| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Dictionary.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**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*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |

## **java.util**

Class Dictionary<K,V>

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **java.util.Dictionary<K,V>**

**Direct Known Subclasses:** [Hashtable](http://docs.google.com/java/util/Hashtable.html)

public abstract class **Dictionary<K,V>**extends [Object](http://docs.google.com/java/lang/Object.html)

The Dictionary class is the abstract parent of any class, such as Hashtable, which maps keys to values. Every key and every value is an object. In any one Dictionary object, every key is associated with at most one value. Given a Dictionary and a key, the associated element can be looked up. Any non-null object can be used as a key and as a value.

As a rule, the equals method should be used by implementations of this class to decide if two keys are the same.

**NOTE: This class is obsolete. New implementations should implement the Map interface, rather than extending this class.**

**Since:** JDK1.0 **See Also:**[Map](http://docs.google.com/java/util/Map.html), [Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

| **Constructor Summary** | |
| --- | --- |
| [**Dictionary**](http://docs.google.com/java/util/Dictionary.html#Dictionary())()            Sole constructor. |

| **Method Summary** | |
| --- | --- |
| abstract  [Enumeration](http://docs.google.com/java/util/Enumeration.html)<[V](http://docs.google.com/java/util/Dictionary.html)> | [**elements**](http://docs.google.com/java/util/Dictionary.html#elements())()            Returns an enumeration of the values in this dictionary. |
| abstract  [V](http://docs.google.com/java/util/Dictionary.html) | [**get**](http://docs.google.com/java/util/Dictionary.html#get(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) key)            Returns the value to which the key is mapped in this dictionary. |
| abstract  boolean | [**isEmpty**](http://docs.google.com/java/util/Dictionary.html#isEmpty())()            Tests if this dictionary maps no keys to value. |
| abstract  [Enumeration](http://docs.google.com/java/util/Enumeration.html)<[K](http://docs.google.com/java/util/Dictionary.html)> | [**keys**](http://docs.google.com/java/util/Dictionary.html#keys())()            Returns an enumeration of the keys in this dictionary. |
| abstract  [V](http://docs.google.com/java/util/Dictionary.html) | [**put**](http://docs.google.com/java/util/Dictionary.html#put(K,%20V))([K](http://docs.google.com/java/util/Dictionary.html) key, [V](http://docs.google.com/java/util/Dictionary.html) value)            Maps the specified key to the specified value in this dictionary. |
| abstract  [V](http://docs.google.com/java/util/Dictionary.html) | [**remove**](http://docs.google.com/java/util/Dictionary.html#remove(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) key)            Removes the key (and its corresponding value) from this dictionary. |
| abstract  int | [**size**](http://docs.google.com/java/util/Dictionary.html#size())()            Returns the number of entries (distinct keys) in this dictionary. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### Dictionary

public **Dictionary**()

Sole constructor. (For invocation by subclass constructors, typically implicit.)

| **Method Detail** |
| --- |

### size

public abstract int **size**()

Returns the number of entries (distinct keys) in this dictionary.

**Returns:**the number of keys in this dictionary.

### isEmpty

public abstract boolean **isEmpty**()

Tests if this dictionary maps no keys to value. The general contract for the isEmpty method is that the result is true if and only if this dictionary contains no entries.

**Returns:**true if this dictionary maps no keys to values; false otherwise.

### keys

public abstract [Enumeration](http://docs.google.com/java/util/Enumeration.html)<[K](http://docs.google.com/java/util/Dictionary.html)> **keys**()

Returns an enumeration of the keys in this dictionary. The general contract for the keys method is that an Enumeration object is returned that will generate all the keys for which this dictionary contains entries.

**Returns:**an enumeration of the keys in this dictionary.**See Also:**[elements()](http://docs.google.com/java/util/Dictionary.html#elements()), [Enumeration](http://docs.google.com/java/util/Enumeration.html)

### elements

public abstract [Enumeration](http://docs.google.com/java/util/Enumeration.html)<[V](http://docs.google.com/java/util/Dictionary.html)> **elements**()

Returns an enumeration of the values in this dictionary. The general contract for the elements method is that an Enumeration is returned that will generate all the elements contained in entries in this dictionary.

**Returns:**an enumeration of the values in this dictionary.**See Also:**[keys()](http://docs.google.com/java/util/Dictionary.html#keys()), [Enumeration](http://docs.google.com/java/util/Enumeration.html)

### get

public abstract [V](http://docs.google.com/java/util/Dictionary.html) **get**([Object](http://docs.google.com/java/lang/Object.html) key)

Returns the value to which the key is mapped in this dictionary. The general contract for the isEmpty method is that if this dictionary contains an entry for the specified key, the associated value is returned; otherwise, null is returned.

**Parameters:**key - a key in this dictionary. null if the key is not mapped to any value in this dictionary. **Returns:**the value to which the key is mapped in this dictionary; **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if the key is null.**See Also:**[put(java.lang.Object, java.lang.Object)](http://docs.google.com/java/util/Dictionary.html#put(K,%20V))

### put

public abstract [V](http://docs.google.com/java/util/Dictionary.html) **put**([K](http://docs.google.com/java/util/Dictionary.html) key,  
 [V](http://docs.google.com/java/util/Dictionary.html) value)

Maps the specified key to the specified value in this dictionary. Neither the key nor the value can be null.

If this dictionary already contains an entry for the specified key, the value already in this dictionary for that key is returned, after modifying the entry to contain the new element.

If this dictionary does not already have an entry for the specified key, an entry is created for the specified key and value, and null is returned.

The value can be retrieved by calling the get method with a key that is equal to the original key.

**Parameters:**key - the hashtable key.value - the value. **Returns:**the previous value to which the key was mapped in this dictionary, or null if the key did not have a previous mapping. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if the key or value is null.**See Also:**[Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [get(java.lang.Object)](http://docs.google.com/java/util/Dictionary.html#get(java.lang.Object))

### remove

public abstract [V](http://docs.google.com/java/util/Dictionary.html) **remove**([Object](http://docs.google.com/java/lang/Object.html) key)

Removes the key (and its corresponding value) from this dictionary. This method does nothing if the key is not in this dictionary.

**Parameters:**key - the key that needs to be removed. **Returns:**the value to which the key had been mapped in this dictionary, or null if the key did not have a mapping. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if key is null.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Dictionary.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**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*** |
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[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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