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org.apache.commons.collections4.trie

## Class AbstractBitwiseTrie<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.trie.AbstractBitwiseTrie<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>, [SortedMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.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>, [IterableSortedMap](http://docs.google.com/org/apache/commons/collections4/IterableSortedMap.html)<K,V>, [OrderedMap](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html)<K,V>, [Put](http://docs.google.com/org/apache/commons/collections4/Put.html)<K,V>, [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html)<K,V> Direct Known Subclasses: [PatriciaTrie](http://docs.google.com/org/apache/commons/collections4/trie/PatriciaTrie.html)  
    
  public abstract class AbstractBitwiseTrie<K,V>  
  extends [AbstractMap](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true)<K,V>  
  implements [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html)<K,V>, [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true)  
  This class provides some basic [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html) functionality and utility methods for actual bitwise [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html) implementations.Since: 4.0 See Also: [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.trie.AbstractBitwiseTrie)

### Nested Class Summary

### 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)>

### Constructor SummaryConstructors

|  |  |
| --- | --- |
| * + Modifier | * + Constructor and Description |
| * + protected | * + [AbstractBitwiseTrie](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html#AbstractBitwiseTrie-org.apache.commons.collections4.trie.KeyAnalyzer-)([KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html)> keyAnalyzer) Constructs a new [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html) using the given [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html). |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + protected [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html)> | * + [getKeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html#getKeyAnalyzer--)() Returns the [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html) that constructed the [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html). |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [toString](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html#toString--)() |

### Methods inherited from class java.util.[**AbstractMap**](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true)[clear](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#clear--), [clone](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#clone--), [containsKey](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#containsKey-java.lang.Object-), [containsValue](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#containsValue-java.lang.Object-), [entrySet](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#entrySet--), [equals](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#equals-java.lang.Object-), [get](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#get-java.lang.Object-), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#hashCode--), [isEmpty](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#isEmpty--), [keySet](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#keySet--), [put](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#put-K-V-), [putAll](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#putAll-java.util.Map-), [remove](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#remove-java.lang.Object-), [size](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#size--), [values](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#values--)

### 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 org.apache.commons.collections4.[**Trie**](http://docs.google.com/org/apache/commons/collections4/Trie.html)[prefixMap](http://docs.google.com/org/apache/commons/collections4/Trie.html#prefixMap-K-)

### Methods inherited from interface java.util.[**SortedMap**](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true)[comparator](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#comparator--), [entrySet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#entrySet--), [firstKey](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#firstKey--), [headMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#headMap-K-), [keySet](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#keySet--), [lastKey](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#lastKey--), [subMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#subMap-K-K-), [tailMap](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#tailMap-K-), [values](https://docs.oracle.com/javase/7/docs/api/java/util/SortedMap.html?is-external=true#values--)

### Methods inherited from interface org.apache.commons.collections4.[**OrderedMap**](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html)[firstKey](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html#firstKey--), [lastKey](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html#lastKey--), [mapIterator](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html#mapIterator--), [nextKey](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html#nextKey-K-), [previousKey](http://docs.google.com/org/apache/commons/collections4/OrderedMap.html#previousKey-K-)

### Methods inherited from interface java.util.[**Map**](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true)[clear](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#clear--), [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-), [containsKey](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#containsKey-java.lang.Object-), [containsValue](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#containsValue-java.lang.Object-), [equals](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#equals-java.lang.Object-), [forEach](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#forEach-java.util.function.BiConsumer-), [get](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#get-java.lang.Object-), [getOrDefault](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#getOrDefault-java.lang.Object-V-), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#hashCode--), [isEmpty](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#isEmpty--), [merge](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#merge-K-V-java.util.function.BiFunction-), [put](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#put-K-V-), [putAll](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#putAll-java.util.Map-), [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-), [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-), [size](https://docs.oracle.com/javase/7/docs/api/java/util/Map.html?is-external=true#size--)

### Methods inherited from interface org.apache.commons.collections4.[**Put**](http://docs.google.com/org/apache/commons/collections4/Put.html)[clear](http://docs.google.com/org/apache/commons/collections4/Put.html#clear--), [put](http://docs.google.com/org/apache/commons/collections4/Put.html#put-K-V-), [putAll](http://docs.google.com/org/apache/commons/collections4/Put.html#putAll-java.util.Map-)

### Methods inherited from interface org.apache.commons.collections4.[**Get**](http://docs.google.com/org/apache/commons/collections4/Get.html)[containsKey](http://docs.google.com/org/apache/commons/collections4/Get.html#containsKey-java.lang.Object-), [containsValue](http://docs.google.com/org/apache/commons/collections4/Get.html#containsValue-java.lang.Object-), [entrySet](http://docs.google.com/org/apache/commons/collections4/Get.html#entrySet--), [get](http://docs.google.com/org/apache/commons/collections4/Get.html#get-java.lang.Object-), [isEmpty](http://docs.google.com/org/apache/commons/collections4/Get.html#isEmpty--), [keySet](http://docs.google.com/org/apache/commons/collections4/Get.html#keySet--), [remove](http://docs.google.com/org/apache/commons/collections4/Get.html#remove-java.lang.Object-), [size](http://docs.google.com/org/apache/commons/collections4/Get.html#size--), [values](http://docs.google.com/org/apache/commons/collections4/Get.html#values--)

### Constructor Detail

#### AbstractBitwiseTrie protected AbstractBitwiseTrie([KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html)> keyAnalyzer) Constructs a new [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html) using the given [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html).Parameters: keyAnalyzer - the [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html) to use

### Method Detail

#### getKeyAnalyzer protected [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<? super [K](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html)> getKeyAnalyzer() Returns the [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html) that constructed the [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html).Returns: the [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html) used by this [Trie](http://docs.google.com/org/apache/commons/collections4/Trie.html)

#### toString public [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) toString()Overrides: [toString](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true#toString--) in class [AbstractMap](https://docs.oracle.com/javase/7/docs/api/java/util/AbstractMap.html?is-external=true)<[K](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html),[V](http://docs.google.com/org/apache/commons/collections4/trie/AbstractBitwiseTrie.html)>

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