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org.apache.commons.collections4.map

## Class ReferenceIdentityMap<K,V>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + [java.util.AbstractMap](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true)<K,V>
    - [org.apache.commons.collections4.map.AbstractHashedMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html)<K,V>
      * [org.apache.commons.collections4.map.AbstractReferenceMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html)<K,V>
        + org.apache.commons.collections4.map.ReferenceIdentityMap<K,V>
* Type Parameters: K - the type of the keys in this map V - the type of the values in this map All Implemented Interfaces: [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true), [Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V>, [Get](http://docs.google.com/org/apache/commons/collections4/Get.html)<K,V>, [IterableGet](http://docs.google.com/org/apache/commons/collections4/IterableGet.html)<K,V>, [IterableMap](http://docs.google.com/org/apache/commons/collections4/IterableMap.html)<K,V>, [Put](http://docs.google.com/org/apache/commons/collections4/Put.html)<K,V>  
    
  public class ReferenceIdentityMap<K,V>  
  extends [AbstractReferenceMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html)<K,V>  
  implements [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true)  
  A Map implementation that allows mappings to be removed by the garbage collector and matches keys and values based on == not equals().  
  When you construct a ReferenceIdentityMap, you can specify what kind of references are used to store the map's keys and values. If non-hard references are used, then the garbage collector can remove mappings if a key or value becomes unreachable, or if the JVM's memory is running low. For information on how the different reference types behave, see [Reference](https://docs.oracle.com/javase/7/docs/api/java/lang/ref/Reference.html?is-external=true).  
  Different types of references can be specified for keys and values. The default constructor uses hard keys and soft values, providing a memory-sensitive cache.  
  This map is similar to [ReferenceMap](http://docs.google.com/org/apache/commons/collections4/map/ReferenceMap.html). It differs in that keys and values in this class are compared using ==.  
  This map will violate the detail of various Map and map view contracts. As a general rule, don't compare this map to other maps.  
  This [Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true) implementation does *not* allow null elements. Attempting to add a null key or value to the map will raise a NullPointerException.  
  This implementation is not synchronized. You can use [Collections.synchronizedMap(java.util.Map<K, V>)](https://docs.oracle.com/javase/7/docs/api/java/util/Collections.html?is-external=true#synchronizedMap-java.util.Map-) to provide synchronized access to a ReferenceIdentityMap. Remember that synchronization will not stop the garbage collector removing entries.  
  All the available iterators can be reset back to the start by casting to ResettableIterator and calling reset().  
  **Note that ReferenceIdentityMap is not synchronized and is not thread-safe.** If you wish to use this map from multiple threads concurrently, you must use appropriate synchronization. The simplest approach is to wrap this map using [Collections.synchronizedMap(java.util.Map<K, V>)](https://docs.oracle.com/javase/7/docs/api/java/util/Collections.html?is-external=true#synchronizedMap-java.util.Map-). This class may throw exceptions when accessed by concurrent threads without synchronization.Since: 3.0 (previously in main package v2.1) See Also: [Reference](https://docs.oracle.com/javase/7/docs/api/java/lang/ref/Reference.html?is-external=true), [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.map.ReferenceIdentityMap)

### Nested Class Summary

### Nested classes/interfaces inherited from class org.apache.commons.collections4.map.[**AbstractReferenceMap**](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html)[AbstractReferenceMap.ReferenceEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceEntry.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceEntry.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceEntry.html)>, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html)

### Nested classes/interfaces inherited from class org.apache.commons.collections4.map.[**AbstractHashedMap**](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html)[AbstractHashedMap.EntrySet](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.EntrySet.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.EntrySet.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.EntrySet.html)>, [AbstractHashedMap.EntrySetIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.EntrySetIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.EntrySetIterator.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.EntrySetIterator.html)>, [AbstractHashedMap.HashEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashEntry.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashEntry.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashEntry.html)>, [AbstractHashedMap.HashIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashIterator.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashIterator.html)>, [AbstractHashedMap.HashMapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashMapIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashMapIterator.html),[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.HashMapIterator.html)>, [AbstractHashedMap.KeySet](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.KeySet.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.KeySet.html)>, [AbstractHashedMap.KeySetIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.KeySetIterator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.KeySetIterator.html)>, [AbstractHashedMap.Values](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.Values.html)<[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.Values.html)>, [AbstractHashedMap.ValuesIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.ValuesIterator.html)<[V](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.ValuesIterator.html)>

### Nested classes/interfaces inherited from class java.util.[**AbstractMap**](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true)[AbstractMap.SimpleEntry](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.SimpleEntry.html?is-external=true)<[K](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.SimpleEntry.html?is-external=true),[V](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.SimpleEntry.html?is-external=true)>, [AbstractMap.SimpleImmutableEntry](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.SimpleImmutableEntry.html?is-external=true)<[K](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.SimpleImmutableEntry.html?is-external=true),[V](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.SimpleImmutableEntry.html?is-external=true)>

### Nested classes/interfaces inherited from interface java.util.[**Map**](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)[Map.Entry](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true)<[K](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true),[V](https://docs.oracle.com/javase/7/docs/api/java/util/Map.Entry.html?is-external=true)>

### Field Summary

### Fields inherited from class org.apache.commons.collections4.map.[**AbstractHashedMap**](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html)[DEFAULT\_CAPACITY](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#DEFAULT_CAPACITY), [DEFAULT\_LOAD\_FACTOR](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#DEFAULT_LOAD_FACTOR), [DEFAULT\_THRESHOLD](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#DEFAULT_THRESHOLD), [GETKEY\_INVALID](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#GETKEY_INVALID), [GETVALUE\_INVALID](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#GETVALUE_INVALID), [MAXIMUM\_CAPACITY](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#MAXIMUM_CAPACITY), [NO\_NEXT\_ENTRY](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#NO_NEXT_ENTRY), [NO\_PREVIOUS\_ENTRY](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#NO_PREVIOUS_ENTRY), [NULL](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#NULL), [REMOVE\_INVALID](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#REMOVE_INVALID), [SETVALUE\_INVALID](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#SETVALUE_INVALID)

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [ReferenceIdentityMap](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#ReferenceIdentityMap--)() Constructs a new ReferenceIdentityMap that will use hard references to keys and soft references to values. |
| * + [ReferenceIdentityMap](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#ReferenceIdentityMap-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-)([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType) Constructs a new ReferenceIdentityMap that will use the specified types of references. |
| * + [ReferenceIdentityMap](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#ReferenceIdentityMap-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-boolean-)([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType, boolean purgeValues) Constructs a new ReferenceIdentityMap that will use the specified types of references. |
| * + [ReferenceIdentityMap](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#ReferenceIdentityMap-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-int-float-)([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType, int capacity, float loadFactor) Constructs a new ReferenceIdentityMap with the specified reference types, load factor and initial capacity. |
| * + [ReferenceIdentityMap](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#ReferenceIdentityMap-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-int-float-boolean-)([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType, int capacity, float loadFactor, boolean purgeValues) Constructs a new ReferenceIdentityMap with the specified reference types, load factor and initial capacity. |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + protected int | * + [hash](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#hash-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key) Gets the hash code for the key specified. |
| * + protected int | * + [hashEntry](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#hashEntry-java.lang.Object-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value) Gets the hash code for a MapEntry. |
| * + protected boolean | * + [isEqualKey](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#isEqualKey-java.lang.Object-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key1, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key2) Compares two keys for equals. |
| * + protected boolean | * + [isEqualValue](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html#isEqualValue-java.lang.Object-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value1, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value2) Compares two values for equals. |

### Methods inherited from class org.apache.commons.collections4.map.[**AbstractReferenceMap**](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html)[clear](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#clear--), [containsKey](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#containsKey-java.lang.Object-), [containsValue](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#containsValue-java.lang.Object-), [createEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#createEntry-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-int-K-V-), [createEntrySetIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#createEntrySetIterator--), [createKeySetIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#createKeySetIterator--), [createValuesIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#createValuesIterator--), [doReadObject](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#doReadObject-java.io.ObjectInputStream-), [doWriteObject](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#doWriteObject-java.io.ObjectOutputStream-), [entrySet](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#entrySet--), [get](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#get-java.lang.Object-), [getEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#getEntry-java.lang.Object-), [init](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#init--), [isEmpty](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#isEmpty--), [isKeyType](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#isKeyType-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-), [isValueType](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#isValueType-org.apache.commons.collections4.map.AbstractReferenceMap.ReferenceStrength-), [keySet](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#keySet--), [mapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#mapIterator--), [purge](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#purge--), [purge](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#purge-java.lang.ref.Reference-), [purgeBeforeRead](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#purgeBeforeRead--), [purgeBeforeWrite](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#purgeBeforeWrite--), [put](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#put-K-V-), [remove](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#remove-java.lang.Object-), [size](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#size--), [values](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#values--)

### Methods inherited from class org.apache.commons.collections4.map.[**AbstractHashedMap**](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html)[addEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#addEntry-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-int-), [addMapping](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#addMapping-int-int-K-V-), [calculateNewCapacity](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#calculateNewCapacity-int-), [calculateThreshold](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#calculateThreshold-int-float-), [checkCapacity](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#checkCapacity--), [clone](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#clone--), [convertKey](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#convertKey-java.lang.Object-), [destroyEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#destroyEntry-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-), [ensureCapacity](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#ensureCapacity-int-), [entryHashCode](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#entryHashCode-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-), [entryKey](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#entryKey-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-), [entryNext](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#entryNext-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-), [entryValue](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#entryValue-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-), [equals](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#equals-java.lang.Object-), [hashCode](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#hashCode--), [hashIndex](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#hashIndex-int-int-), [putAll](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#putAll-java.util.Map-), [removeEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#removeEntry-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-int-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-), [removeMapping](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#removeMapping-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-int-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-), [reuseEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#reuseEntry-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-int-int-K-V-), [toString](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#toString--), [updateEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#updateEntry-org.apache.commons.collections4.map.AbstractHashedMap.HashEntry-V-)

### Methods inherited from class java.lang.[**Object**](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[finalize](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#finalize--), [getClass](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#getClass--), [notify](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notify--), [notifyAll](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notifyAll--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-int-)

### Methods inherited from interface java.util.[**Map**](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)[compute](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#compute-K-java.util.function.BiFunction-), [computeIfAbsent](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#computeIfAbsent-K-java.util.function.Function-), [computeIfPresent](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#computeIfPresent-K-java.util.function.BiFunction-), [forEach](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#forEach-java.util.function.BiConsumer-), [getOrDefault](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#getOrDefault-java.lang.Object-V-), [merge](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#merge-K-V-java.util.function.BiFunction-), [putIfAbsent](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#putIfAbsent-K-V-), [remove](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#remove-java.lang.Object-java.lang.Object-), [replace](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#replace-K-V-), [replace](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#replace-K-V-V-), [replaceAll](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#replaceAll-java.util.function.BiFunction-)

### Constructor Detail

#### ReferenceIdentityMap public ReferenceIdentityMap() Constructs a new ReferenceIdentityMap that will use hard references to keys and soft references to values.

#### ReferenceIdentityMap public ReferenceIdentityMap([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType) Constructs a new ReferenceIdentityMap that will use the specified types of references.Parameters: keyType - the type of reference to use for keys; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK) valueType - the type of reference to use for values; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK)

#### ReferenceIdentityMap public ReferenceIdentityMap([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType, boolean purgeValues) Constructs a new ReferenceIdentityMap that will use the specified types of references.Parameters: keyType - the type of reference to use for keys; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK) valueType - the type of reference to use for values; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK) purgeValues - should the value be automatically purged when the key is garbage collected

#### ReferenceIdentityMap public ReferenceIdentityMap([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType, int capacity, float loadFactor) Constructs a new ReferenceIdentityMap with the specified reference types, load factor and initial capacity.Parameters: keyType - the type of reference to use for keys; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK) valueType - the type of reference to use for values; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK) capacity - the initial capacity for the map loadFactor - the load factor for the map

#### ReferenceIdentityMap public ReferenceIdentityMap([AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) keyType, [AbstractReferenceMap.ReferenceStrength](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html) valueType, int capacity, float loadFactor, boolean purgeValues) Constructs a new ReferenceIdentityMap with the specified reference types, load factor and initial capacity.Parameters: keyType - the type of reference to use for keys; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK) valueType - the type of reference to use for values; must be [HARD](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#HARD), [SOFT](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#SOFT), [WEAK](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.ReferenceStrength.html#WEAK) capacity - the initial capacity for the map loadFactor - the load factor for the map purgeValues - should the value be automatically purged when the key is garbage collected

### Method Detail

#### hash protected int hash([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key) Gets the hash code for the key specified. This implementation uses the identity hash code.Overrides: [hash](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#hash-java.lang.Object-) in class [AbstractHashedMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html)> Parameters: key - the key to get a hash code for Returns: the hash code

#### hashEntry protected int hashEntry([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value) Gets the hash code for a MapEntry. This implementation uses the identity hash code.Overrides: [hashEntry](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#hashEntry-java.lang.Object-java.lang.Object-) in class [AbstractReferenceMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html)> Parameters: key - the key to get a hash code for, may be null value - the value to get a hash code for, may be null Returns: the hash code, as per the MapEntry specification

#### isEqualKey protected boolean isEqualKey([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key1, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key2) Compares two keys for equals. This implementation converts the key from the entry to a real reference before comparison and uses ==.Overrides: [isEqualKey](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html#isEqualKey-java.lang.Object-java.lang.Object-) in class [AbstractReferenceMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractReferenceMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html)> Parameters: key1 - the first key to compare passed in from outside key2 - the second key extracted from the entry via entry.key Returns: true if equal by identity

#### isEqualValue protected boolean isEqualValue([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value1, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value2) Compares two values for equals. This implementation uses ==.Overrides: [isEqualValue](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html#isEqualValue-java.lang.Object-java.lang.Object-) in class [AbstractHashedMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractHashedMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/ReferenceIdentityMap.html)> Parameters: value1 - the first value to compare passed in from outside value2 - the second value extracted from the entry via getValue() Returns: true if equal by identity

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