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org.apache.commons.collections4

## Interface SetValuedMap<K,V>

* Type Parameters: K - the type of the keys in this map V - the type of the values in this map All Superinterfaces: [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V> All Known Implementing Classes: [AbstractSetValuedMap](http://docs.google.com/org/apache/commons/collections4/multimap/AbstractSetValuedMap.html), [HashSetValuedHashMap](http://docs.google.com/org/apache/commons/collections4/multimap/HashSetValuedHashMap.html)  
    
  public interface SetValuedMap<K,V>  
  extends [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<K,V>
* Defines a map that holds a set of values against each key.  
  A SetValuedMap is a Map with slightly different semantics:
  + Putting a value into the map will add the value to a [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true) at that key.
  + Getting a value will return a [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true), holding all the values put to that key.

Since: 4.1

### Method SummaryAll Methods Instance Methods Abstract Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[V](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html)> | * + [get](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html#get-K-)([K](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html) key) Gets the set of values associated with the specified key. |
| * + [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[V](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html)> | * + [remove](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html#remove-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key) Removes all values associated with the specified key. |

### Methods inherited from interface org.apache.commons.collections4.[**MultiValuedMap**](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)[asMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#asMap--), [clear](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#clear--), [containsKey](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#containsKey-java.lang.Object-), [containsMapping](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#containsMapping-java.lang.Object-java.lang.Object-), [containsValue](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#containsValue-java.lang.Object-), [entries](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#entries--), [isEmpty](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#isEmpty--), [keys](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#keys--), [keySet](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#keySet--), [mapIterator](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#mapIterator--), [put](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#put-K-V-), [putAll](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#putAll-K-java.lang.Iterable-), [putAll](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#putAll-java.util.Map-), [putAll](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#putAll-org.apache.commons.collections4.MultiValuedMap-), [removeMapping](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#removeMapping-java.lang.Object-java.lang.Object-), [size](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#size--), [values](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#values--)

### Method Detail

#### get [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[V](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html)> get([K](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html) key) Gets the set of values associated with the specified key. Implementations typically return an empty Set if no values have been mapped to the key. Specified by: [get](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#get-K-) in interface [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html)> Parameters: key - the key to retrieve Returns: the Set of values, implementations should return an empty Set for no mapping Throws: [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if the key is null and null keys are invalid

#### remove [Set](https://docs.oracle.com/javase/7/docs/api/java/util/Set.html?is-external=true)<[V](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html)> remove([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) key) Removes all values associated with the specified key. The returned set *may* be modifiable, but updates will not be propagated to this set-valued map. In case no mapping was stored for the specified key, an empty, unmodifiable set will be returned.Specified by: [remove](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html#remove-java.lang.Object-) in interface [MultiValuedMap](http://docs.google.com/org/apache/commons/collections4/MultiValuedMap.html)<[K](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html),[V](http://docs.google.com/org/apache/commons/collections4/SetValuedMap.html)> Parameters: key - the key to remove values from Returns: the Set of values removed, implementations should return null for no mapping found, but may return an empty collection Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - if the map is unmodifiable [NullPointerException](https://docs.oracle.com/javase/7/docs/api/java/lang/NullPointerException.html?is-external=true) - if the key is null and null keys are invalid

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