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org.apache.commons.collections4.collection

## Class UnmodifiableBoundedCollection<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.collection.UnmodifiableBoundedCollection<E>
* Type Parameters: E - the type of elements in this collection 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>, [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<E>, [Unmodifiable](http://docs.google.com/org/apache/commons/collections4/Unmodifiable.html)  
    
  public final class UnmodifiableBoundedCollection<E>  
  extends [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<E>  
  implements [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<E>, [Unmodifiable](http://docs.google.com/org/apache/commons/collections4/Unmodifiable.html)  
  [UnmodifiableBoundedCollection](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html) decorates another [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html) to ensure it can't be altered.  
  If a BoundedCollection is first wrapped in some other collection decorator, such as synchronized or predicated, the BoundedCollection methods are no longer accessible. The factory on this class will attempt to retrieve the bounded nature by examining the package scope variables.  
  This class is Serializable from Commons Collections 3.1.  
  Attempts to modify it will result in an UnsupportedOperationException.Since: 3.0 See Also: [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.collection.UnmodifiableBoundedCollection)

### 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/collection/UnmodifiableBoundedCollection.html#add-E-)([E](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html) object) |
| * + boolean | * + [addAll](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.html)> coll) |
| * + void | * + [clear](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#clear--)() |
| * + protected [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<[E](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html)> | * + [decorated](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#decorated--)() Gets the collection being decorated. |
| * + boolean | * + [isFull](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#isFull--)() Returns true if this collection is full and no new elements can be added. |
| * + [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/collection/UnmodifiableBoundedCollection.html)> | * + [iterator](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#iterator--)() |
| * + int | * + [maxSize](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#maxSize--)() Gets the maximum size of the collection (the bound). |
| * + boolean | * + [remove](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.html)> filter) |
| * + boolean | * + [retainAll](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#retainAll-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll) |
| * + static <E> [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<E> | * + [unmodifiableBoundedCollection](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#unmodifiableBoundedCollection-org.apache.commons.collections4.BoundedCollection-)([BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<? extends E> coll) Factory method to create an unmodifiable bounded collection. |
| * + static <E> [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<E> | * + [unmodifiableBoundedCollection](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html#unmodifiableBoundedCollection-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends E> coll) Factory method to create an unmodifiable bounded collection. |

### Methods inherited from class org.apache.commons.collections4.collection.[**AbstractCollectionDecorator**](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)[contains](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#contains-java.lang.Object-), [containsAll](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#containsAll-java.util.Collection-), [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--), [equals](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#equals-java.lang.Object-), [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--), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#hashCode--), [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.[**Collection**](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)[contains](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#contains-java.lang.Object-), [containsAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#containsAll-java.util.Collection-), [equals](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#equals-java.lang.Object-), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#hashCode--), [isEmpty](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#isEmpty--), [parallelStream](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#parallelStream--), [size](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#size--), [spliterator](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#spliterator--), [stream](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#stream--), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#toArray--), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#toArray-T:A-)

### 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-)

### Method Detail

#### unmodifiableBoundedCollection public static <E> [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<E> unmodifiableBoundedCollection([BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<? extends E> coll) Factory method to create an unmodifiable bounded collection.Type Parameters: E - the type of the elements in the collection Parameters: coll - the BoundedCollection to decorate, must not be null Returns: a new unmodifiable bounded collection Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if coll is null Since: 4.0

#### unmodifiableBoundedCollection public static <E> [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<E> unmodifiableBoundedCollection([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends E> coll) Factory method to create an unmodifiable bounded collection. This method is capable of drilling down through up to 1000 other decorators to find a suitable BoundedCollection.Type Parameters: E - the type of the elements in the collection Parameters: coll - the BoundedCollection to decorate, must not be null Returns: a new unmodifiable bounded collection Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if coll is null [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if coll is not a BoundedCollection Since: 4.0

#### 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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.html)>

#### add public boolean add([E](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html) object)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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.html)>

#### 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/collection/UnmodifiableBoundedCollection.html)> coll)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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.html)>

#### 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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.html)>

#### retainAll public boolean retainAll([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<?> coll)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/collection/UnmodifiableBoundedCollection.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/collection/UnmodifiableBoundedCollection.html)>

#### isFull public boolean isFull() Description copied from interface: [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html#isFull--) Returns true if this collection is full and no new elements can be added.Specified by: [isFull](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html#isFull--) in interface [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<[E](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html)> Returns: true if the collection is full.

#### maxSize public int maxSize() Description copied from interface: [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html#maxSize--) Gets the maximum size of the collection (the bound).Specified by: [maxSize](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html#maxSize--) in interface [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<[E](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html)> Returns: the maximum number of elements the collection can hold.

#### decorated protected [BoundedCollection](http://docs.google.com/org/apache/commons/collections4/BoundedCollection.html)<[E](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html)> decorated() Description copied from class: [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#decorated--) Gets the collection being decorated. All access to the decorated collection goes via this method.Overrides: [decorated](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#decorated--) in class [AbstractCollectionDecorator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)<[E](http://docs.google.com/org/apache/commons/collections4/collection/UnmodifiableBoundedCollection.html)> Returns: the decorated collection

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