| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | Class | Use | **Tree** | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV**](http://docs.google.com/java/text/spi/package-tree.html)   [**NEXT**](http://docs.google.com/java/util/concurrent/package-tree.html) | [**FRAMES**](http://docs.google.com/index.html?java/util/package-tree.html)    [**NO FRAMES**](http://docs.google.com/package-tree.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

Hierarchy For Package java.util

**Package Hierarchies:**[All Packages](http://docs.google.com/overview-tree.html)

## Class Hierarchy

* java.lang.[**Object**](http://docs.google.com/java/lang/Object.html)
  + java.util.[**AbstractCollection**](http://docs.google.com/java/util/AbstractCollection.html)<E> (implements java.util.[Collection](http://docs.google.com/java/util/Collection.html)<E>)
    - java.util.[**AbstractList**](http://docs.google.com/java/util/AbstractList.html)<E> (implements java.util.[List](http://docs.google.com/java/util/List.html)<E>)
      * java.util.[**AbstractSequentialList**](http://docs.google.com/java/util/AbstractSequentialList.html)<E>
        + java.util.[**LinkedList**](http://docs.google.com/java/util/LinkedList.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[Deque](http://docs.google.com/java/util/Deque.html)<E>, java.util.[List](http://docs.google.com/java/util/List.html)<E>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
      * java.util.[**ArrayList**](http://docs.google.com/java/util/ArrayList.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[List](http://docs.google.com/java/util/List.html)<E>, java.util.[RandomAccess](http://docs.google.com/java/util/RandomAccess.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
      * java.util.[**Vector**](http://docs.google.com/java/util/Vector.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[List](http://docs.google.com/java/util/List.html)<E>, java.util.[RandomAccess](http://docs.google.com/java/util/RandomAccess.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
        + java.util.[**Stack**](http://docs.google.com/java/util/Stack.html)<E>
    - java.util.[**AbstractQueue**](http://docs.google.com/java/util/AbstractQueue.html)<E> (implements java.util.[Queue](http://docs.google.com/java/util/Queue.html)<E>)
      * java.util.[**PriorityQueue**](http://docs.google.com/java/util/PriorityQueue.html)<E> (implements java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**AbstractSet**](http://docs.google.com/java/util/AbstractSet.html)<E> (implements java.util.[Set](http://docs.google.com/java/util/Set.html)<E>)
      * java.util.[**EnumSet**](http://docs.google.com/java/util/EnumSet.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
      * java.util.[**HashSet**](http://docs.google.com/java/util/HashSet.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html), java.util.[Set](http://docs.google.com/java/util/Set.html)<E>)
        + java.util.[**LinkedHashSet**](http://docs.google.com/java/util/LinkedHashSet.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html), java.util.[Set](http://docs.google.com/java/util/Set.html)<E>)
      * java.util.[**TreeSet**](http://docs.google.com/java/util/TreeSet.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[NavigableSet](http://docs.google.com/java/util/NavigableSet.html)<E>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**ArrayDeque**](http://docs.google.com/java/util/ArrayDeque.html)<E> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[Deque](http://docs.google.com/java/util/Deque.html)<E>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**AbstractMap**](http://docs.google.com/java/util/AbstractMap.html)<K,V> (implements java.util.[Map](http://docs.google.com/java/util/Map.html)<K,V>)
    - java.util.[**EnumMap**](http://docs.google.com/java/util/EnumMap.html)<K,V> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**HashMap**](http://docs.google.com/java/util/HashMap.html)<K,V> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[Map](http://docs.google.com/java/util/Map.html)<K,V>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
      * java.util.[**LinkedHashMap**](http://docs.google.com/java/util/LinkedHashMap.html)<K,V> (implements java.util.[Map](http://docs.google.com/java/util/Map.html)<K,V>)
    - java.util.[**IdentityHashMap**](http://docs.google.com/java/util/IdentityHashMap.html)<K,V> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[Map](http://docs.google.com/java/util/Map.html)<K,V>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**TreeMap**](http://docs.google.com/java/util/TreeMap.html)<K,V> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[NavigableMap](http://docs.google.com/java/util/NavigableMap.html)<K,V>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**WeakHashMap**](http://docs.google.com/java/util/WeakHashMap.html)<K,V> (implements java.util.[Map](http://docs.google.com/java/util/Map.html)<K,V>)
  + java.util.[**AbstractMap.SimpleEntry**](http://docs.google.com/java/util/AbstractMap.SimpleEntry.html)<K,V> (implements java.util.[Map.Entry](http://docs.google.com/java/util/Map.Entry.html)<K,V>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**AbstractMap.SimpleImmutableEntry**](http://docs.google.com/java/util/AbstractMap.SimpleImmutableEntry.html)<K,V> (implements java.util.[Map.Entry](http://docs.google.com/java/util/Map.Entry.html)<K,V>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**Arrays**](http://docs.google.com/java/util/Arrays.html)
  + java.util.[**BitSet**](http://docs.google.com/java/util/BitSet.html) (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**Calendar**](http://docs.google.com/java/util/Calendar.html) (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.lang.[Comparable](http://docs.google.com/java/lang/Comparable.html)<T>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**GregorianCalendar**](http://docs.google.com/java/util/GregorianCalendar.html)
  + java.util.[**Collections**](http://docs.google.com/java/util/Collections.html)
  + java.util.[**Currency**](http://docs.google.com/java/util/Currency.html) (implements java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**Date**](http://docs.google.com/java/util/Date.html) (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.lang.[Comparable](http://docs.google.com/java/lang/Comparable.html)<T>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**Dictionary**](http://docs.google.com/java/util/Dictionary.html)<K,V>
    - java.util.[**Hashtable**](http://docs.google.com/java/util/Hashtable.html)<K,V> (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.util.[Map](http://docs.google.com/java/util/Map.html)<K,V>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
      * java.util.[**Properties**](http://docs.google.com/java/util/Properties.html)
  + java.util.[**EventListenerProxy**](http://docs.google.com/java/util/EventListenerProxy.html) (implements java.util.[EventListener](http://docs.google.com/java/util/EventListener.html))
  + java.util.[**EventObject**](http://docs.google.com/java/util/EventObject.html) (implements java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**FormattableFlags**](http://docs.google.com/java/util/FormattableFlags.html)
  + java.util.[**Formatter**](http://docs.google.com/java/util/Formatter.html) (implements java.io.[Closeable](http://docs.google.com/java/io/Closeable.html), java.io.[Flushable](http://docs.google.com/java/io/Flushable.html))
  + java.util.[**Locale**](http://docs.google.com/java/util/Locale.html) (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**Observable**](http://docs.google.com/java/util/Observable.html)
  + java.security.[**Permission**](http://docs.google.com/java/security/Permission.html) (implements java.security.[Guard](http://docs.google.com/java/security/Guard.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.security.[**BasicPermission**](http://docs.google.com/java/security/BasicPermission.html) (implements java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
      * java.util.[**PropertyPermission**](http://docs.google.com/java/util/PropertyPermission.html)
  + java.util.[**Random**](http://docs.google.com/java/util/Random.html) (implements java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
  + java.util.[**ResourceBundle**](http://docs.google.com/java/util/ResourceBundle.html)
    - java.util.[**ListResourceBundle**](http://docs.google.com/java/util/ListResourceBundle.html)
    - java.util.[**PropertyResourceBundle**](http://docs.google.com/java/util/PropertyResourceBundle.html)
  + java.util.[**ResourceBundle.Control**](http://docs.google.com/java/util/ResourceBundle.Control.html)
  + java.util.[**Scanner**](http://docs.google.com/java/util/Scanner.html) (implements java.util.[Iterator](http://docs.google.com/java/util/Iterator.html)<E>)
  + java.util.[**ServiceLoader**](http://docs.google.com/java/util/ServiceLoader.html)<S> (implements java.lang.[Iterable](http://docs.google.com/java/lang/Iterable.html)<T>)
  + java.util.[**StringTokenizer**](http://docs.google.com/java/util/StringTokenizer.html) (implements java.util.[Enumeration](http://docs.google.com/java/util/Enumeration.html)<E>)
  + java.lang.[**Throwable**](http://docs.google.com/java/lang/Throwable.html) (implements java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.lang.[**Error**](http://docs.google.com/java/lang/Error.html)
      * java.util.[**ServiceConfigurationError**](http://docs.google.com/java/util/ServiceConfigurationError.html)
    - java.lang.[**Exception**](http://docs.google.com/java/lang/Exception.html)
      * java.io.[**IOException**](http://docs.google.com/java/io/IOException.html)
        + java.util.[**InvalidPropertiesFormatException**](http://docs.google.com/java/util/InvalidPropertiesFormatException.html)
      * java.lang.[**RuntimeException**](http://docs.google.com/java/lang/RuntimeException.html)
        + java.util.[**ConcurrentModificationException**](http://docs.google.com/java/util/ConcurrentModificationException.html)
        + java.util.[**EmptyStackException**](http://docs.google.com/java/util/EmptyStackException.html)
        + java.lang.[**IllegalArgumentException**](http://docs.google.com/java/lang/IllegalArgumentException.html)

java.util.[**IllegalFormatException**](http://docs.google.com/java/util/IllegalFormatException.html)

java.util.[**DuplicateFormatFlagsException**](http://docs.google.com/java/util/DuplicateFormatFlagsException.html)

java.util.[**FormatFlagsConversionMismatchException**](http://docs.google.com/java/util/FormatFlagsConversionMismatchException.html)

java.util.[**IllegalFormatCodePointException**](http://docs.google.com/java/util/IllegalFormatCodePointException.html)

java.util.[**IllegalFormatConversionException**](http://docs.google.com/java/util/IllegalFormatConversionException.html)

java.util.[**IllegalFormatFlagsException**](http://docs.google.com/java/util/IllegalFormatFlagsException.html)

java.util.[**IllegalFormatPrecisionException**](http://docs.google.com/java/util/IllegalFormatPrecisionException.html)

java.util.[**IllegalFormatWidthException**](http://docs.google.com/java/util/IllegalFormatWidthException.html)

java.util.[**MissingFormatArgumentException**](http://docs.google.com/java/util/MissingFormatArgumentException.html)

java.util.[**MissingFormatWidthException**](http://docs.google.com/java/util/MissingFormatWidthException.html)

java.util.[**UnknownFormatConversionException**](http://docs.google.com/java/util/UnknownFormatConversionException.html)

java.util.[**UnknownFormatFlagsException**](http://docs.google.com/java/util/UnknownFormatFlagsException.html)

* + - * + java.lang.[**IllegalStateException**](http://docs.google.com/java/lang/IllegalStateException.html)

java.util.[**FormatterClosedException**](http://docs.google.com/java/util/FormatterClosedException.html)

* + - * + java.util.[**MissingResourceException**](http://docs.google.com/java/util/MissingResourceException.html)
        + java.util.[**NoSuchElementException**](http://docs.google.com/java/util/NoSuchElementException.html)

java.util.[**InputMismatchException**](http://docs.google.com/java/util/InputMismatchException.html)

* + - * java.util.[**TooManyListenersException**](http://docs.google.com/java/util/TooManyListenersException.html)
  + java.util.[**Timer**](http://docs.google.com/java/util/Timer.html)
  + java.util.[**TimerTask**](http://docs.google.com/java/util/TimerTask.html) (implements java.lang.[Runnable](http://docs.google.com/java/lang/Runnable.html))
  + java.util.[**TimeZone**](http://docs.google.com/java/util/TimeZone.html) (implements java.lang.[Cloneable](http://docs.google.com/java/lang/Cloneable.html), java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**SimpleTimeZone**](http://docs.google.com/java/util/SimpleTimeZone.html)
  + java.util.[**UUID**](http://docs.google.com/java/util/UUID.html) (implements java.lang.[Comparable](http://docs.google.com/java/lang/Comparable.html)<T>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))

## Interface Hierarchy

* java.util.[**Comparator**](http://docs.google.com/java/util/Comparator.html)<T>
* java.util.[**Enumeration**](http://docs.google.com/java/util/Enumeration.html)<E>
* java.util.[**EventListener**](http://docs.google.com/java/util/EventListener.html)
* java.util.[**Formattable**](http://docs.google.com/java/util/Formattable.html)
* java.lang.[**Iterable**](http://docs.google.com/java/lang/Iterable.html)<T>
  + java.util.[**Collection**](http://docs.google.com/java/util/Collection.html)<E>
    - java.util.[**List**](http://docs.google.com/java/util/List.html)<E>
    - java.util.[**Queue**](http://docs.google.com/java/util/Queue.html)<E>
      * java.util.[**Deque**](http://docs.google.com/java/util/Deque.html)<E>
    - java.util.[**Set**](http://docs.google.com/java/util/Set.html)<E>
      * java.util.[**SortedSet**](http://docs.google.com/java/util/SortedSet.html)<E>
        + java.util.[**NavigableSet**](http://docs.google.com/java/util/NavigableSet.html)<E>
* java.util.[**Iterator**](http://docs.google.com/java/util/Iterator.html)<E>
  + java.util.[**ListIterator**](http://docs.google.com/java/util/ListIterator.html)<E>
* java.util.[**Map**](http://docs.google.com/java/util/Map.html)<K,V>
  + java.util.[**SortedMap**](http://docs.google.com/java/util/SortedMap.html)<K,V>
    - java.util.[**NavigableMap**](http://docs.google.com/java/util/NavigableMap.html)<K,V>
* java.util.[**Map.Entry**](http://docs.google.com/java/util/Map.Entry.html)<K,V>
* java.util.[**Observer**](http://docs.google.com/java/util/Observer.html)
* java.util.[**RandomAccess**](http://docs.google.com/java/util/RandomAccess.html)

## Enum Hierarchy

* java.lang.[**Object**](http://docs.google.com/java/lang/Object.html)
  + java.lang.[**Enum**](http://docs.google.com/java/lang/Enum.html)<E> (implements java.lang.[Comparable](http://docs.google.com/java/lang/Comparable.html)<T>, java.io.[Serializable](http://docs.google.com/java/io/Serializable.html))
    - java.util.[**Formatter.BigDecimalLayoutForm**](http://docs.google.com/java/util/Formatter.BigDecimalLayoutForm.html)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | Class | Use | **Tree** | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV**](http://docs.google.com/java/text/spi/package-tree.html)   [**NEXT**](http://docs.google.com/java/util/concurrent/package-tree.html) | [**FRAMES**](http://docs.google.com/index.html?java/util/package-tree.html)    [**NO FRAMES**](http://docs.google.com/package-tree.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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