| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Stack.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*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/util/SortedSet.html)   [**NEXT CLASS**](http://docs.google.com/java/util/StringTokenizer.html) | [**FRAMES**](http://docs.google.com/index.html?java/util/Stack.html)    [**NO FRAMES**](http://docs.google.com/Stack.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#2et92p0) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: FIELD | [CONSTR](#26in1rg) | [METHOD](#35nkun2) |

## **java.util**

Class Stack<E>

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.util.AbstractCollection](http://docs.google.com/java/util/AbstractCollection.html)<E>  
 [java.util.AbstractList](http://docs.google.com/java/util/AbstractList.html)<E>  
 [java.util.Vector](http://docs.google.com/java/util/Vector.html)<E>  
 **java.util.Stack<E>**

**All Implemented Interfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html), [Cloneable](http://docs.google.com/java/lang/Cloneable.html), [Iterable](http://docs.google.com/java/lang/Iterable.html)<E>, [Collection](http://docs.google.com/java/util/Collection.html)<E>, [List](http://docs.google.com/java/util/List.html)<E>, [RandomAccess](http://docs.google.com/java/util/RandomAccess.html)

public class **Stack<E>**extends [Vector](http://docs.google.com/java/util/Vector.html)<E>

The Stack class represents a last-in-first-out (LIFO) stack of objects. It extends class Vector with five operations that allow a vector to be treated as a stack. The usual push and pop operations are provided, as well as a method to peek at the top item on the stack, a method to test for whether the stack is empty, and a method to search the stack for an item and discover how far it is from the top.

When a stack is first created, it contains no items.

A more complete and consistent set of LIFO stack operations is provided by the [Deque](http://docs.google.com/java/util/Deque.html) interface and its implementations, which should be used in preference to this class. For example:

Deque<Integer> stack = new ArrayDeque<Integer>();

**Since:** JDK1.0 **See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#java.util.Stack)

| **Field Summary** | |
| --- | --- |

| **Fields inherited from class java.util.**[**Vector**](http://docs.google.com/java/util/Vector.html) |
| --- |
| [capacityIncrement](http://docs.google.com/java/util/Vector.html#capacityIncrement), [elementCount](http://docs.google.com/java/util/Vector.html#elementCount), [elementData](http://docs.google.com/java/util/Vector.html#elementData) |

| **Fields inherited from class java.util.**[**AbstractList**](http://docs.google.com/java/util/AbstractList.html) |
| --- |
| [modCount](http://docs.google.com/java/util/AbstractList.html#modCount) |

| **Constructor Summary** | |
| --- | --- |
| [**Stack**](http://docs.google.com/java/util/Stack.html#Stack())()            Creates an empty Stack. |

| **Method Summary** | |
| --- | --- |
| boolean | [**empty**](http://docs.google.com/java/util/Stack.html#empty())()            Tests if this stack is empty. |
| [E](http://docs.google.com/java/util/Stack.html) | [**peek**](http://docs.google.com/java/util/Stack.html#peek())()            Looks at the object at the top of this stack without removing it from the stack. |
| [E](http://docs.google.com/java/util/Stack.html) | [**pop**](http://docs.google.com/java/util/Stack.html#pop())()            Removes the object at the top of this stack and returns that object as the value of this function. |
| [E](http://docs.google.com/java/util/Stack.html) | [**push**](http://docs.google.com/java/util/Stack.html#push(E))([E](http://docs.google.com/java/util/Stack.html) item)            Pushes an item onto the top of this stack. |
| int | [**search**](http://docs.google.com/java/util/Stack.html#search(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) o)            Returns the 1-based position where an object is on this stack. |

| **Methods inherited from class java.util.**[**Vector**](http://docs.google.com/java/util/Vector.html) |
| --- |
| [add](http://docs.google.com/java/util/Vector.html#add(E)), [add](http://docs.google.com/java/util/Vector.html#add(int,%20E)), [addAll](http://docs.google.com/java/util/Vector.html#addAll(java.util.Collection)), [addAll](http://docs.google.com/java/util/Vector.html#addAll(int,%20java.util.Collection)), [addElement](http://docs.google.com/java/util/Vector.html#addElement(E)), [capacity](http://docs.google.com/java/util/Vector.html#capacity()), [clear](http://docs.google.com/java/util/Vector.html#clear()), [clone](http://docs.google.com/java/util/Vector.html#clone()), [contains](http://docs.google.com/java/util/Vector.html#contains(java.lang.Object)), [containsAll](http://docs.google.com/java/util/Vector.html#containsAll(java.util.Collection)), [copyInto](http://docs.google.com/java/util/Vector.html#copyInto(java.lang.Object%5B%5D)), [elementAt](http://docs.google.com/java/util/Vector.html#elementAt(int)), [elements](http://docs.google.com/java/util/Vector.html#elements()), [ensureCapacity](http://docs.google.com/java/util/Vector.html#ensureCapacity(int)), [equals](http://docs.google.com/java/util/Vector.html#equals(java.lang.Object)), [firstElement](http://docs.google.com/java/util/Vector.html#firstElement()), [get](http://docs.google.com/java/util/Vector.html#get(int)), [hashCode](http://docs.google.com/java/util/Vector.html#hashCode()), [indexOf](http://docs.google.com/java/util/Vector.html#indexOf(java.lang.Object)), [indexOf](http://docs.google.com/java/util/Vector.html#indexOf(java.lang.Object,%20int)), [insertElementAt](http://docs.google.com/java/util/Vector.html#insertElementAt(E,%20int)), [isEmpty](http://docs.google.com/java/util/Vector.html#isEmpty()), [lastElement](http://docs.google.com/java/util/Vector.html#lastElement()), [lastIndexOf](http://docs.google.com/java/util/Vector.html#lastIndexOf(java.lang.Object)), [lastIndexOf](http://docs.google.com/java/util/Vector.html#lastIndexOf(java.lang.Object,%20int)), [remove](http://docs.google.com/java/util/Vector.html#remove(int)), [remove](http://docs.google.com/java/util/Vector.html#remove(java.lang.Object)), [removeAll](http://docs.google.com/java/util/Vector.html#removeAll(java.util.Collection)), [removeAllElements](http://docs.google.com/java/util/Vector.html#removeAllElements()), [removeElement](http://docs.google.com/java/util/Vector.html#removeElement(java.lang.Object)), [removeElementAt](http://docs.google.com/java/util/Vector.html#removeElementAt(int)), [removeRange](http://docs.google.com/java/util/Vector.html#removeRange(int,%20int)), [retainAll](http://docs.google.com/java/util/Vector.html#retainAll(java.util.Collection)), [set](http://docs.google.com/java/util/Vector.html#set(int,%20E)), [setElementAt](http://docs.google.com/java/util/Vector.html#setElementAt(E,%20int)), [setSize](http://docs.google.com/java/util/Vector.html#setSize(int)), [size](http://docs.google.com/java/util/Vector.html#size()), [subList](http://docs.google.com/java/util/Vector.html#subList(int,%20int)), [toArray](http://docs.google.com/java/util/Vector.html#toArray()), [toArray](http://docs.google.com/java/util/Vector.html#toArray(T%5B%5D)), [toString](http://docs.google.com/java/util/Vector.html#toString()), [trimToSize](http://docs.google.com/java/util/Vector.html#trimToSize()) |

| **Methods inherited from class java.util.**[**AbstractList**](http://docs.google.com/java/util/AbstractList.html) |
| --- |
| [iterator](http://docs.google.com/java/util/AbstractList.html#iterator()), [listIterator](http://docs.google.com/java/util/AbstractList.html#listIterator()), [listIterator](http://docs.google.com/java/util/AbstractList.html#listIterator(int)) |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [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)) |

| **Methods inherited from interface java.util.**[**List**](http://docs.google.com/java/util/List.html) |
| --- |
| [iterator](http://docs.google.com/java/util/List.html#iterator()), [listIterator](http://docs.google.com/java/util/List.html#listIterator()), [listIterator](http://docs.google.com/java/util/List.html#listIterator(int)) |

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

### Stack

public **Stack**()

Creates an empty Stack.

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

### push

public [E](http://docs.google.com/java/util/Stack.html) **push**([E](http://docs.google.com/java/util/Stack.html) item)

Pushes an item onto the top of this stack. This has exactly the same effect as:

addElement(item)

**Parameters:**item - the item to be pushed onto this stack. **Returns:**the item argument.**See Also:**[Vector.addElement(E)](http://docs.google.com/java/util/Vector.html#addElement(E))

### pop

public [E](http://docs.google.com/java/util/Stack.html) **pop**()

Removes the object at the top of this stack and returns that object as the value of this function.

**Returns:**The object at the top of this stack (the last item of the Vector object). **Throws:** [EmptyStackException](http://docs.google.com/java/util/EmptyStackException.html) - if this stack is empty.

### peek

public [E](http://docs.google.com/java/util/Stack.html) **peek**()

Looks at the object at the top of this stack without removing it from the stack.

**Returns:**the object at the top of this stack (the last item of the Vector object). **Throws:** [EmptyStackException](http://docs.google.com/java/util/EmptyStackException.html) - if this stack is empty.

### empty

public boolean **empty**()

Tests if this stack is empty.

**Returns:**true if and only if this stack contains no items; false otherwise.

### search

public int **search**([Object](http://docs.google.com/java/lang/Object.html) o)

Returns the 1-based position where an object is on this stack. If the object o occurs as an item in this stack, this method returns the distance from the top of the stack of the occurrence nearest the top of the stack; the topmost item on the stack is considered to be at distance 1. The equals method is used to compare o to the items in this stack.

**Parameters:**o - the desired object. **Returns:**the 1-based position from the top of the stack where the object is located; the return value -1 indicates that the object is not on the stack.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Stack.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*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/util/SortedSet.html)   [**NEXT CLASS**](http://docs.google.com/java/util/StringTokenizer.html) | [**FRAMES**](http://docs.google.com/index.html?java/util/Stack.html)    [**NO FRAMES**](http://docs.google.com/Stack.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#2et92p0) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: FIELD | [CONSTR](#26in1rg) | [METHOD](#35nkun2) |

[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.

Copyright 2006 Sun Microsystems, Inc. All rights reserved. Use is subject to [license terms](http://docs.google.com/legal/license.html). Also see the [documentation redistribution policy](http://java.sun.com/docs/redist.html).