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org.apache.commons.collections4.trie.analyzer

## Class StringKeyAnalyzer

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + [org.apache.commons.collections4.trie.KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)>
    - org.apache.commons.collections4.trie.analyzer.StringKeyAnalyzer
* All Implemented Interfaces: [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true), [Comparator](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)>  
    
  public class StringKeyAnalyzer  
  extends [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)>  
  An [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html) for [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)s.Since: 4.0 See Also: [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.collections4.trie.analyzer.StringKeyAnalyzer)

### Field SummaryFields

|  |  |
| --- | --- |
| * + Modifier and Type | * + Field and Description |
| * + static [StringKeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html) | * + [INSTANCE](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#INSTANCE) A singleton instance of [StringKeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html). |
| * + static int | * + [LENGTH](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#LENGTH) The number of bits per [Character](https://docs.oracle.com/javase/7/docs/api/java/lang/Character.html?is-external=true). |

### Fields inherited from class org.apache.commons.collections4.trie.[**KeyAnalyzer**](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)[EQUAL\_BIT\_KEY](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#EQUAL_BIT_KEY), [NULL\_BIT\_KEY](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#NULL_BIT_KEY), [OUT\_OF\_BOUNDS\_BIT\_KEY](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#OUT_OF_BOUNDS_BIT_KEY)

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [StringKeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#StringKeyAnalyzer--)() |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + int | * + [bitIndex](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#bitIndex-java.lang.String-int-int-java.lang.String-int-int-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key, int offsetInBits, int lengthInBits, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) other, int otherOffsetInBits, int otherLengthInBits) Returns the n-th different bit between key and other. |
| * + int | * + [bitsPerElement](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#bitsPerElement--)() Returns the number of bits per element in the key. |
| * + boolean | * + [isBitSet](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#isBitSet-java.lang.String-int-int-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key, int bitIndex, int lengthInBits) Returns whether or not a bit is set. |
| * + boolean | * + [isPrefix](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#isPrefix-java.lang.String-int-int-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) prefix, int offsetInBits, int lengthInBits, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key) Determines whether or not the given prefix (from offset to length) is a prefix of the given key. |
| * + int | * + [lengthInBits](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html#lengthInBits-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key) Returns the length of the Key in bits. |

### Methods inherited from class org.apache.commons.collections4.trie.[**KeyAnalyzer**](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)[compare](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#compare-K-K-)

### 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--), [equals](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#equals-java.lang.Object-), [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--), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#hashCode--), [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--), [toString](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#toString--), [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.[**Comparator**](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true)[comparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparing-java.util.function.Function-), [comparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparing-java.util.function.Function-java.util.Comparator-), [comparingDouble](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparingDouble-java.util.function.ToDoubleFunction-), [comparingInt](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparingInt-java.util.function.ToIntFunction-), [comparingLong](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#comparingLong-java.util.function.ToLongFunction-), [equals](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#equals-java.lang.Object-), [naturalOrder](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#naturalOrder--), [nullsFirst](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#nullsFirst-java.util.Comparator-), [nullsLast](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#nullsLast-java.util.Comparator-), [reversed](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#reversed--), [reverseOrder](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#reverseOrder--), [thenComparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparing-java.util.Comparator-), [thenComparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparing-java.util.function.Function-), [thenComparing](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparing-java.util.function.Function-java.util.Comparator-), [thenComparingDouble](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparingDouble-java.util.function.ToDoubleFunction-), [thenComparingInt](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparingInt-java.util.function.ToIntFunction-), [thenComparingLong](https://docs.oracle.com/javase/7/docs/api/java/util/Comparator.html?is-external=true#thenComparingLong-java.util.function.ToLongFunction-)

### Field Detail

#### INSTANCE public static final [StringKeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html) INSTANCE A singleton instance of [StringKeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/analyzer/StringKeyAnalyzer.html).

#### LENGTH public static final int LENGTH The number of bits per [Character](https://docs.oracle.com/javase/7/docs/api/java/lang/Character.html?is-external=true).See Also: [Constant Field Values](http://docs.google.com/constant-values.html#org.apache.commons.collections4.trie.analyzer.StringKeyAnalyzer.LENGTH)

### Constructor Detail

#### StringKeyAnalyzer public StringKeyAnalyzer()

### Method Detail

#### bitsPerElement public int bitsPerElement() Description copied from class: [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#bitsPerElement--) Returns the number of bits per element in the key. This is only useful for variable-length keys, such as Strings.Specified by: [bitsPerElement](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#bitsPerElement--) in class [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> Returns: the number of bits per element

#### lengthInBits public int lengthInBits([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key) Description copied from class: [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#lengthInBits-K-) Returns the length of the Key in bits.Specified by: [lengthInBits](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#lengthInBits-K-) in class [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> Parameters: key - the key Returns: the bit length of the key

#### bitIndex public int bitIndex([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key, int offsetInBits, int lengthInBits, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) other, int otherOffsetInBits, int otherLengthInBits) Description copied from class: [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#bitIndex-K-int-int-K-int-int-) Returns the n-th different bit between key and other. This starts the comparison in key at 'offsetInBits' and goes for 'lengthInBits' bits, and compares to the other key starting at 'otherOffsetInBits' and going for 'otherLengthInBits' bits.Specified by: [bitIndex](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#bitIndex-K-int-int-K-int-int-) in class [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> Parameters: key - the key to use offsetInBits - the bit offset in the key lengthInBits - the maximum key length in bits to use other - the other key to use otherOffsetInBits - the bit offset in the other key otherLengthInBits - the maximum key length in bits for the other key Returns: the bit index where the key and other first differ

#### isBitSet public boolean isBitSet([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key, int bitIndex, int lengthInBits) Description copied from class: [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#isBitSet-K-int-int-) Returns whether or not a bit is set.Specified by: [isBitSet](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#isBitSet-K-int-int-) in class [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> Parameters: key - the key to check, may not be null bitIndex - the bit index to check lengthInBits - the maximum key length in bits to check Returns: true if the bit is set in the given key and bitIndex < lengthInBits, false otherwise.

#### isPrefix public boolean isPrefix([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) prefix, int offsetInBits, int lengthInBits, [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) key) Description copied from class: [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#isPrefix-K-int-int-K-) Determines whether or not the given prefix (from offset to length) is a prefix of the given key.Specified by: [isPrefix](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html#isPrefix-K-int-int-K-) in class [KeyAnalyzer](http://docs.google.com/org/apache/commons/collections4/trie/KeyAnalyzer.html)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)> Parameters: prefix - the prefix to check offsetInBits - the bit offset in the key lengthInBits - the maximum key length in bits to use key - the key to check Returns: true if this is a valid prefix for the given key

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