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Uses of Interface

org.apache.commons.collections4.MapIterator

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

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| * 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.bidimap](#2et92p0) | * This package contains implementations of the [BidiMap](http://docs.google.com/org/apache/commons/collections4/BidiMap.html), [OrderedBidiMap](http://docs.google.com/org/apache/commons/collections4/OrderedBidiMap.html) and [SortedBidiMap](http://docs.google.com/org/apache/commons/collections4/SortedBidiMap.html) interfaces. |
| * [org.apache.commons.collections4.iterators](#tyjcwt) | * 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.map](#3dy6vkm) | * 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](#1t3h5sf) | * This package contains implementations of the [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html) interfaces. |
| * [org.apache.commons.collections4.splitmap](#4d34og8) | * 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 [**MapIterator**](http://docs.google.com/org/apache/commons/collections4/MapIterator.html) in [**org.apache.commons.collections4**](http://docs.google.com/org/apache/commons/collections4/package-summary.html)Subinterfaces of [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html) in [org.apache.commons.collections4](http://docs.google.com/org/apache/commons/collections4/package-summary.html)

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| * + Modifier and Type | * + Interface and Description |
| * + interface | * + [OrderedMapIterator](http://docs.google.com/org/apache/commons/collections4/OrderedMapIterator.html)<K,V> Defines an iterator that operates over an ordered Map. |

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

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| * + Modifier and Type | * + Field and Description |
| * + static [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html) | * + IteratorUtils.[EMPTY\_MAP\_ITERATOR](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#EMPTY_MAP_ITERATOR) A map iterator over no elements. |

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

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| * + Modifier and Type | * + Method and Description |
| * + static <K,V> [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> | * + IteratorUtils.[emptyMapIterator](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#emptyMapIterator--)() Gets an empty map iterator. |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/IterableGet.html),[V](http://docs.google.com/org/apache/commons/collections4/IterableGet.html)> | * + IterableGet.[mapIterator](http://docs.google.com/org/apache/commons/collections4/IterableGet.html#mapIterator--)() Obtains a MapIterator over the map. |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)> | * + MultiValuedMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#mapIterator--)() Obtains a MapIterator over this multi-valued map. |
| * + static <K,V> [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> | * + IteratorUtils.[unmodifiableMapIterator](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#unmodifiableMapIterator-org.apache.commons.collections4.MapIterator-)([MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> mapIterator) Gets an immutable version of a [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html). |

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

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| * + Modifier and Type | * + Method and Description |
| * + static <K,V> [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> | * + IteratorUtils.[unmodifiableMapIterator](http://docs.google.com/org/apache/commons/collections4/IteratorUtils.html#unmodifiableMapIterator-org.apache.commons.collections4.MapIterator-)([MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> mapIterator) Gets an immutable version of a [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html). |

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

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| * + Modifier and Type | * + Class and Description |
| * + protected static class | * + [AbstractDualBidiMap.BidiMapIterator](http://docs.google.com/org/apache/commons/collections4/bidimap/AbstractDualBidiMap.BidiMapIterator.html)<K,V> Inner class MapIterator. |
| * + protected static class | * + [DualTreeBidiMap.BidiOrderedMapIterator](http://docs.google.com/org/apache/commons/collections4/bidimap/DualTreeBidiMap.BidiOrderedMapIterator.html)<K,V> Inner class MapIterator. |

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

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| * + Modifier and Type | * + Method and Description |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/bidimap/AbstractBidiMapDecorator.html),[V](http://docs.google.com/org/apache/commons/collections4/bidimap/AbstractBidiMapDecorator.html)> | * + AbstractBidiMapDecorator.[mapIterator](http://docs.google.com/org/apache/commons/collections4/bidimap/AbstractBidiMapDecorator.html#mapIterator--)() |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/bidimap/AbstractDualBidiMap.html),[V](http://docs.google.com/org/apache/commons/collections4/bidimap/AbstractDualBidiMap.html)> | * + AbstractDualBidiMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/bidimap/AbstractDualBidiMap.html#mapIterator--)() Obtains a MapIterator over the map. |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/bidimap/UnmodifiableBidiMap.html),[V](http://docs.google.com/org/apache/commons/collections4/bidimap/UnmodifiableBidiMap.html)> | * + UnmodifiableBidiMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/bidimap/UnmodifiableBidiMap.html#mapIterator--)() |

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

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| * + Modifier and Type | * + Class and Description |
| * + class | * + [AbstractMapIteratorDecorator](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractMapIteratorDecorator.html)<K,V> Provides basic behaviour for decorating a map iterator with extra functionality. |
| * + class | * + [AbstractOrderedMapIteratorDecorator](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractOrderedMapIteratorDecorator.html)<K,V> Provides basic behaviour for decorating an ordered map iterator with extra functionality. |
| * + class | * + [EmptyMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/EmptyMapIterator.html)<K,V> Provides an implementation of an empty map iterator. |
| * + class | * + [EmptyOrderedMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/EmptyOrderedMapIterator.html)<K,V> Provides an implementation of an empty ordered map iterator. |
| * + class | * + [EntrySetMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/EntrySetMapIterator.html)<K,V> Implements a MapIterator using a Map entrySet. |
| * + class | * + [UnmodifiableMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/UnmodifiableMapIterator.html)<K,V> Decorates a map iterator such that it cannot be modified. |
| * + class | * + [UnmodifiableOrderedMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/UnmodifiableOrderedMapIterator.html)<K,V> Decorates an ordered map iterator such that it cannot be modified. |

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

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| * + Modifier and Type | * + Field and Description |
| * + static [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html) | * + EmptyMapIterator.[INSTANCE](http://docs.google.com/org/apache/commons/collections4/iterators/EmptyMapIterator.html#INSTANCE) Singleton instance of the iterator. |

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

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| * + Modifier and Type | * + Method and Description |
| * + static <K,V> [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> | * + EmptyMapIterator.[emptyMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/EmptyMapIterator.html#emptyMapIterator--)() Get a typed instance of the iterator. |
| * + protected [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractMapIteratorDecorator.html),[V](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractMapIteratorDecorator.html)> | * + AbstractMapIteratorDecorator.[getMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractMapIteratorDecorator.html#getMapIterator--)() Gets the iterator being decorated. |
| * + static <K,V> [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> | * + UnmodifiableMapIterator.[unmodifiableMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/UnmodifiableMapIterator.html#unmodifiableMapIterator-org.apache.commons.collections4.MapIterator-)([MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<? extends K,? extends V> iterator) Decorates the specified iterator such that it cannot be modified. |

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

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| * + Modifier and Type | * + Method and Description |
| * + static <K,V> [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<K,V> | * + UnmodifiableMapIterator.[unmodifiableMapIterator](http://docs.google.com/org/apache/commons/collections4/iterators/UnmodifiableMapIterator.html#unmodifiableMapIterator-org.apache.commons.collections4.MapIterator-)([MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<? extends K,? extends V> iterator) Decorates the specified iterator such that it cannot be modified. |

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

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| * + Constructor and Description |
| * + [AbstractMapIteratorDecorator](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractMapIteratorDecorator.html#AbstractMapIteratorDecorator-org.apache.commons.collections4.MapIterator-)([MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractMapIteratorDecorator.html),[V](http://docs.google.com/org/apache/commons/collections4/iterators/AbstractMapIteratorDecorator.html)> iterator) Constructor that decorates the specified iterator. |

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

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| * + Modifier and Type | * + Class and Description |
| * + protected static class | * + [AbstractHashedMap.HashMapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashMapIterator.html)<K,V> MapIterator implementation. |
| * + protected static class | * + [AbstractLinkedMap.LinkMapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractLinkedMap.LinkMapIterator.html)<K,V> MapIterator implementation. |
| * + protected static class | * + [AbstractSortedMapDecorator.SortedMapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractSortedMapDecorator.SortedMapIterator.html)<K,V> OrderedMapIterator implementation. |
| * + class | * + [EntrySetToMapIteratorAdapter](http://docs.google.com/org/apache/commons/collections4/map/EntrySetToMapIteratorAdapter.html)<K,V> Adapts a Map entrySet to the MapIterator interface. |

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

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| * + Modifier and Type | * + Method and Description |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html)> | * + AbstractHashedMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#mapIterator--)() Gets an iterator over the map. |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractIterableMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractIterableMap.html)> | * + AbstractIterableMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractIterableMap.html#mapIterator--)() Obtains a MapIterator over the map. |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html)> | * + AbstractReferenceMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#mapIterator--)() Gets a MapIterator over the reference map. |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/Flat3Map.html),[V](http://docs.google.com/org/apache/commons/collections4/map/Flat3Map.html)> | * + Flat3Map.[mapIterator](http://docs.google.com/org/apache/commons/collections4/map/Flat3Map.html#mapIterator--)() Gets an iterator over the map. |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[MultiKey](http://docs.google.com/org/apache/commons/collections4/keyvalue/MultiKey.html)<? extends [K](http://docs.google.com/org/apache/commons/collections4/map/MultiKeyMap.html)>,[V](http://docs.google.com/org/apache/commons/collections4/map/MultiKeyMap.html)> | * + MultiKeyMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/map/MultiKeyMap.html#mapIterator--)() |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/UnmodifiableMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/UnmodifiableMap.html)> | * + UnmodifiableMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/map/UnmodifiableMap.html#mapIterator--)() |

### Uses of [**MapIterator**](http://docs.google.com/org/apache/commons/collections4/MapIterator.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) that return [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)

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| * + Modifier and Type | * + Method and Description |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/multimap/AbstractMultiValuedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/multimap/AbstractMultiValuedMap.html)> | * + AbstractMultiValuedMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/multimap/AbstractMultiValuedMap.html#mapIterator--)() |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/multimap/AbstractMultiValuedMapDecorator.html),[V](http://docs.google.com/org/apache/commons/collections4/multimap/AbstractMultiValuedMapDecorator.html)> | * + AbstractMultiValuedMapDecorator.[mapIterator](http://docs.google.com/org/apache/commons/collections4/multimap/AbstractMultiValuedMapDecorator.html#mapIterator--)() |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/multimap/UnmodifiableMultiValuedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/multimap/UnmodifiableMultiValuedMap.html)> | * + UnmodifiableMultiValuedMap.[mapIterator](http://docs.google.com/org/apache/commons/collections4/multimap/UnmodifiableMultiValuedMap.html#mapIterator--)() |

### Uses of [**MapIterator**](http://docs.google.com/org/apache/commons/collections4/MapIterator.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) that return [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)

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| * + Modifier and Type | * + Method and Description |
| * + [MapIterator](http://docs.google.com/org/apache/commons/collections4/MapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/splitmap/AbstractIterableGetMapDecorator.html),[V](http://docs.google.com/org/apache/commons/collections4/splitmap/AbstractIterableGetMapDecorator.html)> | * + AbstractIterableGetMapDecorator.[mapIterator](http://docs.google.com/org/apache/commons/collections4/splitmap/AbstractIterableGetMapDecorator.html#mapIterator--)() Get a MapIterator over this Get. |

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