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](http://docs.google.com/org/apache/commons/collections4/Transformer.html)
* Use
* [Tree](http://docs.google.com/overview-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
* Next
* [Frames](http://docs.google.com/index.html?org/apache/commons/collections4/class-use/Transformer.html)
* [No Frames](http://docs.google.com/Transformer.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)

Uses of Interface

org.apache.commons.collections4.Transformer

* Packages that use [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * Package | * Description |
| * [org.apache.commons.collections4](#3znysh7) | * This package contains the interfaces and utilities shared across all the subpackages of this component. |
| * [org.apache.commons.collections4.bag](#2et92p0) | * This package contains implementations of the [Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html) and [SortedBag](http://docs.google.com/org/apache/commons/collections4/SortedBag.html) interfaces. |
| * [org.apache.commons.collections4.collection](#tyjcwt) | * This package contains implementations of the [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true) interface. |
| * [org.apache.commons.collections4.comparators](#3dy6vkm) | * This package contains implementations of the [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true) interface. |
| * [org.apache.commons.collections4.functors](#1t3h5sf) | * This package contains implementations of the [Closure](http://docs.google.com/org/apache/commons/collections4/Closure.html), [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html), [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html) and [Factory](http://docs.google.com/org/apache/commons/collections4/Factory.html) interfaces. |
| * [org.apache.commons.collections4.iterators](#4d34og8) | * This package contains implementations of the [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true) interface. |
| * [org.apache.commons.collections4.list](#2s8eyo1) | * This package contains implementations of the [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true) interface. |
| * [org.apache.commons.collections4.map](#17dp8vu) | * This package contains implementations of the [Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true), [IterableMap](http://docs.google.com/org/apache/commons/collections4/IterableMap.html), [OrderedMap](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html) and [SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true) interfaces. |
| * [org.apache.commons.collections4.multimap](#3rdcrjn) | * This package contains implementations of the [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html) interfaces. |
| * [org.apache.commons.collections4.queue](#26in1rg) | * This package contains implementations for the [Queue](https://docs.oracle.com/javase/7/docs/api/java/util/Queue.html?is-external=true) interface. |
| * [org.apache.commons.collections4.set](#lnxbz9) | * 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. |
| * [org.apache.commons.collections4.splitmap](#35nkun2) | * The "split map" concept is that of an object that implements the [Put](http://docs.google.com/org/apache/commons/collections4/Put.html) and [Get](http://docs.google.com/org/apache/commons/collections4/Get.html) interfaces, with *differing* generic types. |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4**](http://docs.google.com/org/apache/commons/collections4/package-summary.html)Methods in [org.apache.commons.collections4](http://docs.google.com/org/apache/commons/collections4/package-summary.html) that return [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[asTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#asTransformer-org.apache.commons.collections4.Closure-)([Closure](http://docs.google.com/org/apache/commons/collections4/Closure.html)<? super T> closure) Creates a Transformer that calls a Closure each time the transformer is used. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[asTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#asTransformer-org.apache.commons.collections4.Factory-)([Factory](http://docs.google.com/org/apache/commons/collections4/Factory.html)<? extends O> factory) Creates a Transformer that calls a Factory each time the transformer is used. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,[Boolean](https://docs.oracle.com/javase/7/docs/api/java/lang/Boolean.html?is-external=true)> | * + TransformerUtils.[asTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#asTransformer-org.apache.commons.collections4.Predicate-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate) Creates a Transformer that calls a Predicate each time the transformer is used. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#chainedTransformer-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>> transformers) Create a new Transformer that calls each transformer in turn, passing the result into the next transformer. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#chainedTransformer-org.apache.commons.collections4.Transformer...-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>... transformers) Create a new Transformer that calls each transformer in turn, passing the result into the next transformer. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[cloneTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#cloneTransformer--)() Gets a transformer that returns a clone of the input object. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[constantTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#constantTransformer-O-)(O constantToReturn) Creates a Transformer that will return the same object each time the transformer is used. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[exceptionTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#exceptionTransformer--)() Gets a transformer that always throws an exception. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Create a new Transformer that calls one of two transformers depending on the specified predicate. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T> trueTransformer) Create a new Transformer that calls the transformer if the predicate is true, otherwise the input object is returned unchanged. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<? extends T>,T> | * + TransformerUtils.[instantiateTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#instantiateTransformer--)() Gets a Transformer that expects an input Class object that it will instantiate. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<? extends T>,T> | * + TransformerUtils.[instantiateTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#instantiateTransformer-java.lang.Class:A-java.lang.Object:A-)([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?>[] paramTypes, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[] args) Creates a Transformer that expects an input Class object that it will instantiate. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[invokerTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#invokerTransformer-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) methodName) Gets a Transformer that invokes a method on the input object. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[invokerTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#invokerTransformer-java.lang.String-java.lang.Class:A-java.lang.Object:A-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) methodName, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?>[] paramTypes, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[] args) Gets a Transformer that invokes a method on the input object. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[mapTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#mapTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<? super I,? extends O> map) Creates a Transformer that uses the passed in Map to transform the input object (as a simple lookup). |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[nopTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#nopTransformer--)() Gets a transformer that returns the input object. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[nullTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#nullTransformer--)() Gets a transformer that always returns null. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> | * + TransformerUtils.[stringValueTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#stringValueTransformer--)() Gets a transformer that returns a java.lang.String representation of the input object. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchMapTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchMapTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<I,[Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O>> objectsAndTransformers) Create a new Transformer that uses the input object as a key to find the transformer to call. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<I>,[Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O>> predicatesAndTransformers) Create a new Transformer that calls one of the transformers depending on the predicates. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers) Create a new Transformer that calls one of the transformers depending on the predicates. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> defaultTransformer) Create a new Transformer that calls one of the transformers depending on the predicates. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Deprecated.  as of 4.1, use [TransformerUtils.ifTransformer(Predicate, Transformer, Transformer)](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-) |

* + Methods in [org.apache.commons.collections4](http://docs.google.com/org/apache/commons/collections4/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <E> [Closure](http://docs.google.com/org/apache/commons/collections4/Closure.html)<E> | * + ClosureUtils.[asClosure](http://docs.google.com/org/apache/commons/collections4/ClosureUtils.html#asClosure-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,?> transformer) Creates a Closure that calls a Transformer each time it is called. |
| * + static <T> [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<T> | * + PredicateUtils.[asPredicate](http://docs.google.com/org/apache/commons/collections4/PredicateUtils.html#asPredicate-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,[Boolean](https://docs.oracle.com/javase/7/docs/api/java/lang/Boolean.html?is-external=true)> transformer) Create a new Predicate that wraps a Transformer. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#chainedTransformer-org.apache.commons.collections4.Transformer...-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>... transformers) Create a new Transformer that calls each transformer in turn, passing the result into the next transformer. |
| * + static <I,O,R extends [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? super O>> R | * + CollectionUtils.[collect](http://docs.google.com/org/apache/commons/collections4/CollectionUtils.html#collect-java.lang.Iterable-org.apache.commons.collections4.Transformer-R-)([Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<? extends I> inputCollection, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> transformer, R outputCollection) Transforms all elements from input collection with the given transformer and adds them to the output collection. |
| * + static <I,O> [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<O> | * + CollectionUtils.[collect](http://docs.google.com/org/apache/commons/collections4/CollectionUtils.html#collect-java.lang.Iterable-org.apache.commons.collections4.Transformer-)([Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<I> inputCollection, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> transformer) Returns a new Collection containing all elements of the input collection transformed by the given transformer. |
| * + static <I,O,R extends [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? super O>> R | * + CollectionUtils.[collect](http://docs.google.com/org/apache/commons/collections4/CollectionUtils.html#collect-java.util.Iterator-org.apache.commons.collections4.Transformer-R-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<? extends I> inputIterator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> transformer, R outputCollection) Transforms all elements from the input iterator with the given transformer and adds them to the output collection. |
| * + static <I,O> [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<O> | * + CollectionUtils.[collect](http://docs.google.com/org/apache/commons/collections4/CollectionUtils.html#collect-java.util.Iterator-org.apache.commons.collections4.Transformer-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<I> inputIterator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> transformer) Transforms all elements from the input iterator with the given transformer and adds them to the output collection. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Create a new Transformer that calls one of two transformers depending on the specified predicate. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Create a new Transformer that calls one of two transformers depending on the specified predicate. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T> trueTransformer) Create a new Transformer that calls the transformer if the predicate is true, otherwise the input object is returned unchanged. |
| * + static <E> [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> | * + ListUtils.[lazyList](http://docs.google.com/org/apache/commons/collections4/ListUtils.html#lazyList-java.util.List-org.apache.commons.collections4.Transformer-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> list, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[Integer](https://docs.oracle.com/javase/7/docs/api/java/lang/Integer.html?is-external=true),? extends E> transformer) Returns a "lazy" list whose elements will be created on demand. |
| * + static <K,V> [IterableMap](http://docs.google.com/org/apache/commons/collections4/IterableMap.html)<K,V> | * + MapUtils.[lazyMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#lazyMap-java.util.Map-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends V> transformerFactory) Returns a "lazy" map whose values will be created on demand. |
| * + static <K,V> [SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> | * + MapUtils.[lazySortedMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#lazySortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends V> transformerFactory) Returns a "lazy" sorted map whose values will be created on demand. |
| * + static <E> [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<E> | * + IteratorUtils.[objectGraphIterator](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#objectGraphIterator-E-org.apache.commons.collections4.Transformer-)(E root, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Gets an iterator that operates over an object graph. |
| * + static <K,V,E> void | * + MapUtils.[populateMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#populateMap-java.util.Map-java.lang.Iterable-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<? extends E> elements, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,V> valueTransformer) Populates a Map using the supplied Transformers to transform the elements into keys and values. |
| * + static <K,V,E> void | * + MapUtils.[populateMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#populateMap-java.util.Map-java.lang.Iterable-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<? extends E> elements, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,V> valueTransformer) Populates a Map using the supplied Transformers to transform the elements into keys and values. |
| * + static <K,V> void | * + MapUtils.[populateMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#populateMap-java.util.Map-java.lang.Iterable-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<? extends V> elements, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<V,K> keyTransformer) Populates a Map using the supplied Transformer to transform the elements into keys, using the unaltered element as the value in the Map. |
| * + static <K,V,E> void | * + MapUtils.[populateMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#populateMap-org.apache.commons.collections4.MultiMap-java.lang.Iterable-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiMap](http://docs.google.com/org/apache/commons/collections4/MultiMap.html)<K,V> map, [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<? extends E> elements, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,V> valueTransformer) Populates a MultiMap using the supplied Transformers to transform the elements into keys and values. |
| * + static <K,V,E> void | * + MapUtils.[populateMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#populateMap-org.apache.commons.collections4.MultiMap-java.lang.Iterable-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiMap](http://docs.google.com/org/apache/commons/collections4/MultiMap.html)<K,V> map, [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<? extends E> elements, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<E,V> valueTransformer) Populates a MultiMap using the supplied Transformers to transform the elements into keys and values. |
| * + static <K,V> void | * + MapUtils.[populateMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#populateMap-org.apache.commons.collections4.MultiMap-java.lang.Iterable-org.apache.commons.collections4.Transformer-)([MultiMap](http://docs.google.com/org/apache/commons/collections4/MultiMap.html)<K,V> map, [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<? extends V> elements, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<V,K> keyTransformer) Populates a MultiMap using the supplied Transformer to transform the elements into keys, using the unaltered element as the value in the MultiMap. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers) Create a new Transformer that calls one of the transformers depending on the predicates. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> defaultTransformer) Create a new Transformer that calls one of the transformers depending on the predicates. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> defaultTransformer) Create a new Transformer that calls one of the transformers depending on the predicates. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Deprecated.  as of 4.1, use [TransformerUtils.ifTransformer(Predicate, Transformer, Transformer)](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-) |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Deprecated.  as of 4.1, use [TransformerUtils.ifTransformer(Predicate, Transformer, Transformer)](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-) |
| * + static <E> [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + IterableUtils.[toString](http://docs.google.com/org/apache/commons/collections4/IterableUtils.html#toString-java.lang.Iterable-org.apache.commons.collections4.Transformer-)([Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<E> iterable, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> transformer) Returns a string representation of the elements of the specified iterable. |
| * + static <E> [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + IterableUtils.[toString](http://docs.google.com/org/apache/commons/collections4/IterableUtils.html#toString-java.lang.Iterable-org.apache.commons.collections4.Transformer-java.lang.String-java.lang.String-java.lang.String-)([Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<E> iterable, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> transformer, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) delimiter, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) prefix, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) suffix) Returns a string representation of the elements of the specified iterable. |
| * + static <E> [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + IteratorUtils.[toString](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#toString-java.util.Iterator-org.apache.commons.collections4.Transformer-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<E> iterator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> transformer) Returns a string representation of the elements of the specified iterator. |
| * + static <E> [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + IteratorUtils.[toString](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#toString-java.util.Iterator-org.apache.commons.collections4.Transformer-java.lang.String-java.lang.String-java.lang.String-)([Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<E> iterator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> transformer, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) delimiter, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) prefix, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) suffix) Returns a string representation of the elements of the specified iterator. |
| * + static <C> void | * + CollectionUtils.[transform](http://docs.google.com/org/apache/commons/collections4/CollectionUtils.html#transform-java.util.Collection-org.apache.commons.collections4.Transformer-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<C> collection, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super C,? extends C> transformer) Transform the collection by applying a Transformer to each element. |
| * + <O> [FluentIterable](http://docs.google.com/org/apache/commons/collections4/FluentIterable.html)<O> | * + FluentIterable.[transform](http://docs.google.com/org/apache/commons/collections4/FluentIterable.html#transform-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/FluentIterable.html),? extends O> transformer) Returns a new FluentIterable whose iterator will return all elements of this iterable transformed by the provided transformer. |
| * + static <I,O> [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<I> | * + ComparatorUtils.[transformedComparator](http://docs.google.com/org/apache/commons/collections4/ComparatorUtils.html#transformedComparator-java.util.Comparator-org.apache.commons.collections4.Transformer-)([Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<O> comparator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> transformer) Gets a Comparator that passes transformed objects to the given comparator. |
| * + static <I,O> [Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<O> | * + IterableUtils.[transformedIterable](http://docs.google.com/org/apache/commons/collections4/IterableUtils.html#transformedIterable-java.lang.Iterable-org.apache.commons.collections4.Transformer-)([Iterable](https://docs.oracle.com/javase/7/docs/api/java/lang/Iterable.html?is-external=true)<I> iterable, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> transformer) Returns a transformed view of the given iterable where all of its elements have been transformed by the provided transformer. |
| * + static <I,O> [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html?is-external=true)<O> | * + IteratorUtils.[transformedIterator](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#transformedIterator-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> iterator, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> transform) Gets an iterator that transforms the elements of another iterator. |
| * + static <E> [List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> | * + ListUtils.[transformedList](http://docs.google.com/org/apache/commons/collections4/ListUtils.html#transformedList-java.util.List-org.apache.commons.collections4.Transformer-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> list, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed list backed by the given list. |
| * + static <K,V> [IterableMap](http://docs.google.com/org/apache/commons/collections4/IterableMap.html)<K,V> | * + MapUtils.[transformedMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#transformedMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Returns a transformed map backed by the given map. |
| * + static <K,V> [IterableMap](http://docs.google.com/org/apache/commons/collections4/IterableMap.html)<K,V> | * + MapUtils.[transformedMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#transformedMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Returns a transformed map backed by the given map. |
| * + static <K,V> [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> | * + MultiMapUtils.[transformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiMapUtils.html#transformedMultiValuedMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Returns a TransformedMultiValuedMap backed by the given map. |
| * + static <K,V> [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> | * + MultiMapUtils.[transformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiMapUtils.html#transformedMultiValuedMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Returns a TransformedMultiValuedMap backed by the given map. |
| * + static <E> [SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)<E> | * + SetUtils.[transformedNavigableSet](http://docs.google.com/org/apache/commons/collections4/SetUtils.html#transformedNavigableSet-java.util.NavigableSet-org.apache.commons.collections4.Transformer-)([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed navigable set backed by the given navigable set. |
| * + static <T> [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<T> | * + PredicateUtils.[transformedPredicate](http://docs.google.com/org/apache/commons/collections4/PredicateUtils.html#transformedPredicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Predicate-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T> transformer, [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate) Creates a predicate that transforms the input object before passing it to the predicate. |
| * + static <E> [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<E> | * + SetUtils.[transformedSet](http://docs.google.com/org/apache/commons/collections4/SetUtils.html#transformedSet-java.util.Set-org.apache.commons.collections4.Transformer-)([Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed set backed by the given set. |
| * + static <K,V> [SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> | * + MapUtils.[transformedSortedMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#transformedSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Returns a transformed sorted map backed by the given map. |
| * + static <K,V> [SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> | * + MapUtils.[transformedSortedMap](http://docs.google.com/org/apache/commons/collections4/MapUtils.html#transformedSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Returns a transformed sorted map backed by the given map. |
| * + static <E> [SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)<E> | * + SetUtils.[transformedSortedSet](http://docs.google.com/org/apache/commons/collections4/SetUtils.html#transformedSortedSet-java.util.SortedSet-org.apache.commons.collections4.Transformer-)([SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed sorted set backed by the given set. |
| * + static <E> [Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html)<E> | * + BagUtils.[transformingBag](http://docs.google.com/org/apache/commons/collections4/BagUtils.html#transformingBag-org.apache.commons.collections4.Bag-org.apache.commons.collections4.Transformer-)([Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html)<E> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed bag backed by the given bag. |
| * + static <E> [Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<E> | * + CollectionUtils.[transformingCollection](http://docs.google.com/org/apache/commons/collections4/CollectionUtils.html#transformingCollection-java.util.Collection-org.apache.commons.collections4.Transformer-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<E> collection, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed bag backed by the given collection. |
| * + static <E> [Queue](https://docs.oracle.com/javase/7/docs/api/java/util/Queue.html?is-external=true)<E> | * + QueueUtils.[transformingQueue](http://docs.google.com/org/apache/commons/collections4/QueueUtils.html#transformingQueue-java.util.Queue-org.apache.commons.collections4.Transformer-)([Queue](https://docs.oracle.com/javase/7/docs/api/java/util/Queue.html?is-external=true)<E> queue, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed queue backed by the given queue. |
| * + static <E> [SortedBag](http://docs.google.com/org/apache/commons/collections4/SortedBag.html)<E> | * + BagUtils.[transformingSortedBag](http://docs.google.com/org/apache/commons/collections4/BagUtils.html#transformingSortedBag-org.apache.commons.collections4.SortedBag-org.apache.commons.collections4.Transformer-)([SortedBag](http://docs.google.com/org/apache/commons/collections4/SortedBag.html)<E> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Returns a transformed sorted bag backed by the given bag. |

* + Method parameters in [org.apache.commons.collections4](http://docs.google.com/org/apache/commons/collections4/package-summary.html) with type arguments of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + TransformerUtils.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#chainedTransformer-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>> transformers) Create a new Transformer that calls each transformer in turn, passing the result into the next transformer. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchMapTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchMapTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<I,[Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O>> objectsAndTransformers) Create a new Transformer that uses the input object as a key to find the transformer to call. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + TransformerUtils.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/TransformerUtils.html#switchTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<I>,[Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O>> predicatesAndTransformers) Create a new Transformer that calls one of the transformers depending on the predicates. |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.bag**](http://docs.google.com/org/apache/commons/collections4/bag/package-summary.html)Methods in [org.apache.commons.collections4.bag](http://docs.google.com/org/apache/commons/collections4/bag/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <E> [Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html)<E> | * + TransformedBag.[transformedBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedBag.html#transformedBag-org.apache.commons.collections4.Bag-org.apache.commons.collections4.Transformer-)([Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html)<E> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming bag that will transform existing contents of the specified bag. |
| * + static <E> [TransformedSortedBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html)<E> | * + TransformedSortedBag.[transformedSortedBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html#transformedSortedBag-org.apache.commons.collections4.SortedBag-org.apache.commons.collections4.Transformer-)([SortedBag](http://docs.google.com/org/apache/commons/collections4/SortedBag.html)<E> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming sorted bag that will transform existing contents of the specified sorted bag. |
| * + static <E> [Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html)<E> | * + TransformedBag.[transformingBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedBag.html#transformingBag-org.apache.commons.collections4.Bag-org.apache.commons.collections4.Transformer-)([Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html)<E> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming bag. |
| * + static <E> [TransformedSortedBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html)<E> | * + TransformedSortedBag.[transformingSortedBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html#transformingSortedBag-org.apache.commons.collections4.SortedBag-org.apache.commons.collections4.Transformer-)([SortedBag](http://docs.google.com/org/apache/commons/collections4/SortedBag.html)<E> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming sorted bag. |

* + Constructors in [org.apache.commons.collections4.bag](http://docs.google.com/org/apache/commons/collections4/bag/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [TransformedBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedBag.html#TransformedBag-org.apache.commons.collections4.Bag-org.apache.commons.collections4.Transformer-)([Bag](http://docs.google.com/org/apache/commons/collections4/Bag.html)<[E](http://docs.google.com/org/apache/commons/collections4/bag/TransformedBag.html)> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/bag/TransformedBag.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/bag/TransformedBag.html)> transformer) Constructor that wraps (not copies). |
| * + [TransformedSortedBag](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html#TransformedSortedBag-org.apache.commons.collections4.SortedBag-org.apache.commons.collections4.Transformer-)([SortedBag](http://docs.google.com/org/apache/commons/collections4/SortedBag.html)<[E](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html)> bag, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/bag/TransformedSortedBag.html)> transformer) Constructor that wraps (not copies). |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.collection**](http://docs.google.com/org/apache/commons/collections4/collection/package-summary.html)Fields in [org.apache.commons.collections4.collection](http://docs.google.com/org/apache/commons/collections4/collection/package-summary.html) declared as [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Field and Description |
| * + protected [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html)> | * + TransformedCollection.[transformer](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html#transformer) The transformer to use |

* + Methods in [org.apache.commons.collections4.collection](http://docs.google.com/org/apache/commons/collections4/collection/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <K,C> [IndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html)<K,C> | * + IndexedCollection.[nonUniqueIndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html#nonUniqueIndexedCollection-java.util.Collection-org.apache.commons.collections4.Transformer-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<C> coll, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<C,K> keyTransformer) Create an [IndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html) for a non-unique index. |
| * + static <E> [TransformedCollection](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html)<E> | * + TransformedCollection.[transformedCollection](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html#transformedCollection-java.util.Collection-org.apache.commons.collections4.Transformer-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<E> collection, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming collection that will transform existing contents of the specified collection. |
| * + static <E> [TransformedCollection](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html)<E> | * + TransformedCollection.[transformingCollection](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html#transformingCollection-java.util.Collection-org.apache.commons.collections4.Transformer-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<E> coll, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming collection. |
| * + static <K,C> [IndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html)<K,C> | * + IndexedCollection.[uniqueIndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html#uniqueIndexedCollection-java.util.Collection-org.apache.commons.collections4.Transformer-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<C> coll, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<C,K> keyTransformer) Create an [IndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html) for a unique index. |

* + Constructors in [org.apache.commons.collections4.collection](http://docs.google.com/org/apache/commons/collections4/collection/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [IndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html#IndexedCollection-java.util.Collection-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.MultiMap-boolean-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[C](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html)> coll, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[C](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html),[K](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html)> keyTransformer, [MultiMap](http://docs.google.com/org/apache/commons/collections4/MultiMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html),[C](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html)> map, boolean uniqueIndex) Create a [IndexedCollection](http://docs.google.com/org/apache/commons/collections4/collection/IndexedCollection.html). |
| * + [TransformedCollection](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html#TransformedCollection-java.util.Collection-org.apache.commons.collections4.Transformer-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html)> coll, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/collection/TransformedCollection.html)> transformer) Constructor that wraps (not copies). |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.comparators**](http://docs.google.com/org/apache/commons/collections4/comparators/package-summary.html)Constructors in [org.apache.commons.collections4.comparators](http://docs.google.com/org/apache/commons/collections4/comparators/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [TransformingComparator](http://docs.google.com/org/apache/commons/collections4/comparators/TransformingComparator.html#TransformingComparator-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/comparators/TransformingComparator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/comparators/TransformingComparator.html)> transformer) Constructs an instance with the given Transformer and a [ComparableComparator](http://docs.google.com/org/apache/commons/collections4/comparators/ComparableComparator.html). |
| * + [TransformingComparator](http://docs.google.com/org/apache/commons/collections4/comparators/TransformingComparator.html#TransformingComparator-org.apache.commons.collections4.Transformer-java.util.Comparator-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/comparators/TransformingComparator.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/comparators/TransformingComparator.html)> transformer, [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<[O](http://docs.google.com/org/apache/commons/collections4/comparators/TransformingComparator.html)> decorated) Constructs an instance with the given Transformer and Comparator. |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.functors**](http://docs.google.com/org/apache/commons/collections4/functors/package-summary.html)Classes in [org.apache.commons.collections4.functors](http://docs.google.com/org/apache/commons/collections4/functors/package-summary.html) that implement [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Class and Description |
| * + class | * + [ChainedTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html)<T> Transformer implementation that chains the specified transformers together. |
| * + class | * + [CloneTransformer](http://docs.google.com/org/apache/commons/collections4/functors/CloneTransformer.html)<T> Transformer implementation that returns a clone of the input object. |
| * + class | * + [ClosureTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ClosureTransformer.html)<T> Transformer implementation that calls a Closure using the input object and then returns the input. |
| * + class | * + [ConstantTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ConstantTransformer.html)<I,O> Transformer implementation that returns the same constant each time. |
| * + class | * + [ExceptionTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ExceptionTransformer.html)<I,O> Transformer implementation that always throws an exception. |
| * + class | * + [FactoryTransformer](http://docs.google.com/org/apache/commons/collections4/functors/FactoryTransformer.html)<I,O> Transformer implementation that calls a Factory and returns the result. |
| * + class | * + [IfTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)<I,O> Transformer implementation that will call one of two closures based on whether a predicate evaluates as true or false. |
| * + class | * + [InstantiateTransformer](http://docs.google.com/org/apache/commons/collections4/functors/InstantiateTransformer.html)<T> Transformer implementation that creates a new object instance by reflection. |
| * + class | * + [InvokerTransformer](http://docs.google.com/org/apache/commons/collections4/functors/InvokerTransformer.html)<I,O> Transformer implementation that creates a new object instance by reflection. |
| * + class | * + [MapTransformer](http://docs.google.com/org/apache/commons/collections4/functors/MapTransformer.html)<I,O> Transformer implementation that returns the value held in a specified map using the input parameter as a key. |
| * + class | * + [NOPTransformer](http://docs.google.com/org/apache/commons/collections4/functors/NOPTransformer.html)<T> Transformer implementation that does nothing. |
| * + class | * + [PredicateTransformer](http://docs.google.com/org/apache/commons/collections4/functors/PredicateTransformer.html)<T> Transformer implementation that calls a Predicate using the input object and then returns the result. |
| * + class | * + [StringValueTransformer](http://docs.google.com/org/apache/commons/collections4/functors/StringValueTransformer.html)<T> Transformer implementation that returns the result of calling String.valueOf on the input object. |
| * + class | * + [SwitchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)<I,O> Transformer implementation calls the transformer whose predicate returns true, like a switch statement. |

* + Fields in [org.apache.commons.collections4.functors](http://docs.google.com/org/apache/commons/collections4/functors/package-summary.html) declared as [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Field and Description |
| * + static [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html) | * + CloneTransformer.[INSTANCE](http://docs.google.com/org/apache/commons/collections4/functors/CloneTransformer.html#INSTANCE) Singleton predicate instance |
| * + static [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html) | * + ExceptionTransformer.[INSTANCE](http://docs.google.com/org/apache/commons/collections4/functors/ExceptionTransformer.html#INSTANCE) Singleton predicate instance |
| * + static [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html) | * + NOPTransformer.[INSTANCE](http://docs.google.com/org/apache/commons/collections4/functors/NOPTransformer.html#INSTANCE) Singleton predicate instance |
| * + static [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html) | * + ConstantTransformer.[NULL\_INSTANCE](http://docs.google.com/org/apache/commons/collections4/functors/ConstantTransformer.html#NULL_INSTANCE) Returns null each time |

* + Methods in [org.apache.commons.collections4.functors](http://docs.google.com/org/apache/commons/collections4/functors/package-summary.html) that return [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + ChainedTransformer.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html#chainedTransformer-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>> transformers) Create a new Transformer that calls each transformer in turn, passing the result into the next transformer. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + ChainedTransformer.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html#chainedTransformer-org.apache.commons.collections4.Transformer...-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>... transformers) Factory method that performs validation and copies the parameter array. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + CloneTransformer.[cloneTransformer](http://docs.google.com/org/apache/commons/collections4/functors/CloneTransformer.html#cloneTransformer--)() Factory returning the singleton instance. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + ClosureTransformer.[closureTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ClosureTransformer.html#closureTransformer-org.apache.commons.collections4.Closure-)([Closure](http://docs.google.com/org/apache/commons/collections4/Closure.html)<? super T> closure) Factory method that performs validation. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + ConstantTransformer.[constantTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ConstantTransformer.html#constantTransformer-O-)(O constantToReturn) Transformer method that performs validation. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + ExceptionTransformer.[exceptionTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ExceptionTransformer.html#exceptionTransformer--)() Factory returning the singleton instance. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + FactoryTransformer.[factoryTransformer](http://docs.google.com/org/apache/commons/collections4/functors/FactoryTransformer.html#factoryTransformer-org.apache.commons.collections4.Factory-)([Factory](http://docs.google.com/org/apache/commons/collections4/Factory.html)<? extends O> factory) Factory method that performs validation. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)> | * + SwitchTransformer.[getDefaultTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#getDefaultTransformer--)() Gets the default transformer. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> | * + IfTransformer.[getFalseTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#getFalseTransformer--)() Gets the transformer used when false. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [T](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html),? extends [T](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html)> | * + TransformedPredicate.[getTransformer](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html#getTransformer--)() Gets the transformer in use. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/functors/TransformerClosure.html),?> | * + TransformerClosure.[getTransformer](http://docs.google.com/org/apache/commons/collections4/functors/TransformerClosure.html#getTransformer--)() Gets the transformer. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [T](http://docs.google.com/org/apache/commons/collections4/functors/TransformerPredicate.html),[Boolean](https://docs.oracle.com/javase/7/docs/api/java/lang/Boolean.html?is-external=true)> | * + TransformerPredicate.[getTransformer](http://docs.google.com/org/apache/commons/collections4/functors/TransformerPredicate.html#getTransformer--)() Gets the transformer. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [T](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html),? extends [T](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html)>[] | * + ChainedTransformer.[getTransformers](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html#getTransformers--)() Gets the transformers. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)>[] | * + SwitchTransformer.[getTransformers](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#getTransformers--)() Gets the transformers. |
| * + [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> | * + IfTransformer.[getTrueTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#getTrueTransformer--)() Gets the transformer used when true. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + IfTransformer.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Factory method that performs validation. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + IfTransformer.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T> trueTransformer) Factory method that performs validation. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<? extends T>,T> | * + InstantiateTransformer.[instantiateTransformer](http://docs.google.com/org/apache/commons/collections4/functors/InstantiateTransformer.html#instantiateTransformer--)() Get a typed no-arg instance. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<? extends T>,T> | * + InstantiateTransformer.[instantiateTransformer](http://docs.google.com/org/apache/commons/collections4/functors/InstantiateTransformer.html#instantiateTransformer-java.lang.Class:A-java.lang.Object:A-)([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?>[] paramTypes, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[] args) Transformer method that performs validation. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + InvokerTransformer.[invokerTransformer](http://docs.google.com/org/apache/commons/collections4/functors/InvokerTransformer.html#invokerTransformer-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) methodName) Gets an instance of this transformer calling a specific method with no arguments. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + InvokerTransformer.[invokerTransformer](http://docs.google.com/org/apache/commons/collections4/functors/InvokerTransformer.html#invokerTransformer-java.lang.String-java.lang.Class:A-java.lang.Object:A-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) methodName, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?>[] paramTypes, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[] args) Gets an instance of this transformer calling a specific method with specific values. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + MapTransformer.[mapTransformer](http://docs.google.com/org/apache/commons/collections4/functors/MapTransformer.html#mapTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<? super I,? extends O> map) Factory to create the transformer. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + NOPTransformer.[nopTransformer](http://docs.google.com/org/apache/commons/collections4/functors/NOPTransformer.html#nopTransformer--)() Factory returning the singleton instance. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + ConstantTransformer.[nullTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ConstantTransformer.html#nullTransformer--)() Get a typed null instance. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,[Boolean](https://docs.oracle.com/javase/7/docs/api/java/lang/Boolean.html?is-external=true)> | * + PredicateTransformer.[predicateTransformer](http://docs.google.com/org/apache/commons/collections4/functors/PredicateTransformer.html#predicateTransformer-org.apache.commons.collections4.Predicate-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate) Factory method that performs validation. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> | * + StringValueTransformer.[stringValueTransformer](http://docs.google.com/org/apache/commons/collections4/functors/StringValueTransformer.html#stringValueTransformer--)() Factory returning the singleton instance. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + SwitchTransformer.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#switchTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<? extends [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>,? extends [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>> map) Create a new Transformer that calls one of the transformers depending on the predicates. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + SwitchTransformer.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> defaultTransformer) Factory method that performs validation and copies the parameter arrays. |

* + Methods in [org.apache.commons.collections4.functors](http://docs.google.com/org/apache/commons/collections4/functors/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + ChainedTransformer.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html#chainedTransformer-org.apache.commons.collections4.Transformer...-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>... transformers) Factory method that performs validation and copies the parameter array. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + IfTransformer.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Factory method that performs validation. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + IfTransformer.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> falseTransformer) Factory method that performs validation. |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + IfTransformer.[ifTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#ifTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T> trueTransformer) Factory method that performs validation. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + SwitchTransformer.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> defaultTransformer) Factory method that performs validation and copies the parameter arrays. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + SwitchTransformer.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#switchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O> defaultTransformer) Factory method that performs validation and copies the parameter arrays. |
| * + static <T> [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<T> | * + TransformedPredicate.[transformedPredicate](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html#transformedPredicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Predicate-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T> transformer, [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super T> predicate) Factory to create the predicate. |
| * + static <E> [Closure](http://docs.google.com/org/apache/commons/collections4/Closure.html)<E> | * + TransformerClosure.[transformerClosure](http://docs.google.com/org/apache/commons/collections4/functors/TransformerClosure.html#transformerClosure-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,?> transformer) Factory method that performs validation. |
| * + static <T> [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<T> | * + TransformerPredicate.[transformerPredicate](http://docs.google.com/org/apache/commons/collections4/functors/TransformerPredicate.html#transformerPredicate-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,[Boolean](https://docs.oracle.com/javase/7/docs/api/java/lang/Boolean.html?is-external=true)> transformer) Factory to create the predicate. |

* + Method parameters in [org.apache.commons.collections4.functors](http://docs.google.com/org/apache/commons/collections4/functors/package-summary.html) with type arguments of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <T> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<T,T> | * + ChainedTransformer.[chainedTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html#chainedTransformer-java.util.Collection-)([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html?is-external=true)<? extends [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super T,? extends T>> transformers) Create a new Transformer that calls each transformer in turn, passing the result into the next transformer. |
| * + static <I,O> [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<I,O> | * + SwitchTransformer.[switchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#switchTransformer-java.util.Map-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<? extends [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super I>,? extends [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super I,? extends O>> map) Create a new Transformer that calls one of the transformers depending on the predicates. |

* + Constructors in [org.apache.commons.collections4.functors](http://docs.google.com/org/apache/commons/collections4/functors/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [ChainedTransformer](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html#ChainedTransformer-org.apache.commons.collections4.Transformer...-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [T](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html),? extends [T](http://docs.google.com/org/apache/commons/collections4/functors/ChainedTransformer.html)>... transformers) Constructor that performs no validation. |
| * + [IfTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#IfTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> falseTransformer) Constructor that performs no validation. |
| * + [IfTransformer](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html#IfTransformer-org.apache.commons.collections4.Predicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> predicate, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> trueTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/IfTransformer.html)> falseTransformer) Constructor that performs no validation. |
| * + [SwitchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#SwitchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)> defaultTransformer) Constructor that performs no validation. |
| * + [SwitchTransformer](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html#SwitchTransformer-org.apache.commons.collections4.Predicate:A-org.apache.commons.collections4.Transformer:A-org.apache.commons.collections4.Transformer-)([Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)>[] predicates, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)>[] transformers, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [I](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html),? extends [O](http://docs.google.com/org/apache/commons/collections4/functors/SwitchTransformer.html)> defaultTransformer) Constructor that performs no validation. |
| * + [TransformedPredicate](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html#TransformedPredicate-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Predicate-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [T](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html),? extends [T](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html)> transformer, [Predicate](http://docs.google.com/org/apache/commons/collections4/Predicate.html)<? super [T](http://docs.google.com/org/apache/commons/collections4/functors/TransformedPredicate.html)> predicate) Constructor that performs no validation. |
| * + [TransformerClosure](http://docs.google.com/org/apache/commons/collections4/functors/TransformerClosure.html#TransformerClosure-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/functors/TransformerClosure.html),?> transformer) Constructor that performs no validation. |
| * + [TransformerPredicate](http://docs.google.com/org/apache/commons/collections4/functors/TransformerPredicate.html#TransformerPredicate-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [T](http://docs.google.com/org/apache/commons/collections4/functors/TransformerPredicate.html),[Boolean](https://docs.oracle.com/javase/7/docs/api/java/lang/Boolean.html?is-external=true)> transformer) Constructor that performs no validation. |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.iterators**](http://docs.google.com/org/apache/commons/collections4/iterators/package-summary.html)Methods in [org.apache.commons.collections4.iterators](http://docs.google.com/org/apache/commons/collections4/iterators/package-summary.html) that return [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + [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)> | * + TransformIterator.[getTransformer](http://docs.google.com/org/apache/commons/collections4/iterators/TransformIterator.html#getTransformer--)() Gets the transformer this iterator is using. |

* + Methods in [org.apache.commons.collections4.iterators](http://docs.google.com/org/apache/commons/collections4/iterators/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + void | * + TransformIterator.[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. |

* + Constructors in [org.apache.commons.collections4.iterators](http://docs.google.com/org/apache/commons/collections4/iterators/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [ObjectGraphIterator](http://docs.google.com/org/apache/commons/collections4/iterators/ObjectGraphIterator.html#ObjectGraphIterator-E-org.apache.commons.collections4.Transformer-)([E](http://docs.google.com/org/apache/commons/collections4/iterators/ObjectGraphIterator.html) root, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/iterators/ObjectGraphIterator.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/iterators/ObjectGraphIterator.html)> transformer) Constructs an ObjectGraphIterator using a root object and transformer. |
| * + [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. |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.list**](http://docs.google.com/org/apache/commons/collections4/list/package-summary.html)Methods in [org.apache.commons.collections4.list](http://docs.google.com/org/apache/commons/collections4/list/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <E> [LazyList](http://docs.google.com/org/apache/commons/collections4/list/LazyList.html)<E> | * + LazyList.[lazyList](http://docs.google.com/org/apache/commons/collections4/list/LazyList.html#lazyList-java.util.List-org.apache.commons.collections4.Transformer-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> list, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[Integer](https://docs.oracle.com/javase/7/docs/api/java/lang/Integer.html?is-external=true),? extends E> transformer) Transformer method to create a lazily instantiating list. |
| * + static <E> [TransformedList](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html)<E> | * + TransformedList.[transformedList](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html#transformedList-java.util.List-org.apache.commons.collections4.Transformer-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> list, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming list that will transform existing contents of the specified list. |
| * + static <E> [TransformedList](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html)<E> | * + TransformedList.[transformingList](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html#transformingList-java.util.List-org.apache.commons.collections4.Transformer-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<E> list, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming list. |

* + Constructors in [org.apache.commons.collections4.list](http://docs.google.com/org/apache/commons/collections4/list/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [LazyList](http://docs.google.com/org/apache/commons/collections4/list/LazyList.html#LazyList-java.util.List-org.apache.commons.collections4.Transformer-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/LazyList.html)> list, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<[Integer](https://docs.oracle.com/javase/7/docs/api/java/lang/Integer.html?is-external=true),? extends [E](http://docs.google.com/org/apache/commons/collections4/list/LazyList.html)> transformer) Constructor that wraps (not copies). |
| * + [TransformedList](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html#TransformedList-java.util.List-org.apache.commons.collections4.Transformer-)([List](https://docs.oracle.com/javase/7/docs/api/java/util/List.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html)> list, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/list/TransformedList.html)> transformer) Constructor that wraps (not copies). |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.map**](http://docs.google.com/org/apache/commons/collections4/map/package-summary.html)Fields in [org.apache.commons.collections4.map](http://docs.google.com/org/apache/commons/collections4/map/package-summary.html) declared as [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Field and Description |
| * + protected [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html)> | * + LazyMap.[factory](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html#factory) The factory to use to construct elements |
| * + protected [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> | * + TransformedMap.[keyTransformer](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#keyTransformer) The transformer to use for the key |
| * + protected [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> | * + TransformedMap.[valueTransformer](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#valueTransformer) The transformer to use for the value |

* + Methods in [org.apache.commons.collections4.map](http://docs.google.com/org/apache/commons/collections4/map/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <K,V> [Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> | * + DefaultedMap.[defaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#defaultedMap-java.util.Map-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends V> transformer) Factory method to create a defaulting map. |
| * + static <V,K> [LazyMap](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html)<K,V> | * + LazyMap.[lazyMap](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html#lazyMap-java.util.Map-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends V> factory) Factory method to create a lazily instantiated map. |
| * + static <K,V> [LazySortedMap](http://docs.google.com/org/apache/commons/collections4/map/LazySortedMap.html)<K,V> | * + LazySortedMap.[lazySortedMap](http://docs.google.com/org/apache/commons/collections4/map/LazySortedMap.html#lazySortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends V> factory) Factory method to create a lazily instantiated sorted map. |
| * + static <K,V> [TransformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)<K,V> | * + TransformedMap.[transformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#transformedMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming map that will transform existing contents of the specified map. |
| * + static <K,V> [TransformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)<K,V> | * + TransformedMap.[transformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#transformedMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming map that will transform existing contents of the specified map. |
| * + static <K,V> [TransformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)<K,V> | * + TransformedSortedMap.[transformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html#transformedSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming sorted map that will transform existing contents of the specified map. |
| * + static <K,V> [TransformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)<K,V> | * + TransformedSortedMap.[transformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html#transformedSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming sorted map that will transform existing contents of the specified map. |
| * + static <K,V> [TransformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)<K,V> | * + TransformedMap.[transformingMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#transformingMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming map. |
| * + static <K,V> [TransformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)<K,V> | * + TransformedMap.[transformingMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#transformingMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming map. |
| * + static <K,V> [TransformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)<K,V> | * + TransformedSortedMap.[transformingSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html#transformingSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming sorted map. |
| * + static <K,V> [TransformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)<K,V> | * + TransformedSortedMap.[transformingSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html#transformingSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming sorted map. |

* + Constructors in [org.apache.commons.collections4.map](http://docs.google.com/org/apache/commons/collections4/map/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [DefaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#DefaultedMap-java.util.Map-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)> defaultValueTransformer) Constructor that wraps (not copies). |
| * + [DefaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#DefaultedMap-org.apache.commons.collections4.Transformer-)([Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)> defaultValueTransformer) Constructs a new empty DefaultedMap that decorates a HashMap. |
| * + [LazyMap](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html#LazyMap-java.util.Map-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html)> factory) Constructor that wraps (not copies). |
| * + [LazySortedMap](http://docs.google.com/org/apache/commons/collections4/map/LazySortedMap.html#LazySortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/map/LazySortedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/LazySortedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/LazySortedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/LazySortedMap.html)> factory) Constructor that wraps (not copies). |
| * + [TransformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#TransformedMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> valueTransformer) Constructor that wraps (not copies). |
| * + [TransformedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html#TransformedMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedMap.html)> valueTransformer) Constructor that wraps (not copies). |
| * + [TransformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html#TransformedSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)> valueTransformer) Constructor that wraps (not copies). |
| * + [TransformedSortedMap](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html#TransformedSortedMap-java.util.SortedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/map/TransformedSortedMap.html)> valueTransformer) Constructor that wraps (not copies). |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.multimap**](http://docs.google.com/org/apache/commons/collections4/multimap/package-summary.html)Methods in [org.apache.commons.collections4.multimap](http://docs.google.com/org/apache/commons/collections4/multimap/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <K,V> [TransformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)<K,V> | * + TransformedMultiValuedMap.[transformedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html#transformedMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming MultiValuedMap that will transform existing contents of the specified map. |
| * + static <K,V> [TransformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)<K,V> | * + TransformedMultiValuedMap.[transformedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html#transformedMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming MultiValuedMap that will transform existing contents of the specified map. |
| * + static <K,V> [TransformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)<K,V> | * + TransformedMultiValuedMap.[transformingMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html#transformingMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming MultiValuedMap. |
| * + static <K,V> [TransformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)<K,V> | * + TransformedMultiValuedMap.[transformingMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html#transformingMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super K,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super V,? extends V> valueTransformer) Factory method to create a transforming MultiValuedMap. |

* + Constructors in [org.apache.commons.collections4.multimap](http://docs.google.com/org/apache/commons/collections4/multimap/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [TransformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html#TransformedMultiValuedMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [V](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)> valueTransformer) Constructor that wraps (not copies). |
| * + [TransformedMultiValuedMap](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html#TransformedMultiValuedMap-org.apache.commons.collections4.MultiValuedMap-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [V](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/multimap/TransformedMultiValuedMap.html)> valueTransformer) Constructor that wraps (not copies). |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.queue**](http://docs.google.com/org/apache/commons/collections4/queue/package-summary.html)Methods in [org.apache.commons.collections4.queue](http://docs.google.com/org/apache/commons/collections4/queue/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <E> [TransformedQueue](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html)<E> | * + TransformedQueue.[transformedQueue](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html#transformedQueue-java.util.Queue-org.apache.commons.collections4.Transformer-)([Queue](https://docs.oracle.com/javase/7/docs/api/java/util/Queue.html?is-external=true)<E> queue, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming queue that will transform existing contents of the specified queue. |
| * + static <E> [TransformedQueue](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html)<E> | * + TransformedQueue.[transformingQueue](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html#transformingQueue-java.util.Queue-org.apache.commons.collections4.Transformer-)([Queue](https://docs.oracle.com/javase/7/docs/api/java/util/Queue.html?is-external=true)<E> queue, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming queue. |

* + Constructors in [org.apache.commons.collections4.queue](http://docs.google.com/org/apache/commons/collections4/queue/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [TransformedQueue](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html#TransformedQueue-java.util.Queue-org.apache.commons.collections4.Transformer-)([Queue](https://docs.oracle.com/javase/7/docs/api/java/util/Queue.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html)> queue, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/queue/TransformedQueue.html)> transformer) Constructor that wraps (not copies). |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.set**](http://docs.google.com/org/apache/commons/collections4/set/package-summary.html)Methods in [org.apache.commons.collections4.set](http://docs.google.com/org/apache/commons/collections4/set/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <E> [TransformedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html)<E> | * + TransformedNavigableSet.[transformedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html#transformedNavigableSet-java.util.NavigableSet-org.apache.commons.collections4.Transformer-)([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming navigable set that will transform existing contents of the specified navigable set. |
| * + static <E> [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<E> | * + TransformedSet.[transformedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html#transformedSet-java.util.Set-org.apache.commons.collections4.Transformer-)([Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming set that will transform existing contents of the specified set. |
| * + static <E> [TransformedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html)<E> | * + TransformedSortedSet.[transformedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html#transformedSortedSet-java.util.SortedSet-org.apache.commons.collections4.Transformer-)([SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming sorted set that will transform existing contents of the specified sorted set. |
| * + static <E> [TransformedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html)<E> | * + TransformedNavigableSet.[transformingNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html#transformingNavigableSet-java.util.NavigableSet-org.apache.commons.collections4.Transformer-)([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming navigable set. |
| * + static <E> [TransformedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html)<E> | * + TransformedSet.[transformingSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html#transformingSet-java.util.Set-org.apache.commons.collections4.Transformer-)([Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming set. |
| * + static <E> [TransformedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html)<E> | * + TransformedSortedSet.[transformingSortedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html#transformingSortedSet-java.util.SortedSet-org.apache.commons.collections4.Transformer-)([SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)<E> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super E,? extends E> transformer) Factory method to create a transforming sorted set. |

* + Constructors in [org.apache.commons.collections4.set](http://docs.google.com/org/apache/commons/collections4/set/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [TransformedNavigableSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html#TransformedNavigableSet-java.util.NavigableSet-org.apache.commons.collections4.Transformer-)([NavigableSet](https://docs.oracle.com/javase/7/docs/api/java/util/NavigableSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html)> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/set/TransformedNavigableSet.html)> transformer) Constructor that wraps (not copies). |
| * + [TransformedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html#TransformedSet-java.util.Set-org.apache.commons.collections4.Transformer-)([Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html)> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/set/TransformedSet.html)> transformer) Constructor that wraps (not copies). |
| * + [TransformedSortedSet](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html#TransformedSortedSet-java.util.SortedSet-org.apache.commons.collections4.Transformer-)([SortedSet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedSet.html?is-external=true)<[E](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html)> set, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [E](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html),? extends [E](http://docs.google.com/org/apache/commons/collections4/set/TransformedSortedSet.html)> transformer) Constructor that wraps (not copies). |

### Uses of [**Transformer**](http://docs.google.com/org/apache/commons/collections4/Transformer.html) in [**org.apache.commons.collections4.splitmap**](http://docs.google.com/org/apache/commons/collections4/splitmap/package-summary.html)Methods in [org.apache.commons.collections4.splitmap](http://docs.google.com/org/apache/commons/collections4/splitmap/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <J,K,U,V> [TransformedSplitMap](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)<J,K,U,V> | * + TransformedSplitMap.[transformingMap](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html#transformingMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super J,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super U,? extends V> valueTransformer) Factory method to create a transforming map. |
| * + static <J,K,U,V> [TransformedSplitMap](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)<J,K,U,V> | * + TransformedSplitMap.[transformingMap](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html#transformingMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super J,? extends K> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super U,? extends V> valueTransformer) Factory method to create a transforming map. |

* + Constructors in [org.apache.commons.collections4.splitmap](http://docs.google.com/org/apache/commons/collections4/splitmap/package-summary.html) with parameters of type [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)

|  |
| --- |
| * + Constructor and Description |
| * + [TransformedSplitMap](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html#TransformedSplitMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html),[V](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [J](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [U](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)> valueTransformer) Constructor that wraps (not copies). |
| * + [TransformedSplitMap](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html#TransformedSplitMap-java.util.Map-org.apache.commons.collections4.Transformer-org.apache.commons.collections4.Transformer-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html),[V](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)> map, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [J](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html),? extends [K](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)> keyTransformer, [Transformer](http://docs.google.com/org/apache/commons/collections4/Transformer.html)<? super [U](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html),? extends [V](http://docs.google.com/org/apache/commons/collections4/splitmap/TransformedSplitMap.html)> valueTransformer) Constructor that wraps (not copies). |

[Skip navigation links](#2jxsxqh)

* [Overview](http://docs.google.com/overview-summary.html)
* [Package](http://docs.google.com/package-summary.html)
* [Class](http://docs.google.com/org/apache/commons/collections4/Transformer.html)
* Use
* [Tree](http://docs.google.com/overview-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
* Next
* [Frames](http://docs.google.com/index.html?org/apache/commons/collections4/class-use/Transformer.html)
* [No Frames](http://docs.google.com/Transformer.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)

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