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[Skip navigation links](#1fob9te)

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

Package org.apache.commons.collections4.keyvalue

This package contains implementations of collection and map related key/value classes.

See: [Description](#3znysh7)

* Class Summary

|  |  |
| --- | --- |
| * Class | * Description |
| * [AbstractKeyValue](http://docs.google.com/org/apache/commons/collections4/keyvalue/AbstractKeyValue.html)<K,V> | * Abstract pair class to assist with creating KeyValue and [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true) implementations. |
| * [AbstractMapEntry](http://docs.google.com/org/apache/commons/collections4/keyvalue/AbstractMapEntry.html)<K,V> | * Abstract Pair class to assist with creating correct [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true) implementations. |
| * [AbstractMapEntryDecorator](http://docs.google.com/org/apache/commons/collections4/keyvalue/AbstractMapEntryDecorator.html)<K,V> | * Provides a base decorator that allows additional functionality to be added to a [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true). |
| * [DefaultKeyValue](http://docs.google.com/org/apache/commons/collections4/keyvalue/DefaultKeyValue.html)<K,V> | * A mutable KeyValue pair that does not implement [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true). |
| * [DefaultMapEntry](http://docs.google.com/org/apache/commons/collections4/keyvalue/DefaultMapEntry.html)<K,V> | * A restricted implementation of [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true) that prevents the [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true) contract from being broken. |
| * [MultiKey](http://docs.google.com/org/apache/commons/collections4/keyvalue/MultiKey.html)<K> | * A MultiKey allows multiple map keys to be merged together. |
| * [TiedMapEntry](http://docs.google.com/org/apache/commons/collections4/keyvalue/TiedMapEntry.html)<K,V> | * A [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true) tied to a map underneath. |
| * [UnmodifiableMapEntry](http://docs.google.com/org/apache/commons/collections4/keyvalue/UnmodifiableMapEntry.html)<K,V> | * A [Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true) that throws UnsupportedOperationException when setValue is called. |

## Package org.apache.commons.collections4.keyvalue Description

This package contains implementations of collection and map related key/value classes. These are usually used in maps, however they can be used as data holders in any collection.

The following key/value designs are included:

* Map Entry - various map entry implementations
* KeyValue - a key and value pair, without map entry semantics
* MultiKey - a holder of multiple keys tied together

[Skip navigation links](#3dy6vkm)

* [Overview](http://docs.google.com/overview-summary.html)
* Package
* Class
* [Use](http://docs.google.com/package-use.html)
* [Tree](http://docs.google.com/package-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 Package](http://docs.google.com/org/apache/commons/collections4/iterators/package-summary.html)
* [Next Package](http://docs.google.com/org/apache/commons/collections4/list/package-summary.html)
* [Frames](http://docs.google.com/index.html?org/apache/commons/collections4/keyvalue/package-summary.html)
* [No Frames](http://docs.google.com/package-summary.html)
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