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org.apache.commons.collections4.iterators

## Class ListIteratorWrapper<E>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + org.apache.commons.collections4.iterators.ListIteratorWrapper<E>
* All Implemented Interfaces: [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<E>, [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<E>, [OrderedIterator](http://docs.google.com/org/apache/commons/collections4/OrderedIterator.html)<E>, [ResettableIterator](http://docs.google.com/org/apache/commons/collections4/ResettableIterator.html)<E>, [ResettableListIterator](http://docs.google.com/org/apache/commons/collections4/ResettableListIterator.html)<E>  
    
  public class ListIteratorWrapper<E>  
  extends [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)  
  implements [ResettableListIterator](http://docs.google.com/org/apache/commons/collections4/ResettableListIterator.html)<E>  
  Converts an [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true) into a [ResettableListIterator](http://docs.google.com/org/apache/commons/collections4/ResettableListIterator.html). For plain Iterators this is accomplished by caching the returned elements. This class can also be used to simply add [ResettableIterator](http://docs.google.com/org/apache/commons/collections4/ResettableIterator.html) functionality to a given [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true).  
  The ListIterator interface has additional useful methods for navigation - previous() and the index methods. This class allows a regular Iterator to behave as a ListIterator. It achieves this by building a list internally of as the underlying iterator is traversed.  
  The optional operations of ListIterator are not supported for plain Iterators.  
  This class implements ResettableListIterator from Commons Collections 3.2.Since: 2.1

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [ListIteratorWrapper](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#ListIteratorWrapper-java.util.Iterator-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> iterator) Constructs a new ListIteratorWrapper that will wrap the given iterator. |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + void | * + [add](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#add-E-)([E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) obj) Throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) unless the underlying Iterator is a ListIterator. |
| * + boolean | * + [hasNext](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#hasNext--)() Returns true if there are more elements in the iterator. |
| * + boolean | * + [hasPrevious](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#hasPrevious--)() Returns true if there are previous elements in the iterator. |
| * + [E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) | * + [next](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#next--)() Returns the next element from the iterator. |
| * + int | * + [nextIndex](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#nextIndex--)() Returns the index of the next element. |
| * + [E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) | * + [previous](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#previous--)() Returns the previous element. |
| * + int | * + [previousIndex](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#previousIndex--)() Returns the index of the previous element. |
| * + void | * + [remove](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#remove--)() Throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) if [previous()](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#previous--) has ever been called. |
| * + void | * + [reset](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#reset--)() Resets this iterator back to the position at which the iterator was created. |
| * + void | * + [set](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#set-E-)([E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) obj) Throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) unless the underlying Iterator is a ListIterator. |

### 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--), [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.[**Iterator**](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)[forEachRemaining](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true#forEachRemaining-java.util.function.Consumer-)

### Constructor Detail

#### ListIteratorWrapper public ListIteratorWrapper([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> iterator) Constructs a new ListIteratorWrapper that will wrap the given iterator.Parameters: iterator - the iterator to wrap Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if the iterator is null

### Method Detail

#### add public void add([E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) obj) throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) Throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) unless the underlying Iterator is a ListIterator.Specified by: [add](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#add-E-) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Parameters: obj - the object to add Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - if the underlying iterator is not of type [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)

#### hasNext public boolean hasNext() Returns true if there are more elements in the iterator.Specified by: [hasNext](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true#hasNext--) in interface [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/iterators/ListIteratorWrapper.html)> Specified by: [hasNext](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#hasNext--) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Returns: true if there are more elements

#### hasPrevious public boolean hasPrevious() Returns true if there are previous elements in the iterator.Specified by: [hasPrevious](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#hasPrevious--) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Specified by: [hasPrevious](http://docs.google.com/org/apache/commons/collections4/OrderedIterator.html#hasPrevious--) in interface [OrderedIterator](http://docs.google.com/org/apache/commons/collections4/OrderedIterator.html)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Returns: true if there are previous elements

#### next public [E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) next() throws [NoSuchElementException](https://docs.oracle.com/javase/7/docs/api/java/util/NoSuchElementException.html?is-external=true) Returns the next element from the iterator.Specified by: [next](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true#next--) in interface [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/iterators/ListIteratorWrapper.html)> Specified by: [next](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#next--) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Returns: the next element from the iterator Throws: [NoSuchElementException](https://docs.oracle.com/javase/7/docs/api/java/util/NoSuchElementException.html?is-external=true) - if there are no more elements

#### nextIndex public int nextIndex() Returns the index of the next element.Specified by: [nextIndex](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#nextIndex--) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Returns: the index of the next element

#### previous public [E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) previous() throws [NoSuchElementException](https://docs.oracle.com/javase/7/docs/api/java/util/NoSuchElementException.html?is-external=true) Returns the previous element.Specified by: [previous](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#previous--) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Specified by: [previous](http://docs.google.com/org/apache/commons/collections4/OrderedIterator.html#previous--) in interface [OrderedIterator](http://docs.google.com/org/apache/commons/collections4/OrderedIterator.html)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Returns: the previous element Throws: [NoSuchElementException](https://docs.oracle.com/javase/7/docs/api/java/util/NoSuchElementException.html?is-external=true) - if there are no previous elements

#### previousIndex public int previousIndex() Returns the index of the previous element.Specified by: [previousIndex](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#previousIndex--) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Returns: the index of the previous element

#### remove public void remove() throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) Throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) if [previous()](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html#previous--) has ever been called.Specified by: [remove](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true#remove--) in interface [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/iterators/ListIteratorWrapper.html)> Specified by: [remove](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#remove--) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - always

#### set public void set([E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html) obj) throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) Throws [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) unless the underlying Iterator is a ListIterator.Specified by: [set](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true#set-E-) in interface [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Parameters: obj - the object to set Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - if the underlying iterator is not of type [ListIterator](https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html?is-external=true)

#### reset public void reset() Resets this iterator back to the position at which the iterator was created.Specified by: [reset](http://docs.google.com/org/apache/commons/collections4/ResettableIterator.html#reset--) in interface [ResettableIterator](http://docs.google.com/org/apache/commons/collections4/ResettableIterator.html)<[E](http://docs.google.com/org/apache/commons/collections4/iterators/ListIteratorWrapper.html)> Since: 3.2

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