JavaScript is disabled on your browser.

[Skip navigation links](#1fob9te)

* [Overview](http://docs.google.com/overview-summary.html)
* [Package](http://docs.google.com/package-summary.html)
* Class
* [Use](http://docs.google.com/class-use/PredicatedNavigableSet.html)
* [Tree](http://docs.google.com/package-tree.html)
* [Deprecated](http://docs.google.com/deprecated-list.html)
* [Index](http://docs.google.com/index-all.html)
* [Help](http://docs.google.com/help-doc.html)
* [Prev Class](http://docs.google.com/org/apache/commons/collections4/set/MapBackedSet.html)
* [Next Class](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html)
* [Frames](http://docs.google.com/index.html?org/apache/commons/collections4/set/PredicatedNavigableSet.html)
* [No Frames](http://docs.google.com/PredicatedNavigableSet.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)
* Summary:
* [Nested](#2et92p0) |
* [Field](#3dy6vkm) |
* [Constr](#1t3h5sf) |
* [Method](#4d34og8)
* Detail:
* Field |
* [Constr](#3j2qqm3) |
* [Method](#4i7ojhp)

org.apache.commons.collections4.set

## Class PredicatedNavigableSet<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.PredicatedCollection](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html)<E>
      * [org.apache.commons.collections4.set.PredicatedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html)<E>
        + [org.apache.commons.collections4.set.PredicatedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html)<E>

org.apache.commons.collections4.set.PredicatedNavigableSet<E>

* Type Parameters: E - the type of the elements in this set 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>, [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<E>, [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<E>, [SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)<E>  
    
  public class PredicatedNavigableSet<E>  
  extends [PredicatedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html)<E>  
  implements [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<E>  
  Decorates another NavigableSet to validate that all additions match a specified predicate.  
  This set exists to provide validation for the decorated set. It is normally created to decorate an empty set. If an object cannot be added to the set, an IllegalArgumentException is thrown.  
  One usage would be to ensure that no null entries are added to the set.  
   NavigableSet set =  
   PredicatedSortedSet.predicatedNavigableSet(new TreeSet(),  
   NotNullPredicate.notNullPredicate());  
   Since: 4.1 See Also: [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.set.PredicatedNavigableSet)

### Nested Class Summary

### Nested classes/interfaces inherited from class org.apache.commons.collections4.collection.[**PredicatedCollection**](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html)[PredicatedCollection.Builder](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.Builder.html)<[E](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.Builder.html)>

### Field Summary

### Fields inherited from class org.apache.commons.collections4.collection.[**PredicatedCollection**](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html)[predicate](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html#predicate)

### Constructor SummaryConstructors

|  |  |
| --- | --- |
| * + Modifier | * + Constructor and Description |
| * + protected | * + [PredicatedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#PredicatedNavigableSet-java.util.NavigableSet-org.apache.commons.collections4.Predicate-)([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> set, [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> predicate) Constructor that wraps (not copies). |

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

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) | * + [ceiling](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#ceiling-E-)([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e) |
| * + protected [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> | * + [decorated](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#decorated--)() Gets the navigable set being decorated. |
| * + [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/set/PredicatedNavigableSet.html)> | * + [descendingIterator](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#descendingIterator--)() |
| * + [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> | * + [descendingSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#descendingSet--)() |
| * + [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) | * + [floor](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#floor-E-)([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e) |
| * + [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> | * + [headSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#headSet-E-boolean-)([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) toElement, boolean inclusive) |
| * + [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) | * + [higher](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#higher-E-)([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e) |
| * + [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) | * + [lower](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#lower-E-)([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e) |
| * + [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) | * + [pollFirst](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#pollFirst--)() |
| * + [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) | * + [pollLast](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#pollLast--)() |
| * + static <E> [PredicatedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)<E> | * + [predicatedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#predicatedNavigableSet-java.util.NavigableSet-org.apache.commons.collections4.Predicate-)([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<E> set, [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super E> predicate) Factory method to create a predicated (validating) navigable set. |
| * + [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> | * + [subSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#subSet-E-boolean-E-boolean-)([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) fromElement, boolean fromInclusive, [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) toElement, boolean toInclusive) |
| * + [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> | * + [tailSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html#tailSet-E-boolean-)([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) fromElement, boolean inclusive) |

### Methods inherited from class org.apache.commons.collections4.set.[**PredicatedSortedSet**](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html)[comparator](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#comparator--), [first](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#first--), [headSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#headSet-E-), [last](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#last--), [predicatedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#predicatedSortedSet-java.util.SortedSet-org.apache.commons.collections4.Predicate-), [subSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#subSet-E-E-), [tailSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#tailSet-E-)

### Methods inherited from class org.apache.commons.collections4.set.[**PredicatedSet**](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html)[equals](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html#equals-java.lang.Object-), [hashCode](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html#hashCode--), [predicatedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html#predicatedSet-java.util.Set-org.apache.commons.collections4.Predicate-)

### Methods inherited from class org.apache.commons.collections4.collection.[**PredicatedCollection**](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html)[add](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html#add-E-), [addAll](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html#addAll-java.util.Collection-), [builder](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html#builder-org.apache.commons.collections4.Predicate-), [notNullBuilder](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html#notNullBuilder--), [predicatedCollection](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html#predicatedCollection-java.util.Collection-org.apache.commons.collections4.Predicate-), [validate](http://docs.google.com/org/apache/commons/collections4/collection/PredicatedCollection.html#validate-E-)

### Methods inherited from class org.apache.commons.collections4.collection.[**AbstractCollectionDecorator**](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html)[clear](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#clear--), [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--), [iterator](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#iterator--), [remove](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#remove-java.lang.Object-), [removeAll](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#removeAll-java.util.Collection-), [removeIf](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#removeIf-java.util.function.Predicate-), [retainAll](http://docs.google.com/org/apache/commons/collections4/collection/AbstractCollectionDecorator.html#retainAll-java.util.Collection-), [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.[**NavigableSet**](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)[headSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#headSet-E-), [iterator](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#iterator--), [subSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#subSet-E-E-), [tailSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#tailSet-E-)

### Methods inherited from interface java.util.[**SortedSet**](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)[comparator](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true#comparator--), [first](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true#first--), [last](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true#last--), [spliterator](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true#spliterator--)

### 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-), [equals](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#equals-java.lang.Object-), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#hashCode--), [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-), [removeAll](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#removeAll-java.util.Collection-), [retainAll](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#retainAll-java.util.Collection-), [size](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true#size--), [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

#### PredicatedNavigableSet protected PredicatedNavigableSet([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> set, [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> predicate) Constructor that wraps (not copies). If there are any elements already in the set being decorated, they are validated.Parameters: set - the set to decorate, must not be null predicate - the predicate to use for validation, must not be null Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if set or predicate is null [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if the set contains invalid elements

### Method Detail

#### predicatedNavigableSet public static <E> [PredicatedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)<E> predicatedNavigableSet([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<E> set, [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super E> predicate) Factory method to create a predicated (validating) navigable set. If there are any elements already in the set being decorated, they are validated.Type Parameters: E - the element type Parameters: set - the set to decorate, must not be null predicate - the predicate to use for validation, must not be null Returns: a new predicated navigable set. Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if set or predicate is null [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if the set contains invalid elements Since: 4.0

#### decorated protected [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> decorated() Gets the navigable set being decorated.Overrides: [decorated](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html#decorated--) in class [PredicatedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> Returns: the decorated navigable set

#### lower public [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) lower([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e)Specified by: [lower](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#lower-E-) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### floor public [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) floor([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e)Specified by: [floor](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#floor-E-) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### ceiling public [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) ceiling([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e)Specified by: [ceiling](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#ceiling-E-) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### higher public [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) higher([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) e)Specified by: [higher](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#higher-E-) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### pollFirst public [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) pollFirst()Specified by: [pollFirst](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#pollFirst--) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### pollLast public [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) pollLast()Specified by: [pollLast](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#pollLast--) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### descendingSet public [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> descendingSet()Specified by: [descendingSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#descendingSet--) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### descendingIterator 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/set/PredicatedNavigableSet.html)> descendingIterator()Specified by: [descendingIterator](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#descendingIterator--) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### subSet public [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> subSet([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) fromElement, boolean fromInclusive, [E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) toElement, boolean toInclusive)Specified by: [subSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#subSet-E-boolean-E-boolean-) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### headSet public [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> headSet([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) toElement, boolean inclusive)Specified by: [headSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#headSet-E-boolean-) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

#### tailSet public [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)> tailSet([E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html) fromElement, boolean inclusive)Specified by: [tailSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true#tailSet-E-boolean-) in interface [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)>

[Skip navigation links](#19c6y18)

* [Overview](http://docs.google.com/overview-summary.html)
* [Package](http://docs.google.com/package-summary.html)
* Class
* [Use](http://docs.google.com/class-use/PredicatedNavigableSet.html)
* [Tree](http://docs.google.com/package-tree.html)
* [Deprecated](http://docs.google.com/deprecated-list.html)
* [Index](http://docs.google.com/index-all.html)
* [Help](http://docs.google.com/help-doc.html)
* [Prev Class](http://docs.google.com/org/apache/commons/collections4/set/MapBackedSet.html)
* [Next Class](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html)
* [Frames](http://docs.google.com/index.html?org/apache/commons/collections4/set/PredicatedNavigableSet.html)
* [No Frames](http://docs.google.com/PredicatedNavigableSet.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)
* Summary:
* [Nested](#2et92p0) |
* [Field](#3dy6vkm) |
* [Constr](#1t3h5sf) |
* [Method](#4d34og8)
* Detail:
* Field |
* [Constr](#3j2qqm3) |
* [Method](#4i7ojhp)

Copyright © 2001–2019 [The Apache Software Foundation](https://www.apache.org/). All rights reserved.