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Package org.apache.commons.collections4.set

This package contains implementations of the [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true), [SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true) and [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true) interfaces.

See: [Description](#3znysh7)

* Interface Summary

|  |  |
| --- | --- |
| * Interface | * Description |
| * [CompositeSet.SetMutator](http://docs.google.com/org/apache/commons/collections4/set/CompositeSet.SetMutator.html)<E> | * Define callbacks for mutation operations. |

* Class Summary

|  |  |
| --- | --- |
| * Class | * Description |
| * [AbstractNavigableSetDecorator](http://docs.google.com/org/apache/commons/collections4/set/AbstractNavigableSetDecorator.html)<E> | * Decorates another NavigableSet to provide additional behaviour. |
| * [AbstractSerializableSetDecorator](http://docs.google.com/org/apache/commons/collections4/set/AbstractSerializableSetDecorator.html)<E> | * Serializable subclass of AbstractSetDecorator. |
| * [AbstractSetDecorator](http://docs.google.com/org/apache/commons/collections4/set/AbstractSetDecorator.html)<E> | * Decorates another Set to provide additional behaviour. |
| * [AbstractSortedSetDecorator](http://docs.google.com/org/apache/commons/collections4/set/AbstractSortedSetDecorator.html)<E> | * Decorates another SortedSet to provide additional behaviour. |
| * [CompositeSet](http://docs.google.com/org/apache/commons/collections4/set/CompositeSet.html)<E> | * Decorates a set of other sets to provide a single unified view. |
| * [ListOrderedSet](http://docs.google.com/org/apache/commons/collections4/set/ListOrderedSet.html)<E> | * Decorates another Set to ensure that the order of addition is retained and used by the iterator. |
| * [MapBackedSet](http://docs.google.com/org/apache/commons/collections4/set/MapBackedSet.html)<E,V> | * Decorates a Map to obtain Set behaviour. |
| * [PredicatedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedNavigableSet.html)<E> | * Decorates another NavigableSet to validate that all additions match a specified predicate. |
| * [PredicatedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSet.html)<E> | * Decorates another Set to validate that all additions match a specified predicate. |
| * [PredicatedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/PredicatedSortedSet.html)<E> | * Decorates another SortedSet to validate that all additions match a specified predicate. |
| * [TransformedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html)<E> | * Decorates another NavigableSet to transform objects that are added. |
| * [TransformedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html)<E> | * Decorates another Set to transform objects that are added. |
| * [TransformedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html)<E> | * Decorates another SortedSet to transform objects that are added. |
| * [UnmodifiableNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/UnmodifiableNavigableSet.html)<E> | * Decorates another NavigableSet to ensure it can't be altered. |
| * [UnmodifiableSet](http://docs.google.com/org/apache/commons/collections4/set/UnmodifiableSet.html)<E> | * Decorates another Set to ensure it can't be altered. |
| * [UnmodifiableSortedSet](http://docs.google.com/org/apache/commons/collections4/set/UnmodifiableSortedSet.html)<E> | * Decorates another SortedSet to ensure it can't be altered. |

## Package org.apache.commons.collections4.set Description

This package contains implementations of the [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true), [SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true) and [NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true) interfaces.

The implementations are in the form of direct implementations and decorators. A decorator wraps another implementation of the interface to add some specific additional functionality.

The following implementations are provided in the package:

* CompositeSet - a set that combines multiple sets into one

The following decorators are provided in the package:

* Unmodifiable - ensures the collection cannot be altered
* Predicated - ensures that only elements that are valid according to a predicate can be added
* Transformed - transforms each element added
* ListOrdered - ensures that insertion order is retained
* MapBackedSet - a set formed by decorating a Map

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