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/FixedOrderComparator.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/comparators/ComparatorChain.html)
* [Next Class](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html)
* [Frames](http://docs.google.com/index.html?org/apache/commons/collections4/comparators/FixedOrderComparator.html)
* [No Frames](http://docs.google.com/FixedOrderComparator.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)
* Summary:
* [Nested](#3znysh7) |
* Field |
* [Constr](#2et92p0) |
* [Method](#tyjcwt)
* Detail:
* Field |
* [Constr](#4d34og8) |
* [Method](#lnxbz9)

org.apache.commons.collections4.comparators

## Class FixedOrderComparator<T>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + org.apache.commons.collections4.comparators.FixedOrderComparator<T>
* Type Parameters: T - the type of objects compared by this comparator All Implemented Interfaces: [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true), [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<T>  
    
  public class FixedOrderComparator<T>  
  extends [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)  
  implements [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<T>, [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true)  
  A Comparator which imposes a specific order on a specific set of Objects. Objects are presented to the FixedOrderComparator in a specified order and subsequent calls to [compare](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#compare-T-T-) yield that order. For example:  
   String[] planets = {"Mercury", "Venus", "Earth", "Mars"};  
   FixedOrderComparator distanceFromSun = new FixedOrderComparator(planets);  
   Arrays.sort(planets); // Sort to alphabetical order  
   Arrays.sort(planets, distanceFromSun); // Back to original order  
     
  Once compare has been called, the FixedOrderComparator is locked and attempts to modify it yield an UnsupportedOperationException.  
  Instances of FixedOrderComparator are not synchronized. The class is not thread-safe at construction time, but it is thread-safe to perform multiple comparisons after all the setup operations are complete.  
  This class is Serializable from Commons Collections 4.0.Since: 3.0 See Also: [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.comparators.FixedOrderComparator)

### Nested Class SummaryNested Classes

|  |  |
| --- | --- |
| * + Modifier and Type | * + Class and Description |
| * + static class | * + [FixedOrderComparator.UnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html) Unknown object behavior enum. |

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [FixedOrderComparator](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#FixedOrderComparator--)() Constructs an empty FixedOrderComparator. |
| * + [FixedOrderComparator](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#FixedOrderComparator-java.util.List-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html)> items) Constructs a FixedOrderComparator which uses the order of the given list to compare the objects. |
| * + [FixedOrderComparator](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#FixedOrderComparator-T...-)([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html)... items) Constructs a FixedOrderComparator which uses the order of the given array to compare the objects. |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + boolean | * + [add](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#add-T-)([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) obj) Adds an item, which compares as after all items known to the Comparator. |
| * + boolean | * + [addAsEqual](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#addAsEqual-T-T-)([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) existingObj, [T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) newObj) Adds a new item, which compares as equal to the given existing item. |
| * + protected void | * + [checkLocked](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#checkLocked--)() Checks to see whether the comparator is now locked against further changes. |
| * + int | * + [compare](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#compare-T-T-)([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) obj1, [T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) obj2) Compares two objects according to the order of this Comparator. |
| * + boolean | * + [equals](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#equals-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) object) Returns true iff *that* Object is is a [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true) whose ordering is known to be equivalent to mine. |
| * + [FixedOrderComparator.UnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html) | * + [getUnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#getUnknownObjectBehavior--)() Gets the behavior for comparing unknown objects. |
| * + int | * + [hashCode](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#hashCode--)() Implement a hash code for this comparator that is consistent with [equals](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#equals-java.lang.Object-). |
| * + boolean | * + [isLocked](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#isLocked--)() Returns true if modifications cannot be made to the FixedOrderComparator. |
| * + void | * + [setUnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#setUnknownObjectBehavior-org.apache.commons.collections4.comparators.FixedOrderComparator.UnknownObjectBehavior-)([FixedOrderComparator.UnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html) unknownObjectBehavior) Sets the behavior for comparing unknown objects. |

### 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--), [toString](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#toString--), [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.[**Comparator**](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)[comparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparing-java.util.function.Function-), [comparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparing-java.util.function.Function-java.util.Comparator-), [comparingDouble](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparingDouble-java.util.function.ToDoubleFunction-), [comparingInt](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparingInt-java.util.function.ToIntFunction-), [comparingLong](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparingLong-java.util.function.ToLongFunction-), [naturalOrder](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#naturalOrder--), [nullsFirst](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#nullsFirst-java.util.Comparator-), [nullsLast](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#nullsLast-java.util.Comparator-), [reversed](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#reversed--), [reverseOrder](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#reverseOrder--), [thenComparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparing-java.util.Comparator-), [thenComparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparing-java.util.function.Function-), [thenComparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparing-java.util.function.Function-java.util.Comparator-), [thenComparingDouble](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparingDouble-java.util.function.ToDoubleFunction-), [thenComparingInt](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparingInt-java.util.function.ToIntFunction-), [thenComparingLong](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparingLong-java.util.function.ToLongFunction-)

### Constructor Detail

#### FixedOrderComparator public FixedOrderComparator() Constructs an empty FixedOrderComparator.

#### FixedOrderComparator public FixedOrderComparator([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html)... items) Constructs a FixedOrderComparator which uses the order of the given array to compare the objects. The array is copied, so later changes will not affect the comparator.Parameters: items - the items that the comparator can compare in order Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if the array is null

#### FixedOrderComparator public FixedOrderComparator([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html)> items) Constructs a FixedOrderComparator which uses the order of the given list to compare the objects. The list is copied, so later changes will not affect the comparator.Parameters: items - the items that the comparator can compare in order Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if the list is null

### Method Detail

#### isLocked public boolean isLocked() Returns true if modifications cannot be made to the FixedOrderComparator. FixedOrderComparators cannot be modified once they have performed a comparison.Returns: true if attempts to change the FixedOrderComparator yield an UnsupportedOperationException, false if it can be changed.

#### checkLocked protected void checkLocked() Checks to see whether the comparator is now locked against further changes.Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - if the comparator is locked

#### getUnknownObjectBehavior public [FixedOrderComparator.UnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html) getUnknownObjectBehavior() Gets the behavior for comparing unknown objects.Returns: [FixedOrderComparator.UnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html)

#### setUnknownObjectBehavior public void setUnknownObjectBehavior([FixedOrderComparator.UnknownObjectBehavior](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html) unknownObjectBehavior) Sets the behavior for comparing unknown objects.Parameters: unknownObjectBehavior - the flag for unknown behaviour - UNKNOWN\_AFTER, UNKNOWN\_BEFORE or UNKNOWN\_THROW\_EXCEPTION Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - if a comparison has been performed [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if unknownObjectBehavior is null

#### add public boolean add([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) obj) Adds an item, which compares as after all items known to the Comparator. If the item is already known to the Comparator, its old position is replaced with the new position.Parameters: obj - the item to be added to the Comparator. Returns: true if obj has been added for the first time, false if it was already known to the Comparator. Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - if a comparison has already been made

#### addAsEqual public boolean addAsEqual([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) existingObj, [T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) newObj) Adds a new item, which compares as equal to the given existing item.Parameters: existingObj - an item already in the Comparator's set of known objects newObj - an item to be added to the Comparator's set of known objects Returns: true if newObj has been added for the first time, false if it was already known to the Comparator. Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if existingObject is not in the Comparator's set of known objects. [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - if a comparison has already been made

#### compare public int compare([T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) obj1, [T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) obj2) Compares two objects according to the order of this Comparator. It is important to note that this class will throw an IllegalArgumentException in the case of an unrecognized object. This is not specified in the Comparator interface, but is the most appropriate exception.Specified by: [compare](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#compare-T-T-) in interface [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<[T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html)> Parameters: obj1 - the first object to compare obj2 - the second object to compare Returns: negative if obj1 is less, positive if greater, zero if equal Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if obj1 or obj2 are not known to this Comparator and an alternative behavior has not been set via [setUnknownObjectBehavior(UnknownObjectBehavior)](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#setUnknownObjectBehavior-org.apache.commons.collections4.comparators.FixedOrderComparator.UnknownObjectBehavior-).

#### hashCode public int hashCode() Implement a hash code for this comparator that is consistent with [equals](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html#equals-java.lang.Object-).Overrides: [hashCode](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#hashCode--) in class [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) Returns: a hash code for this comparator.

#### equals public boolean equals([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) object) Returns true iff *that* Object is is a [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true) whose ordering is known to be equivalent to mine. This implementation returns true iff *that* is a [FixedOrderComparator](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html) whose attributes are equal to mine.Specified by: [equals](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#equals-java.lang.Object-) in interface [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<[T](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.html)> Overrides: [equals](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#equals-java.lang.Object-) in class [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) Parameters: object - the object to compare to Returns: true if equal

[Skip navigation links](#1pxezwc)

* [Overview](http://docs.google.com/overview-summary.html)
* [Package](http://docs.google.com/package-summary.html)
* Class
* [Use](http://docs.google.com/class-use/FixedOrderComparator.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/comparators/ComparatorChain.html)
* [Next Class](http://docs.google.com/org/apache/commons/collections4/comparators/FixedOrderComparator.UnknownObjectBehavior.html)
* [Frames](http://docs.google.com/index.html?org/apache/commons/collections4/comparators/FixedOrderComparator.html)
* [No Frames](http://docs.google.com/FixedOrderComparator.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)
* Summary:
* [Nested](#3znysh7) |
* Field |
* [Constr](#2et92p0) |
* [Method](#tyjcwt)
* Detail:
* Field |
* [Constr](#4d34og8) |
* [Method](#lnxbz9)

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