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org.apache.commons.collections4.iterators

## Class TransformIterator<I,O>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + org.apache.commons.collections4.iterators.TransformIterator<I,O>
* All Implemented Interfaces: [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<O>  
    
  public class TransformIterator<I,O>  
  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)<O>  
  Decorates an iterator such that each element returned is transformed.Since: 1.0

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [TransformIterator](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#TransformIterator--)() Constructs a new TransformIterator that will not function until the [setIterator](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#setIterator-java.util.Iterator-) and [setTransformer(Transformer)](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#setTransformer-org.apache.commons.collections4.Transformer-) methods are invoked. |
| * + [TransformIterator](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#TransformIterator-java.util.Iterator-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> iterator) Constructs a new TransformIterator that won't transform elements from the given iterator. |
| * + [TransformIterator](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#TransformIterator-java.util.Iterator-org.apache.commons.collections4.Transformer-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> iterator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> transformer) Constructs a new TransformIterator that will use the given iterator and transformer. |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> | * + [getIterator](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#getIterator--)() Gets the iterator this iterator is using. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> | * + [getTransformer](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#getTransformer--)() Gets the transformer this iterator is using. |
| * + boolean | * + [hasNext](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#hasNext--)() |
| * + [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html) | * + [next](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#next--)() Gets the next object from the iteration, transforming it using the current transformer. |
| * + void | * + [remove](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#remove--)() |
| * + void | * + [setIterator](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#setIterator-java.util.Iterator-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> iterator) Sets the iterator for this iterator to use. |
| * + void | * + [setTransformer](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#setTransformer-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> transformer) Sets the transformer this the iterator to use. |
| * + protected [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html) | * + [transform](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#transform-I-)([I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html) source) Transforms the given object using the transformer. |

### 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

#### TransformIterator public TransformIterator() Constructs a new TransformIterator that will not function until the [setIterator](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#setIterator-java.util.Iterator-) and [setTransformer(Transformer)](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#setTransformer-org.apache.commons.collections4.Transformer-) methods are invoked.

#### TransformIterator public TransformIterator([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> iterator) Constructs a new TransformIterator that won't transform elements from the given iterator.Parameters: iterator - the iterator to use

#### TransformIterator public TransformIterator([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> iterator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> transformer) Constructs a new TransformIterator that will use the given iterator and transformer. If the given transformer is null, then objects will not be transformed.Parameters: iterator - the iterator to use transformer - the transformer to use

### Method Detail

#### 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)<[O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)>

#### next public [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html) next() Gets the next object from the iteration, transforming it using the current transformer. If the transformer is null, no transformation occurs and the object from the iterator is returned directly.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)<[O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> Returns: the next object Throws: [NoSuchElementException](https://docs.oracle.com/javase/7/docs/api/java/util/NoSuchElementException.html?is-external=true) - if there are no more elements

#### 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)<[O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)>

#### getIterator public [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> getIterator() Gets the iterator this iterator is using.Returns: the iterator.

#### setIterator public void setIterator([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> iterator) Sets the iterator for this iterator to use. If iteration has started, this effectively resets the iterator.Parameters: iterator - the iterator to use

#### getTransformer public [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> getTransformer() Gets the transformer this iterator is using.Returns: the transformer.

#### setTransformer public void setTransformer([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html)> transformer) Sets the transformer this the iterator to use. A null transformer is a no-op transformer.Parameters: transformer - the transformer to use

#### transform protected [O](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html) transform([I](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html) source) Transforms the given object using the transformer. If the transformer is null, the original object is returned as-is.Parameters: source - the object to transform Returns: the transformed object

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