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org.apache.commons.collections4.iterators

## Class PeekingIterator<E>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + org.apache.commons.collections4.iterators.PeekingIterator<E>
* All Implemented Interfaces: [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<E>  
    
  public class PeekingIterator<E>  
  extends [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)  
  implements [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<E>  
  Decorates an iterator to support one-element lookahead while iterating.  
  The decorator supports the removal operation, but an [IllegalStateException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalStateException.html?is-external=true) will be thrown if [remove()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#remove--) is called directly after a call to [peek()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#peek--) or [element()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#element--).Since: 4.0

### Constructor SummaryConstructors

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

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

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + [E](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html) | * + [element](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#element--)() Returns the next element in iteration without advancing the underlying iterator. |
| * + boolean | * + [hasNext](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#hasNext--)() |
| * + [E](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html) | * + [next](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#next--)() |
| * + [E](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html) | * + [peek](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#peek--)() Returns the next element in iteration without advancing the underlying iterator. |
| * + static <E> [PeekingIterator](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html)<E> | * + [peekingIterator](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#peekingIterator-java.util.Iterator-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends E> iterator) Decorates the specified iterator to support one-element lookahead. |
| * + void | * + [remove](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#remove--)() |

### 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

#### PeekingIterator public PeekingIterator([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/PeekingIterator.html)> iterator) Constructor.Parameters: iterator - the iterator to decorate

### Method Detail

#### peekingIterator public static <E> [PeekingIterator](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html)<E> peekingIterator([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends E> iterator) Decorates the specified iterator to support one-element lookahead. If the iterator is already a [PeekingIterator](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html) it is returned directly.Type Parameters: E - the element type Parameters: iterator - the iterator to decorate Returns: a new peeking iterator Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if the iterator is null

#### hasNext public boolean hasNext()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/PeekingIterator.html)>

#### peek public [E](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html) peek() Returns the next element in iteration without advancing the underlying iterator. If the iterator is already exhausted, null will be returned. Note: this method does not throw a [NoSuchElementException](https://docs.oracle.com/javase/7/docs/api/java/util/NoSuchElementException.html?is-external=true) if the iterator is already exhausted. If you want such a behavior, use [element()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#element--) instead. The rationale behind this is to follow the [Queue](https://docs.oracle.com/javase/7/docs/api/java/util/Queue.html?is-external=true) interface which uses the same terminology.Returns: the next element from the iterator

#### element public [E](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html) element() Returns the next element in iteration without advancing the underlying iterator. If the iterator is already exhausted, null will be returned.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 the iterator is already exhausted according to [hasNext()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#hasNext--)

#### next public [E](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html) next()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/PeekingIterator.html)>

#### remove public void remove()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/PeekingIterator.html)> Throws: [IllegalStateException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalStateException.html?is-external=true) - if [peek()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#peek--) or [element()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#element--) has been called prior to the call to [remove()](http://docs.google.com/org/apache/commons/collections4/iterators/PeekingIterator.html#remove--)

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