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org.apache.commons.collections4.map

## Class DefaultedMap<K,V>

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + [org.apache.commons.collections4.map.AbstractIterableMap](http://docs.google.com/org/apache/commons/collections4/map/AbstractIterableMap.html)<K,V>
    - [org.apache.commons.collections4.map.AbstractMapDecorator](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html)<K,V>
      * org.apache.commons.collections4.map.DefaultedMap<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 DefaultedMap<K,V>  
  extends [AbstractMapDecorator](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html)<K,V>  
  implements [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true)  
  Decorates another Map returning a default value if the map does not contain the requested key.  
  When the [get(Object)](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#get-java.lang.Object-) method is called with a key that does not exist in the map, this map will return the default value specified in the constructor/factory. Only the get method is altered, so the [Map.containsKey(Object)](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#containsKey-java.lang.Object-) can be used to determine if a key really is in the map or not.  
  The defaulted value is not added to the map. Compare this behaviour with [LazyMap](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html), which does add the value to the map (via a Transformer).  
  For instance:  
   Map map = new DefaultedMap("NULL");  
   Object obj = map.get("Surname");  
   // obj == "NULL"  
     
  After the above code is executed the map is still empty.  
  **Note that DefaultedMap 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(Map)](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: 3.2 See Also: [LazyMap](http://docs.google.com/org/apache/commons/collections4/map/LazyMap.html), [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.map.DefaultedMap)

### Nested Class Summary

### 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)>

### Constructor SummaryConstructors

|  |  |
| --- | --- |
| * + Modifier | * + Constructor and Description |
| * + protected | * + [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. |
|  | * + [DefaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#DefaultedMap-V-)([V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html) defaultValue) Constructs a new empty DefaultedMap that decorates a HashMap. |

### Method SummaryAll Methods Static Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static <K,V> [DefaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)<K,V> | * + [defaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#defaultedMap-java.util.Map-org.apache.commons.collections4.Factory-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Factory](http://docs.google.com/org/apache/commons/collections4/Factory.html)<? extends V> factory) Factory method to create a defaulting map. |
| * + static <K,V> [Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> | * + [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 <K,V> [DefaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)<K,V> | * + [defaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#defaultedMap-java.util.Map-V-)([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, V defaultValue) Factory method to create a defaulting map. |
| * + [V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html) | * + [get](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html#get-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key) |

### Methods inherited from class org.apache.commons.collections4.map.[**AbstractMapDecorator**](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html)[clear](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#clear--), [containsKey](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#containsKey-java.lang.Object-), [containsValue](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#containsValue-java.lang.Object-), [decorated](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#decorated--), [entrySet](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#entrySet--), [equals](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#equals-java.lang.Object-), [hashCode](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#hashCode--), [isEmpty](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#isEmpty--), [keySet](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#keySet--), [put](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#put-K-V-), [putAll](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#putAll-java.util.Map-), [remove](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#remove-java.lang.Object-), [size](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#size--), [toString](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#toString--), [values](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#values--)

### Methods inherited from class org.apache.commons.collections4.map.[**AbstractIterableMap**](http://docs.google.com/org/apache/commons/collections4/map/AbstractIterableMap.html)[mapIterator](http://docs.google.com/org/apache/commons/collections4/map/AbstractIterableMap.html#mapIterator--)

### Methods inherited from class java.lang.[**Object**](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[clone](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#clone--), [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

#### DefaultedMap public DefaultedMap([V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html) defaultValue) Constructs a new empty DefaultedMap that decorates a HashMap. The object passed in will be returned by the map whenever an unknown key is requested.Parameters: defaultValue - the default value to return when the key is not found

#### DefaultedMap public DefaultedMap([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.Parameters: defaultValueTransformer - transformer to use to generate missing values.

#### DefaultedMap protected DefaultedMap([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).Parameters: map - the map to decorate, must not be null defaultValueTransformer - the value transformer to use Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if map or transformer is null

### Method Detail

#### defaultedMap public static <K,V> [DefaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)<K,V> defaultedMap([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, V defaultValue) Factory method to create a defaulting map. The value specified is returned when a missing key is found.Type Parameters: K - the key type V - the value type Parameters: map - the map to decorate, must not be null defaultValue - the default value to return when the key is not found Returns: a new defaulting map Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if map is null Since: 4.0

#### defaultedMap public static <K,V> [DefaultedMap](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)<K,V> defaultedMap([Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> map, [Factory](http://docs.google.com/org/apache/commons/collections4/Factory.html)<? extends V> factory) Factory method to create a defaulting map. The factory specified is called when a missing key is found. The result will be returned as the result of the map get(key) method.Type Parameters: K - the key type V - the value type Parameters: map - the map to decorate, must not be null factory - the factory to use to create entries, must not be null Returns: a new defaulting map Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if map or factory is null Since: 4.0

#### defaultedMap public static <K,V> [Map](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)<K,V> defaultedMap([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. The transformer specified is called when a missing key is found. The key is passed to the transformer as the input, and the result will be returned as the result of the map get(key) method.Type Parameters: K - the key type V - the value type Parameters: map - the map to decorate, must not be null transformer - the transformer to use as a factory to create entries, must not be null Returns: a new defaulting map Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if map or factory is null Since: 4.0

#### get public [V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html) get([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key)Specified by: [get](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#get-java.lang.Object-) in interface [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)> Specified by: [get](http://docs.google.com/org/apache/commons/collections4/Get.html#get-java.lang.Object-) in interface [Get](http://docs.google.com/org/apache/commons/collections4/Get.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)> Overrides: [get](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html#get-java.lang.Object-) in class [AbstractMapDecorator](http://docs.google.com/org/apache/commons/collections4/map/AbstractMapDecorator.html)<[K](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/map/DefaultedMap.html)> Parameters: key - the key whose associated value is to be returned Returns: the value to which the specified key is mapped, or null if this map contains no mapping for the key See Also: [Map.get(Object)](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#get-java.lang.Object-)

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