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org.apache.commons.collections4

## Class SetUtils.SetView<E>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + [java.util.AbstractCollection](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true)<E>
    - [java.util.AbstractSet](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractSet.html?is-external=true)<E>
      * org.apache.commons.collections4.SetUtils.SetView<E>
* Type Parameters: E - the element type All Implemented Interfaces: [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>, [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<E> Enclosing class: [SetUtils](http://docs.google.com/org/apache/commons/collections4/SetUtils.html)  
    
  public abstract static class SetUtils.SetView<E>  
  extends [AbstractSet](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractSet.html?is-external=true)<E>  
  An unmodifiable **view** of a set that may be backed by other sets.  
  If the decorated sets change, this view will change as well. The contents of this view can be transferred to another instance via the [copyInto(Set)](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#copyInto-S-) and [toSet()](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#toSet--) methods.Since: 4.1

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [SetView](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#SetView--)() |

### Method SummaryAll Methods Instance Methods Abstract Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + <S extends [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/SetUtils.SetView.html)>> void | * + [copyInto](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#copyInto-S-)(S set) Copies the contents of this view into the provided set. |
| * + protected abstract [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/SetUtils.SetView.html)> | * + [createIterator](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#createIterator--)() Return an iterator for this view; the returned iterator is not required to be unmodifiable. |
| * + [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/SetUtils.SetView.html)> | * + [iterator](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#iterator--)() |
| * + int | * + [size](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#size--)() |
| * + [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/SetUtils.SetView.html)> | * + [toSet](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html#toSet--)() Returns a new set containing the contents of this view. |

### Methods inherited from class java.util.[**AbstractSet**](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractSet.html?is-external=true)[equals](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractSet.html?is-external=true#equals-java.lang.Object-), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractSet.html?is-external=true#hashCode--), [removeAll](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractSet.html?is-external=true#removeAll-java.util.Collection-)

### Methods inherited from class java.util.[**AbstractCollection**](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true)[add](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#add-E-), [addAll](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#addAll-java.util.Collection-), [clear](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#clear--), [contains](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#contains-java.lang.Object-), [containsAll](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#containsAll-java.util.Collection-), [isEmpty](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#isEmpty--), [remove](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#remove-java.lang.Object-), [retainAll](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#retainAll-java.util.Collection-), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#toArray--), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#toArray-T:A-), [toString](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#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.[**Set**](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)[add](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#add-E-), [addAll](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#addAll-java.util.Collection-), [clear](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#clear--), [contains](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#contains-java.lang.Object-), [containsAll](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#containsAll-java.util.Collection-), [isEmpty](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#isEmpty--), [remove](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#remove-java.lang.Object-), [retainAll](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#retainAll-java.util.Collection-), [spliterator](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#spliterator--), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#toArray--), [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/Set.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--), [removeIf](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#removeIf-java.util.function.Predicate-), [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

#### SetView public SetView()

### Method Detail

#### copyInto public <S extends [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/SetUtils.SetView.html)>> void copyInto(S set) Copies the contents of this view into the provided set.Type Parameters: S - the set type Parameters: set - the set for copying the contents

#### createIterator protected abstract [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/SetUtils.SetView.html)> createIterator() Return an iterator for this view; the returned iterator is not required to be unmodifiable.Returns: a new iterator for this view

#### 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/SetUtils.SetView.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/SetUtils.SetView.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/SetUtils.SetView.html)> Specified by: [iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#iterator--) in interface [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/SetUtils.SetView.html)> Specified by: [iterator](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#iterator--) in class [AbstractCollection](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html)>

#### size public int size()Specified by: [size](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true#size--) 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/SetUtils.SetView.html)> Specified by: [size](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#size--) in interface [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/SetUtils.SetView.html)> Specified by: [size](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true#size--) in class [AbstractCollection](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractCollection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/SetUtils.SetView.html)>

#### toSet 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/SetUtils.SetView.html)> toSet() Returns a new set containing the contents of this view.Returns: a new set containing all elements of this view

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