| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Canvas.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/awt/Button.AccessibleAWTButton.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/Canvas.AccessibleAWTCanvas.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/Canvas.html)    [**NO FRAMES**](http://docs.google.com/Canvas.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#3znysh7) | [FIELD](#3dy6vkm) | [CONSTR](#4d34og8) | [METHOD](#2s8eyo1) | DETAIL: FIELD | [CONSTR](#26in1rg) | [METHOD](#1ksv4uv) |

## **java.awt**

Class Canvas

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.awt.Component](http://docs.google.com/java/awt/Component.html)  
 **java.awt.Canvas**

**All Implemented Interfaces:** [ImageObserver](http://docs.google.com/java/awt/image/ImageObserver.html), [MenuContainer](http://docs.google.com/java/awt/MenuContainer.html), [Serializable](http://docs.google.com/java/io/Serializable.html), [Accessible](http://docs.google.com/javax/accessibility/Accessible.html)

public class **Canvas**extends [Component](http://docs.google.com/java/awt/Component.html)implements [Accessible](http://docs.google.com/javax/accessibility/Accessible.html)

A Canvas component represents a blank rectangular area of the screen onto which the application can draw or from which the application can trap input events from the user.

An application must subclass the Canvas class in order to get useful functionality such as creating a custom component. The paint method must be overridden in order to perform custom graphics on the canvas.

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

| **Nested Class Summary** | |
| --- | --- |
| protected  class | [**Canvas.AccessibleAWTCanvas**](http://docs.google.com/java/awt/Canvas.AccessibleAWTCanvas.html)            This class implements accessibility support for the Canvas class. |

| **Nested classes/interfaces inherited from class java.awt.**[**Component**](http://docs.google.com/java/awt/Component.html) |
| --- |
| [Component.AccessibleAWTComponent](http://docs.google.com/java/awt/Component.AccessibleAWTComponent.html), [Component.BaselineResizeBehavior](http://docs.google.com/java/awt/Component.BaselineResizeBehavior.html), [Component.BltBufferStrategy](http://docs.google.com/java/awt/Component.BltBufferStrategy.html), [Component.FlipBufferStrategy](http://docs.google.com/java/awt/Component.FlipBufferStrategy.html) |

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

| **Fields inherited from class java.awt.**[**Component**](http://docs.google.com/java/awt/Component.html) |
| --- |
| [BOTTOM\_ALIGNMENT](http://docs.google.com/java/awt/Component.html#BOTTOM_ALIGNMENT), [CENTER\_ALIGNMENT](http://docs.google.com/java/awt/Component.html#CENTER_ALIGNMENT), [LEFT\_ALIGNMENT](http://docs.google.com/java/awt/Component.html#LEFT_ALIGNMENT), [RIGHT\_ALIGNMENT](http://docs.google.com/java/awt/Component.html#RIGHT_ALIGNMENT), [TOP\_ALIGNMENT](http://docs.google.com/java/awt/Component.html#TOP_ALIGNMENT) |

| **Fields inherited from interface java.awt.image.**[**ImageObserver**](http://docs.google.com/java/awt/image/ImageObserver.html) |
| --- |
| [ABORT](http://docs.google.com/java/awt/image/ImageObserver.html#ABORT), [ALLBITS](http://docs.google.com/java/awt/image/ImageObserver.html#ALLBITS), [ERROR](http://docs.google.com/java/awt/image/ImageObserver.html#ERROR), [FRAMEBITS](http://docs.google.com/java/awt/image/ImageObserver.html#FRAMEBITS), [HEIGHT](http://docs.google.com/java/awt/image/ImageObserver.html#HEIGHT), [PROPERTIES](http://docs.google.com/java/awt/image/ImageObserver.html#PROPERTIES), [SOMEBITS](http://docs.google.com/java/awt/image/ImageObserver.html#SOMEBITS), [WIDTH](http://docs.google.com/java/awt/image/ImageObserver.html#WIDTH) |

| **Constructor Summary** | |
| --- | --- |
| [**Canvas**](http://docs.google.com/java/awt/Canvas.html#Canvas())()            Constructs a new Canvas. |
| [**Canvas**](http://docs.google.com/java/awt/Canvas.html#Canvas(java.awt.GraphicsConfiguration))([GraphicsConfiguration](http://docs.google.com/java/awt/GraphicsConfiguration.html) config)            Constructs a new Canvas given a GraphicsConfiguration object. |

| **Method Summary** | |
| --- | --- |
| void | [**addNotify**](http://docs.google.com/java/awt/Canvas.html#addNotify())()            Creates the peer of the canvas. |
| void | [**createBufferStrategy**](http://docs.google.com/java/awt/Canvas.html#createBufferStrategy(int))(int numBuffers)            Creates a new strategy for multi-buffering on this component. |
| void | [**createBufferStrategy**](http://docs.google.com/java/awt/Canvas.html#createBufferStrategy(int,%20java.awt.BufferCapabilities))(int numBuffers, [BufferCapabilities](http://docs.google.com/java/awt/BufferCapabilities.html) caps)            Creates a new strategy for multi-buffering on this component with the required buffer capabilities. |
| [AccessibleContext](http://docs.google.com/javax/accessibility/AccessibleContext.html) | [**getAccessibleContext**](http://docs.google.com/java/awt/Canvas.html#getAccessibleContext())()            Gets the AccessibleContext associated with this Canvas. |
| [BufferStrategy](http://docs.google.com/java/awt/image/BufferStrategy.html) | [**getBufferStrategy**](http://docs.google.com/java/awt/Canvas.html#getBufferStrategy())()            Returns the BufferStrategy used by this component. |
| void | [**paint**](http://docs.google.com/java/awt/Canvas.html#paint(java.awt.Graphics))([Graphics](http://docs.google.com/java/awt/Graphics.html) g)            Paints this canvas. |
| void | [**update**](http://docs.google.com/java/awt/Canvas.html#update(java.awt.Graphics))([Graphics](http://docs.google.com/java/awt/Graphics.html) g)            Updates this canvas. |

| **Methods inherited from class java.awt.**[**Component**](http://docs.google.com/java/awt/Component.html) |
| --- |
| [action](http://docs.google.com/java/awt/Component.html#action(java.awt.Event,%20java.lang.Object)), [add](http://docs.google.com/java/awt/Component.html#add(java.awt.PopupMenu)), [addComponentListener](http://docs.google.com/java/awt/Component.html#addComponentListener(java.awt.event.ComponentListener)), [addFocusListener](http://docs.google.com/java/awt/Component.html#addFocusListener(java.awt.event.FocusListener)), [addHierarchyBoundsListener](http://docs.google.com/java/awt/Component.html#addHierarchyBoundsListener(java.awt.event.HierarchyBoundsListener)), [addHierarchyListener](http://docs.google.com/java/awt/Component.html#addHierarchyListener(java.awt.event.HierarchyListener)), [addInputMethodListener](http://docs.google.com/java/awt/Component.html#addInputMethodListener(java.awt.event.InputMethodListener)), [addKeyListener](http://docs.google.com/java/awt/Component.html#addKeyListener(java.awt.event.KeyListener)), [addMouseListener](http://docs.google.com/java/awt/Component.html#addMouseListener(java.awt.event.MouseListener)), [addMouseMotionListener](http://docs.google.com/java/awt/Component.html#addMouseMotionListener(java.awt.event.MouseMotionListener)), [addMouseWheelListener](http://docs.google.com/java/awt/Component.html#addMouseWheelListener(java.awt.event.MouseWheelListener)), [addPropertyChangeListener](http://docs.google.com/java/awt/Component.html#addPropertyChangeListener(java.beans.PropertyChangeListener)), [addPropertyChangeListener](http://docs.google.com/java/awt/Component.html#addPropertyChangeListener(java.lang.String,%20java.beans.PropertyChangeListener)), [applyComponentOrientation](http://docs.google.com/java/awt/Component.html#applyComponentOrientation(java.awt.ComponentOrientation)), [areFocusTraversalKeysSet](http://docs.google.com/java/awt/Component.html#areFocusTraversalKeysSet(int)), [bounds](http://docs.google.com/java/awt/Component.html#bounds()), [checkImage](http://docs.google.com/java/awt/Component.html#checkImage(java.awt.Image,%20java.awt.image.ImageObserver)), [checkImage](http://docs.google.com/java/awt/Component.html#checkImage(java.awt.Image,%20int,%20int,%20java.awt.image.ImageObserver)), [coalesceEvents](http://docs.google.com/java/awt/Component.html#coalesceEvents(java.awt.AWTEvent,%20java.awt.AWTEvent)), [contains](http://docs.google.com/java/awt/Component.html#contains(int,%20int)), [contains](http://docs.google.com/java/awt/Component.html#contains(java.awt.Point)), [createImage](http://docs.google.com/java/awt/Component.html#createImage(java.awt.image.ImageProducer)), [createImage](http://docs.google.com/java/awt/Component.html#createImage(int,%20int)), [createVolatileImage](http://docs.google.com/java/awt/Component.html#createVolatileImage(int,%20int)), [createVolatileImage](http://docs.google.com/java/awt/Component.html#createVolatileImage(int,%20int,%20java.awt.ImageCapabilities)), [deliverEvent](http://docs.google.com/java/awt/Component.html#deliverEvent(java.awt.Event)), [disable](http://docs.google.com/java/awt/Component.html#disable()), [disableEvents](http://docs.google.com/java/awt/Component.html#disableEvents(long)), [dispatchEvent](http://docs.google.com/java/awt/Component.html#dispatchEvent(java.awt.AWTEvent)), [doLayout](http://docs.google.com/java/awt/Component.html#doLayout()), [enable](http://docs.google.com/java/awt/Component.html#enable()), [enable](http://docs.google.com/java/awt/Component.html#enable(boolean)), [enableEvents](http://docs.google.com/java/awt/Component.html#enableEvents(long)), [enableInputMethods](http://docs.google.com/java/awt/Component.html#enableInputMethods(boolean)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20boolean,%20boolean)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20byte,%20byte)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20char,%20char)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20double,%20double)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20float,%20float)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20int,%20int)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20long,%20long)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20java.lang.Object,%20java.lang.Object)), [firePropertyChange](http://docs.google.com/java/awt/Component.html#firePropertyChange(java.lang.String,%20short,%20short)), [getAlignmentX](http://docs.google.com/java/awt/Component.html#getAlignmentX()), [getAlignmentY](http://docs.google.com/java/awt/Component.html#getAlignmentY()), [getBackground](http://docs.google.com/java/awt/Component.html#getBackground()), [getBaseline](http://docs.google.com/java/awt/Component.html#getBaseline(int,%20int)), [getBaselineResizeBehavior](http://docs.google.com/java/awt/Component.html#getBaselineResizeBehavior()), [getBounds](http://docs.google.com/java/awt/Component.html#getBounds()), [getBounds](http://docs.google.com/java/awt/Component.html#getBounds(java.awt.Rectangle)), [getColorModel](http://docs.google.com/java/awt/Component.html#getColorModel()), [getComponentAt](http://docs.google.com/java/awt/Component.html#getComponentAt(int,%20int)), [getComponentAt](http://docs.google.com/java/awt/Component.html#getComponentAt(java.awt.Point)), [getComponentListeners](http://docs.google.com/java/awt/Component.html#getComponentListeners()), [getComponentOrientation](http://docs.google.com/java/awt/Component.html#getComponentOrientation()), [getCursor](http://docs.google.com/java/awt/Component.html#getCursor()), [getDropTarget](http://docs.google.com/java/awt/Component.html#getDropTarget()), [getFocusCycleRootAncestor](http://docs.google.com/java/awt/Component.html#getFocusCycleRootAncestor()), [getFocusListeners](http://docs.google.com/java/awt/Component.html#getFocusListeners()), [getFocusTraversalKeys](http://docs.google.com/java/awt/Component.html#getFocusTraversalKeys(int)), [getFocusTraversalKeysEnabled](http://docs.google.com/java/awt/Component.html#getFocusTraversalKeysEnabled()), [getFont](http://docs.google.com/java/awt/Component.html#getFont()), [getFontMetrics](http://docs.google.com/java/awt/Component.html#getFontMetrics(java.awt.Font)), [getForeground](http://docs.google.com/java/awt/Component.html#getForeground()), [getGraphics](http://docs.google.com/java/awt/Component.html#getGraphics()), [getGraphicsConfiguration](http://docs.google.com/java/awt/Component.html#getGraphicsConfiguration()), [getHeight](http://docs.google.com/java/awt/Component.html#getHeight()), [getHierarchyBoundsListeners](http://docs.google.com/java/awt/Component.html#getHierarchyBoundsListeners()), [getHierarchyListeners](http://docs.google.com/java/awt/Component.html#getHierarchyListeners()), [getIgnoreRepaint](http://docs.google.com/java/awt/Component.html#getIgnoreRepaint()), [getInputContext](http://docs.google.com/java/awt/Component.html#getInputContext()), [getInputMethodListeners](http://docs.google.com/java/awt/Component.html#getInputMethodListeners()), [getInputMethodRequests](http://docs.google.com/java/awt/Component.html#getInputMethodRequests()), [getKeyListeners](http://docs.google.com/java/awt/Component.html#getKeyListeners()), [getListeners](http://docs.google.com/java/awt/Component.html#getListeners(java.lang.Class)), [getLocale](http://docs.google.com/java/awt/Component.html#getLocale()), [getLocation](http://docs.google.com/java/awt/Component.html#getLocation()), [getLocation](http://docs.google.com/java/awt/Component.html#getLocation(java.awt.Point)), [getLocationOnScreen](http://docs.google.com/java/awt/Component.html#getLocationOnScreen()), [getMaximumSize](http://docs.google.com/java/awt/Component.html#getMaximumSize()), [getMinimumSize](http://docs.google.com/java/awt/Component.html#getMinimumSize()), [getMouseListeners](http://docs.google.com/java/awt/Component.html#getMouseListeners()), [getMouseMotionListeners](http://docs.google.com/java/awt/Component.html#getMouseMotionListeners()), [getMousePosition](http://docs.google.com/java/awt/Component.html#getMousePosition()), [getMouseWheelListeners](http://docs.google.com/java/awt/Component.html#getMouseWheelListeners()), [getName](http://docs.google.com/java/awt/Component.html#getName()), [getParent](http://docs.google.com/java/awt/Component.html#getParent()), [getPeer](http://docs.google.com/java/awt/Component.html#getPeer()), [getPreferredSize](http://docs.google.com/java/awt/Component.html#getPreferredSize()), [getPropertyChangeListeners](http://docs.google.com/java/awt/Component.html#getPropertyChangeListeners()), [getPropertyChangeListeners](http://docs.google.com/java/awt/Component.html#getPropertyChangeListeners(java.lang.String)), [getSize](http://docs.google.com/java/awt/Component.html#getSize()), [getSize](http://docs.google.com/java/awt/Component.html#getSize(java.awt.Dimension)), [getToolkit](http://docs.google.com/java/awt/Component.html#getToolkit()), [getTreeLock](http://docs.google.com/java/awt/Component.html#getTreeLock()), [getWidth](http://docs.google.com/java/awt/Component.html#getWidth()), [getX](http://docs.google.com/java/awt/Component.html#getX()), [getY](http://docs.google.com/java/awt/Component.html#getY()), [gotFocus](http://docs.google.com/java/awt/Component.html#gotFocus(java.awt.Event,%20java.lang.Object)), [handleEvent](http://docs.google.com/java/awt/Component.html#handleEvent(java.awt.Event)), [hasFocus](http://docs.google.com/java/awt/Component.html#hasFocus()), [hide](http://docs.google.com/java/awt/Component.html#hide()), [imageUpdate](http://docs.google.com/java/awt/Component.html#imageUpdate(java.awt.Image,%20int,%20int,%20int,%20int,%20int)), [inside](http://docs.google.com/java/awt/Component.html#inside(int,%20int)), [invalidate](http://docs.google.com/java/awt/Component.html#invalidate()), [isBackgroundSet](http://docs.google.com/java/awt/Component.html#isBackgroundSet()), [isCursorSet](http://docs.google.com/java/awt/Component.html#isCursorSet()), [isDisplayable](http://docs.google.com/java/awt/Component.html#isDisplayable()), [isDoubleBuffered](http://docs.google.com/java/awt/Component.html#isDoubleBuffered()), [isEnabled](http://docs.google.com/java/awt/Component.html#isEnabled()), [isFocusable](http://docs.google.com/java/awt/Component.html#isFocusable()), 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[isVisible](http://docs.google.com/java/awt/Component.html#isVisible()), [keyDown](http://docs.google.com/java/awt/Component.html#keyDown(java.awt.Event,%20int)), [keyUp](http://docs.google.com/java/awt/Component.html#keyUp(java.awt.Event,%20int)), [layout](http://docs.google.com/java/awt/Component.html#layout()), [list](http://docs.google.com/java/awt/Component.html#list()), [list](http://docs.google.com/java/awt/Component.html#list(java.io.PrintStream)), [list](http://docs.google.com/java/awt/Component.html#list(java.io.PrintStream,%20int)), [list](http://docs.google.com/java/awt/Component.html#list(java.io.PrintWriter)), [list](http://docs.google.com/java/awt/Component.html#list(java.io.PrintWriter,%20int)), [locate](http://docs.google.com/java/awt/Component.html#locate(int,%20int)), [location](http://docs.google.com/java/awt/Component.html#location()), [lostFocus](http://docs.google.com/java/awt/Component.html#lostFocus(java.awt.Event,%20java.lang.Object)), [minimumSize](http://docs.google.com/java/awt/Component.html#minimumSize()), [mouseDown](http://docs.google.com/java/awt/Component.html#mouseDown(java.awt.Event,%20int,%20int)), [mouseDrag](http://docs.google.com/java/awt/Component.html#mouseDrag(java.awt.Event,%20int,%20int)), [mouseEnter](http://docs.google.com/java/awt/Component.html#mouseEnter(java.awt.Event,%20int,%20int)), [mouseExit](http://docs.google.com/java/awt/Component.html#mouseExit(java.awt.Event,%20int,%20int)), [mouseMove](http://docs.google.com/java/awt/Component.html#mouseMove(java.awt.Event,%20int,%20int)), [mouseUp](http://docs.google.com/java/awt/Component.html#mouseUp(java.awt.Event,%20int,%20int)), [move](http://docs.google.com/java/awt/Component.html#move(int,%20int)), [nextFocus](http://docs.google.com/java/awt/Component.html#nextFocus()), [paintAll](http://docs.google.com/java/awt/Component.html#paintAll(java.awt.Graphics)), [paramString](http://docs.google.com/java/awt/Component.html#paramString()), [postEvent](http://docs.google.com/java/awt/Component.html#postEvent(java.awt.Event)), [preferredSize](http://docs.google.com/java/awt/Component.html#preferredSize()), [prepareImage](http://docs.google.com/java/awt/Component.html#prepareImage(java.awt.Image,%20java.awt.image.ImageObserver)), [prepareImage](http://docs.google.com/java/awt/Component.html#prepareImage(java.awt.Image,%20int,%20int,%20java.awt.image.ImageObserver)), [print](http://docs.google.com/java/awt/Component.html#print(java.awt.Graphics)), [printAll](http://docs.google.com/java/awt/Component.html#printAll(java.awt.Graphics)), [processComponentEvent](http://docs.google.com/java/awt/Component.html#processComponentEvent(java.awt.event.ComponentEvent)), [processEvent](http://docs.google.com/java/awt/Component.html#processEvent(java.awt.AWTEvent)), [processFocusEvent](http://docs.google.com/java/awt/Component.html#processFocusEvent(java.awt.event.FocusEvent)), [processHierarchyBoundsEvent](http://docs.google.com/java/awt/Component.html#processHierarchyBoundsEvent(java.awt.event.HierarchyEvent)), [processHierarchyEvent](http://docs.google.com/java/awt/Component.html#processHierarchyEvent(java.awt.event.HierarchyEvent)), [processInputMethodEvent](http://docs.google.com/java/awt/Component.html#processInputMethodEvent(java.awt.event.InputMethodEvent)), [processKeyEvent](http://docs.google.com/java/awt/Component.html#processKeyEvent(java.awt.event.KeyEvent)), [processMouseEvent](http://docs.google.com/java/awt/Component.html#processMouseEvent(java.awt.event.MouseEvent)), [processMouseMotionEvent](http://docs.google.com/java/awt/Component.html#processMouseMotionEvent(java.awt.event.MouseEvent)), [processMouseWheelEvent](http://docs.google.com/java/awt/Component.html#processMouseWheelEvent(java.awt.event.MouseWheelEvent)), [remove](http://docs.google.com/java/awt/Component.html#remove(java.awt.MenuComponent)), [removeComponentListener](http://docs.google.com/java/awt/Component.html#removeComponentListener(java.awt.event.ComponentListener)), [removeFocusListener](http://docs.google.com/java/awt/Component.html#removeFocusListener(java.awt.event.FocusListener)), [removeHierarchyBoundsListener](http://docs.google.com/java/awt/Component.html#removeHierarchyBoundsListener(java.awt.event.HierarchyBoundsListener)), [removeHierarchyListener](http://docs.google.com/java/awt/Component.html#removeHierarchyListener(java.awt.event.HierarchyListener)), [removeInputMethodListener](http://docs.google.com/java/awt/Component.html#removeInputMethodListener(java.awt.event.InputMethodListener)), [removeKeyListener](http://docs.google.com/java/awt/Component.html#removeKeyListener(java.awt.event.KeyListener)), [removeMouseListener](http://docs.google.com/java/awt/Component.html#removeMouseListener(java.awt.event.MouseListener)), [removeMouseMotionListener](http://docs.google.com/java/awt/Component.html#removeMouseMotionListener(java.awt.event.MouseMotionListener)), [removeMouseWheelListener](http://docs.google.com/java/awt/Component.html#removeMouseWheelListener(java.awt.event.MouseWheelListener)), [removeNotify](http://docs.google.com/java/awt/Component.html#removeNotify()), [removePropertyChangeListener](http://docs.google.com/java/awt/Component.html#removePropertyChangeListener(java.beans.PropertyChangeListener)), [removePropertyChangeListener](http://docs.google.com/java/awt/Component.html#removePropertyChangeListener(java.lang.String,%20java.beans.PropertyChangeListener)), [repaint](http://docs.google.com/java/awt/Component.html#repaint()), [repaint](http://docs.google.com/java/awt/Component.html#repaint(int,%20int,%20int,%20int)), [repaint](http://docs.google.com/java/awt/Component.html#repaint(long)), [repaint](http://docs.google.com/java/awt/Component.html#repaint(long,%20int,%20int,%20int,%20int)), [requestFocus](http://docs.google.com/java/awt/Component.html#requestFocus()), [requestFocus](http://docs.google.com/java/awt/Component.html#requestFocus(boolean)), [requestFocusInWindow](http://docs.google.com/java/awt/Component.html#requestFocusInWindow()), [requestFocusInWindow](http://docs.google.com/java/awt/Component.html#requestFocusInWindow(boolean)), [reshape](http://docs.google.com/java/awt/Component.html#reshape(int,%20int,%20int,%20int)), [resize](http://docs.google.com/java/awt/Component.html#resize(java.awt.Dimension)), [resize](http://docs.google.com/java/awt/Component.html#resize(int,%20int)), [setBackground](http://docs.google.com/java/awt/Component.html#setBackground(java.awt.Color)), [setBounds](http://docs.google.com/java/awt/Component.html#setBounds(int,%20int,%20int,%20int)), [setBounds](http://docs.google.com/java/awt/Component.html#setBounds(java.awt.Rectangle)), [setComponentOrientation](http://docs.google.com/java/awt/Component.html#setComponentOrientation(java.awt.ComponentOrientation)), [setCursor](http://docs.google.com/java/awt/Component.html#setCursor(java.awt.Cursor)), [setDropTarget](http://docs.google.com/java/awt/Component.html#setDropTarget(java.awt.dnd.DropTarget)), [setEnabled](http://docs.google.com/java/awt/Component.html#setEnabled(boolean)), [setFocusable](http://docs.google.com/java/awt/Component.html#setFocusable(boolean)), [setFocusTraversalKeys](http://docs.google.com/java/awt/Component.html#setFocusTraversalKeys(int,%20java.util.Set)), [setFocusTraversalKeysEnabled](http://docs.google.com/java/awt/Component.html#setFocusTraversalKeysEnabled(boolean)), [setFont](http://docs.google.com/java/awt/Component.html#setFont(java.awt.Font)), [setForeground](http://docs.google.com/java/awt/Component.html#setForeground(java.awt.Color)), [setIgnoreRepaint](http://docs.google.com/java/awt/Component.html#setIgnoreRepaint(boolean)), [setLocale](http://docs.google.com/java/awt/Component.html#setLocale(java.util.Locale)), [setLocation](http://docs.google.com/java/awt/Component.html#setLocation(int,%20int)), [setLocation](http://docs.google.com/java/awt/Component.html#setLocation(java.awt.Point)), [setMaximumSize](http://docs.google.com/java/awt/Component.html#setMaximumSize(java.awt.Dimension)), [setMinimumSize](http://docs.google.com/java/awt/Component.html#setMinimumSize(java.awt.Dimension)), [setName](http://docs.google.com/java/awt/Component.html#setName(java.lang.String)), [setPreferredSize](http://docs.google.com/java/awt/Component.html#setPreferredSize(java.awt.Dimension)), [setSize](http://docs.google.com/java/awt/Component.html#setSize(java.awt.Dimension)), [setSize](http://docs.google.com/java/awt/Component.html#setSize(int,%20int)), [setVisible](http://docs.google.com/java/awt/Component.html#setVisible(boolean)), [show](http://docs.google.com/java/awt/Component.html#show()), [show](http://docs.google.com/java/awt/Component.html#show(boolean)), [size](http://docs.google.com/java/awt/Component.html#size()), [toString](http://docs.google.com/java/awt/Component.html#toString()), [transferFocus](http://docs.google.com/java/awt/Component.html#transferFocus()), [transferFocusBackward](http://docs.google.com/java/awt/Component.html#transferFocusBackward()), [transferFocusUpCycle](http://docs.google.com/java/awt/Component.html#transferFocusUpCycle()), [validate](http://docs.google.com/java/awt/Component.html#validate()) |

| **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()), [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** |
| --- |

### Canvas

public **Canvas**()

Constructs a new Canvas.

### Canvas

public **Canvas**([GraphicsConfiguration](http://docs.google.com/java/awt/GraphicsConfiguration.html) config)

Constructs a new Canvas given a GraphicsConfiguration object.

**Parameters:**config - a reference to a GraphicsConfiguration object.**See Also:**[GraphicsConfiguration](http://docs.google.com/java/awt/GraphicsConfiguration.html)

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

### addNotify

public void **addNotify**()

Creates the peer of the canvas. This peer allows you to change the user interface of the canvas without changing its functionality.

**Overrides:**[addNotify](http://docs.google.com/java/awt/Component.html#addNotify()) in class [Component](http://docs.google.com/java/awt/Component.html) **See Also:**[Toolkit.createCanvas(java.awt.Canvas)](http://docs.google.com/java/awt/Toolkit.html#createCanvas(java.awt.Canvas)), [Component.getToolkit()](http://docs.google.com/java/awt/Component.html#getToolkit())

### paint

public void **paint**([Graphics](http://docs.google.com/java/awt/Graphics.html) g)

Paints this canvas.

Most applications that subclass Canvas should override this method in order to perform some useful operation (typically, custom painting of the canvas). The default operation is simply to clear the canvas. Applications that override this method need not call super.paint(g).

**Overrides:**[paint](http://docs.google.com/java/awt/Component.html#paint(java.awt.Graphics)) in class [Component](http://docs.google.com/java/awt/Component.html) **Parameters:**g - the specified Graphics context**See Also:**[update(Graphics)](http://docs.google.com/java/awt/Canvas.html#update(java.awt.Graphics)), [Component.paint(Graphics)](http://docs.google.com/java/awt/Component.html#paint(java.awt.Graphics))

### update

public void **update**([Graphics](http://docs.google.com/java/awt/Graphics.html) g)

Updates this canvas.

This method is called in response to a call to repaint. The canvas is first cleared by filling it with the background color, and then completely redrawn by calling this canvas's paint method. Note: applications that override this method should either call super.update(g) or incorporate the functionality described above into their own code.

**Overrides:**[update](http://docs.google.com/java/awt/Component.html#update(java.awt.Graphics)) in class [Component](http://docs.google.com/java/awt/Component.html) **Parameters:**g - the specified Graphics context**See Also:**[paint(Graphics)](http://docs.google.com/java/awt/Canvas.html#paint(java.awt.Graphics)), [Component.update(Graphics)](http://docs.google.com/java/awt/Component.html#update(java.awt.Graphics))

### createBufferStrategy

public void **createBufferStrategy**(int numBuffers)

Creates a new strategy for multi-buffering on this component. Multi-buffering is useful for rendering performance. This method attempts to create the best strategy available with the number of buffers supplied. It will always create a BufferStrategy with that number of buffers. A page-flipping strategy is attempted first, then a blitting strategy using accelerated buffers. Finally, an unaccelerated blitting strategy is used.

Each time this method is called, the existing buffer strategy for this component is discarded.

**Parameters:**numBuffers - number of buffers to create, including the front buffer **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if numBuffers is less than 1. [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html) - if the component is not displayable**Since:** 1.4 **See Also:**[Component.isDisplayable()](http://docs.google.com/java/awt/Component.html#isDisplayable()), [getBufferStrategy()](http://docs.google.com/java/awt/Canvas.html#getBufferStrategy())

### createBufferStrategy

public void **createBufferStrategy**(int numBuffers,  
 [BufferCapabilities](http://docs.google.com/java/awt/BufferCapabilities.html) caps)  
 throws [AWTException](http://docs.google.com/java/awt/AWTException.html)

Creates a new strategy for multi-buffering on this component with the required buffer capabilities. This is useful, for example, if only accelerated memory or page flipping is desired (as specified by the buffer capabilities).

Each time this method is called, the existing buffer strategy for this component is discarded.

**Parameters:**numBuffers - number of buffers to createcaps - the required capabilities for creating the buffer strategy; cannot be null **Throws:** [AWTException](http://docs.google.com/java/awt/AWTException.html) - if the capabilities supplied could not be supported or met; this may happen, for example, if there is not enough accelerated memory currently available, or if page flipping is specified but not possible. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if numBuffers is less than 1, or if caps is null**Since:** 1.4 **See Also:**[getBufferStrategy()](http://docs.google.com/java/awt/Canvas.html#getBufferStrategy())

### getBufferStrategy

public [BufferStrategy](http://docs.google.com/java/awt/image/BufferStrategy.html) **getBufferStrategy**()

Returns the BufferStrategy used by this component. This method will return null if a BufferStrategy has not yet been created or has been disposed.

**Returns:**the buffer strategy used by this component**Since:** 1.4 **See Also:**[createBufferStrategy(int)](http://docs.google.com/java/awt/Canvas.html#createBufferStrategy(int))

### getAccessibleContext

public [AccessibleContext](http://docs.google.com/javax/accessibility/AccessibleContext.html) **getAccessibleContext**()

Gets the AccessibleContext associated with this Canvas. For canvases, the AccessibleContext takes the form of an AccessibleAWTCanvas. A new AccessibleAWTCanvas instance is created if necessary.

**Specified by:**[getAccessibleContext](http://docs.google.com/javax/accessibility/Accessible.html#getAccessibleContext()) in interface [Accessible](http://docs.google.com/javax/accessibility/Accessible.html)**Overrides:**[getAccessibleContext](http://docs.google.com/java/awt/Component.html#getAccessibleContext()) in class [Component](http://docs.google.com/java/awt/Component.html) **Returns:**an AccessibleAWTCanvas that serves as the AccessibleContext of this Canvas**Since:** 1.3

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Canvas.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/awt/Button.AccessibleAWTButton.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/Canvas.AccessibleAWTCanvas.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/Canvas.html)    [**NO FRAMES**](http://docs.google.com/Canvas.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#3znysh7) | [FIELD](#3dy6vkm) | [CONSTR](#4d34og8) | [METHOD](#2s8eyo1) | DETAIL: FIELD | [CONSTR](#26in1rg) | [METHOD](#1ksv4uv) |

[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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