index avoiding duplicates. |
| * + static <E> [SetUniqueList](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)<E> | * + [setUniqueList](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#setUniqueList-java.util.List-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> list) Factory method to create a SetList using the supplied list to retain order. |
| * + [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> | * + [subList](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html#subList-int-int-)(int fromIndex, int toIndex) |

### Methods inherited from class org.apache.commons.collections4.list.[**AbstractListDecorator**](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)[decorated](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#decorated--), [equals](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#equals-java.lang.Object-), [get](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#get-int-), [hashCode](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#hashCode--), [indexOf](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#indexOf-java.lang.Object-), [lastIndexOf](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#lastIndexOf-java.lang.Object-)

### Methods inherited from class org.apache.commons.collections4.collection.[**AbstractCollectionDecorator**](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)[isEmpty](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#isEmpty--), [setCollection](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#setCollection-java.util.Collection-), [size](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#size--), [toArray](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#toArray--), [toArray](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#toArray-T:A-), [toString](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#toString--)

### Methods inherited from class java.lang.[**Object**](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[clone](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#clone--), [finalize](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#finalize--), [getClass](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#getClass--), [notify](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notify--), [notifyAll](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notifyAll--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-int-)

### Methods inherited from interface java.util.[**List**](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)[isEmpty](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#isEmpty--), [replaceAll](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#replaceAll-java.util.function.UnaryOperator-), [size](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#size--), [sort](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#sort-java.util.Comparator-), [spliterator](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#spliterator--), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#toArray--), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#toArray-T:A-)

### Methods inherited from interface java.util.[**Collection**](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)[parallelStream](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#parallelStream--), [stream](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#stream--)

### Methods inherited from interface java.lang.[**Iterable**](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)[forEach](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true#forEach-java.util.function.Consumer-)

### Constructor Detail

#### SetUniqueList protected SetUniqueList([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> list, [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> set) Constructor that wraps (not copies) the List and specifies the set to use. The set and list must both be correctly initialised to the same elements.Parameters: set - the set to decorate, must not be null list - the list to decorate, must not be null Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if set or list is null

### Method Detail

#### setUniqueList public static <E> [SetUniqueList](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)<E> setUniqueList([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> list) Factory method to create a SetList using the supplied list to retain order. If the list contains duplicates, these are removed (first indexed one kept). A HashSet is used for the set behaviour.Type Parameters: E - the element type Parameters: list - the list to decorate, must not be null Returns: a new [SetUniqueList](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if list is null Since: 4.0

#### asSet public [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> asSet() Gets an unmodifiable view as a Set.Returns: an unmodifiable set view

#### add public boolean add([E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) object) Adds an element to the list if it is not already present. *(Violation)* The List interface requires that this method returns true always. However this class may return false because of the Set behaviour.Specified by: [add](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#add-E-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [add](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#add-E-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [add](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#add-E-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Parameters: object - the object to add Returns: true if object was added

#### add public void add(int index, [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) object) Adds an element to a specific index in the list if it is not already present. *(Violation)* The List interface makes the assumption that the element is always inserted. This may not happen with this implementation.Specified by: [add](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#add-int-E-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [add](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#add-int-E-) in class [AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Parameters: index - the index to insert at object - the object to add

#### addAll public boolean addAll([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> coll) Adds a collection of objects to the end of the list avoiding duplicates. Only elements that are not already in this list will be added, and duplicates from the specified collection will be ignored. *(Violation)* The List interface makes the assumption that the elements are always inserted. This may not happen with this implementation.Specified by: [addAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#addAll-java.util.Collection-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [addAll](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#addAll-java.util.Collection-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [addAll](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#addAll-java.util.Collection-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Parameters: coll - the collection to add in iterator order Returns: true if this collection changed

#### addAll public boolean addAll(int index, [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> coll) Adds a collection of objects a specific index in the list avoiding duplicates. Only elements that are not already in this list will be added, and duplicates from the specified collection will be ignored. *(Violation)* The List interface makes the assumption that the elements are always inserted. This may not happen with this implementation.Specified by: [addAll](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#addAll-int-java.util.Collection-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [addAll](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#addAll-int-java.util.Collection-) in class [AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Parameters: index - the index to insert at coll - the collection to add in iterator order Returns: true if this collection changed

#### set public [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) set(int index, [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) object) Sets the value at the specified index avoiding duplicates. The object is set into the specified index. Afterwards, any previous duplicate is removed. If the object is not already in the list then a normal set occurs. If it is present, then the old version is removed.Specified by: [set](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#set-int-E-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [set](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#set-int-E-) in class [AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Parameters: index - the index to insert at object - the object to set Returns: the previous object

#### remove public boolean remove([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) object)Specified by: [remove](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#remove-java.lang.Object-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [remove](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#remove-java.lang.Object-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [remove](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#remove-java.lang.Object-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### remove public [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html) remove(int index)Specified by: [remove](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#remove-int-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [remove](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#remove-int-) in class [AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### removeIf public boolean removeIf([Predicate](https://docs.oracle.com/javase/8/docs/api/java/util/function/Predicate.html?is-external=true)<? super [E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> filter)Specified by: [removeIf](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#removeIf-java.util.function.Predicate-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [removeIf](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#removeIf-java.util.function.Predicate-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Since: 4.4

#### removeAll public boolean removeAll([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll)Specified by: [removeAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#removeAll-java.util.Collection-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [removeAll](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#removeAll-java.util.Collection-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [removeAll](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#removeAll-java.util.Collection-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### retainAll public boolean retainAll([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll) This implementation iterates over the elements of this list, checking each element in turn to see if it's contained in coll. If it's not contained, it's removed from this list. As a consequence, it is advised to use a collection type for coll that provides a fast (e.g. O(1)) implementation of [Collection.contains(Object)](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#contains-java.lang.Object-).Specified by: [retainAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#retainAll-java.util.Collection-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [retainAll](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#retainAll-java.util.Collection-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [retainAll](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#retainAll-java.util.Collection-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### clear public void clear()Specified by: [clear](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#clear--) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [clear](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#clear--) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [clear](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#clear--) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### contains public boolean contains([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) object)Specified by: [contains](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#contains-java.lang.Object-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [contains](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#contains-java.lang.Object-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [contains](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#contains-java.lang.Object-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### containsAll public boolean containsAll([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll)Specified by: [containsAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#containsAll-java.util.Collection-) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [containsAll](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#containsAll-java.util.Collection-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [containsAll](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#containsAll-java.util.Collection-) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### iterator public [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> iterator()Specified by: [iterator](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true#iterator--) in interface [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#iterator--) in interface [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Specified by: [iterator](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#iterator--) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [iterator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#iterator--) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### listIterator public [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> listIterator()Specified by: [listIterator](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#listIterator--) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [listIterator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#listIterator--) in class [AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### listIterator public [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> listIterator(int index)Specified by: [listIterator](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#listIterator-int-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [listIterator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#listIterator-int-) in class [AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### subList public [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> subList(int fromIndex, int toIndex) NOTE: from 4.0, an unmodifiable list will be returned, as changes to the subList can invalidate the parent list.Specified by: [subList](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true#subList-int-int-) in interface [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> Overrides: [subList](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html#subList-int-int-) in class [AbstractListDecorator](http://docs.google.com/org/apache/commons/collections4/list/AbstractListDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)>

#### createSetBasedOnList protected [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> createSetBasedOnList([Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> set, [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/SetUniqueList.html)> list) Create a new [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true) with the same type as the provided set and populate it with all elements of list.Parameters: set - the [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true) to be used as return type, must not be null list - the [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true) to populate the [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true) Returns: a new [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true) populated with all elements of the provided [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)

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