

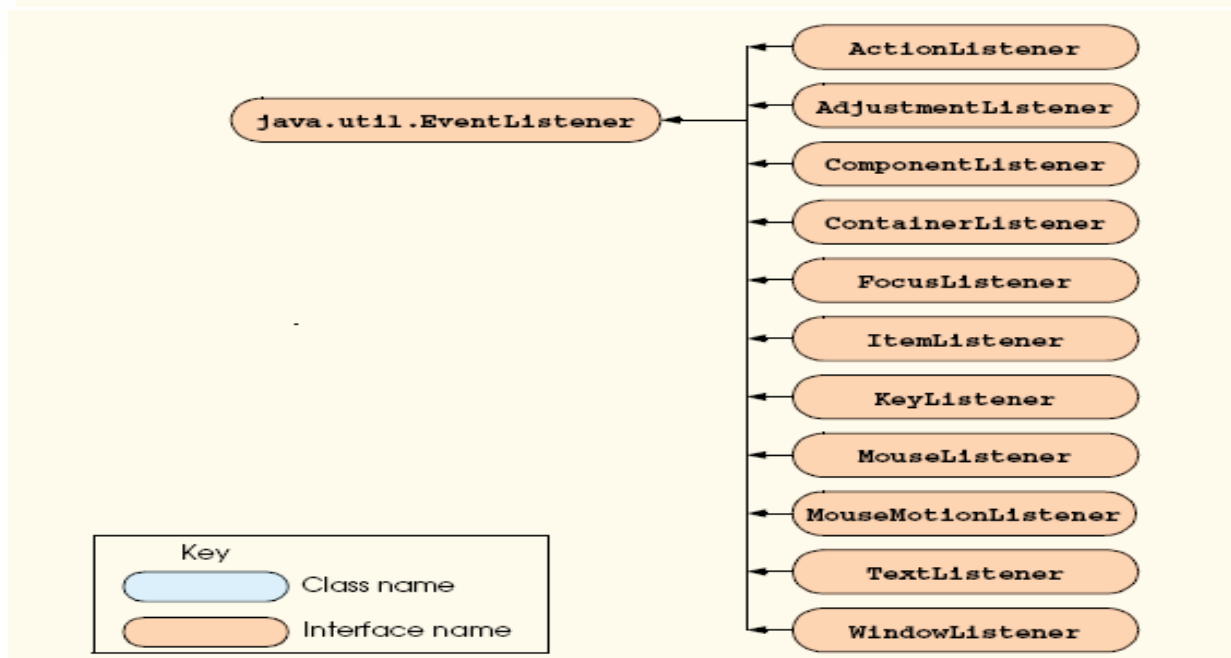
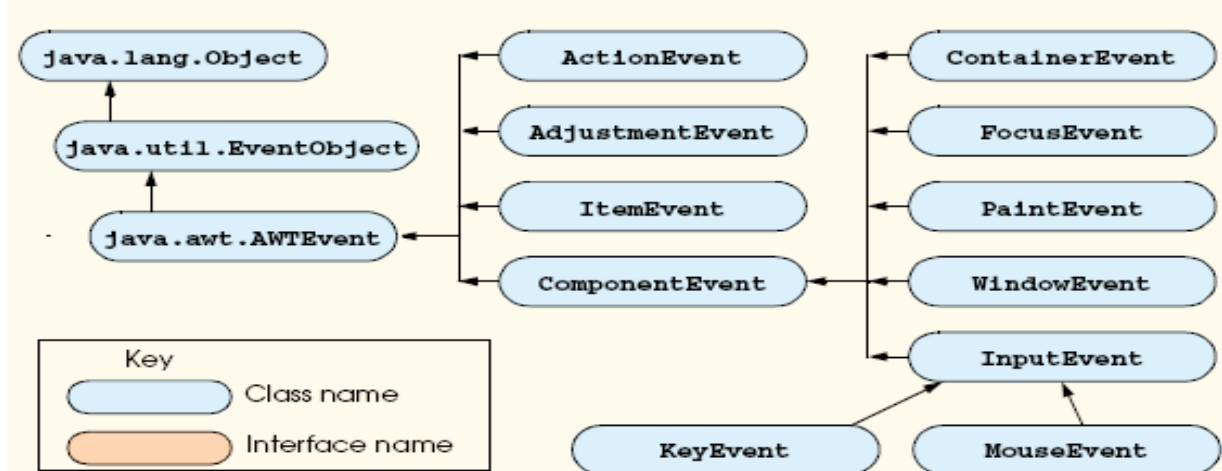
# Listener Interfaces

Listener	Methods on the Interface	Added method	Associate Components
ActionListener	actionPerformed(ActionEvent)	addActionListener()	JButton, JCheckBox, JComboBox, JTextField, JRadioButton, JMenuItem
ItemListener	focusGained(FocusEvent) focusLost(FocusEvent)	addFocusListener()	All Swing components
ItemListener	itemStateChanged(ItemEvent)	addItemListener()	JButton, JCheckBox, JComboBox, JRadioButton components
KeyListener	keyPressed(KeyEvent) keyReleased(KeyEvent) keyTyped(KeyEvent)	addKeyListener()	All Swing components
MouseListener	mouseClicked(MouseEvent) mouseEntered(MouseEvent) mouseExited(MouseEvent) mousePressed(MouseEvent) mouseReleased(MouseEvent)	addMouseListener()	All Swing components
MouseMotionListener	mouseDragged(MouseEvent) mouseMoved(MouseEvent)	addMouseMotionListener	All Swing Components
WindowListener	windowActivated(WindowEvent) windowClosed(WindowEvent) windowDeactivated(WindowEvent) windowDeiconified(WindowEvent) windowIconified(WindowEvent) windowOpened(WindowEvent)	addWindowListener()	JWindow, JFrame

## Adapter classes

MouseListener (Abstract Classe)	mouseClicked(MouseEvent)	addMouseListener()	
	mouseEntered(MouseEvent)		
	mouseExited(MouseEvent)		
	mousePressed(MouseEvent)		
	mouseReleased(MouseEvent)		
KeyListener (Abstract Classe)	keyPressed(KeyEvent)	addKeyListener()	
	keyReleased(KeyEvent)		
	keyTyped(KeyEvent)		
WindowAdapter (Abstract class)	windowActivated(WindowEvent)	addWindowListener()	
	windowClosed(WindowEvent )		
	windowClosing(WindowEvent		
	windowDeactivated(WindowEvent)		
	windowDeiconified(WindowEvent)		

	<div> <div>windowGainedFocus(WindowEvent)</div> <div>windowIconified(WindowEvent)</div> <div>windowLostFocus(WindowEvent)</div> <div>windowOpened(WindowEvent)</div> <div>windowStateChanged(WindowEvent)</div> </div>		
FocusAdapter	<div> <div>focusGained(FocusEvent)</div> <div>focusLost(FocusEvent )</div> </div>	addFocusListener()	All Swing Components
MouseMotionAdapter	<div> <div>mouseDragged(MouseEvent)</div> <div>mouseMoved(MouseEvent)</div> </div>	addMouseMotionListener()	
ContainerAdapter	<div> <div>componentAdded(ContainerEvent)</div> <div>componentRemoved(ContainerEvent)</div> </div>	addContainerListener()	
ComponentAdapter	<div> <div>componentHidden(ComponentEvent)</div> <div>componentMoved(ComponentEvent)</div> <div>componentResized(ComponentEvent)</div> <div>componentShown(ComponentEvent)</div> </div>	addComponentListener()	



## **All Listener Interfaces, Event Classes & Adapter Classes JAVA-5.0**

### **Interface Summary**

<a href="#"><u>ActionListener</u></a>	The listener interface for receiving action events.
<a href="#"><u>AdjustmentListener</u></a>	The listener interface for receiving adjustment events.
<a href="#"><u>AWTEventListener</u></a>	The listener interface for receiving notification of events dispatched to objects that are instances of Component or MenuComponent or their subclasses.
<a href="#"><u>ComponentListener</u></a>	The listener interface for receiving component events.
<a href="#"><u>ContainerListener</u></a>	The listener interface for receiving container events.
<a href="#"><u>FocusListener</u></a>	The listener interface for receiving keyboard focus events on a component.
<a href="#"><u>HierarchyBoundsListener</u></a>	The listener interface for receiving ancestor moved and resized events.
<a href="#"><u>HierarchyListener</u></a>	The listener interface for receiving hierarchy changed events.
<a href="#"><u>InputMethodListener</u></a>	The listener interface for receiving input method events.
<a href="#"><u>ItemListener</u></a>	The listener interface for receiving item events.
<a href="#"><u>KeyListener</u></a>	The listener interface for receiving keyboard events (keystrokes).
<a href="#"><u>MouseListener</u></a>	The listener interface for receiving "interesting" mouse events (press, release, click, enter, and exit) on a component.
<a href="#"><u>MouseMotionListener</u></a>	The listener interface for receiving mouse motion events on a component.
<a href="#"><u>MouseWheelListener</u></a>	The listener interface for receiving mouse wheel events on a component.
<a href="#"><u>TextListener</u></a>	The listener interface for receiving text events.
<a href="#"><u>WindowFocusListener</u></a>	The listener interface for receiving WindowEvents, including WINDOW_GAINED_FOCUS and WINDOW_LOST_FOCUS events.
<a href="#"><u>WindowListener</u></a>	The listener interface for receiving window events.
<a href="#"><u>WindowStateListener</u></a>	The listener interface for receiving window state events.

## Class Summary

<a href="#"><u>ActionEvent</u></a>	A semantic event which indicates that a component-defined action occurred.
<a href="#"><u>AdjustmentEvent</u></a>	The adjustment event emitted by Adjustable objects.
<a href="#"><u>AWTEventListenerProxy</u></a>	A class which extends the EventListenerProxy, specifically for adding an AWTEventListener for a specific event mask.
<a href="#"><u>ComponentAdapter</u></a>	An abstract adapter class for receiving component events.
<a href="#"><u>ComponentEvent</u></a>	A low-level event which indicates that a component moved, changed size, or changed visibility (also, the root class for the other component-level events).
<a href="#"><u>ContainerAdapter</u></a>	An abstract adapter class for receiving container events.
<a href="#"><u>ContainerEvent</u></a>	A low-level event which indicates that a container's contents changed because a component was added or removed.
<a href="#"><u>FocusAdapter</u></a>	An abstract adapter class for receiving keyboard focus events.
<a href="#"><u>FocusEvent</u></a>	A low-level event which indicates that a Component has gained or lost the input focus.
<a href="#"><u>HierarchyBoundsAdapter</u></a>	An abstract adapter class for receiving ancestor moved and resized events.
<a href="#"><u>HierarchyEvent</u></a>	An event which indicates a change to the Component hierarchy to which a Component belongs.
<a href="#"><u>InputEvent</u></a>	The root event class for all component-level input events.
<a href="#"><u>InputMethodEvent</u></a>	Input method events contain information about text that is being composed using an input method.
<a href="#"><u>InvocationEvent</u></a>	An event which executes the run() method on a Runnable when dispatched by the AWT event dispatcher thread.
<a href="#"><u>ItemEvent</u></a>	A semantic event which indicates that an item was selected or deselected.
<a href="#"><u>KeyAdapter</u></a>	An abstract adapter class for receiving keyboard events.
<a href="#"><u>KeyEvent</u></a>	An event which indicates that a keystroke occurred in a component.
<a href="#"><u>MouseAdapter</u></a>	An abstract adapter class for receiving mouse events.
<a href="#"><u>MouseEvent</u></a>	An event which indicates that a mouse action occurred in a component.
<a href="#"><u>MouseMotionAdapter</u></a>	An abstract adapter class for receiving mouse motion events.
<a href="#"><u>MouseWheelEvent</u></a>	An event which indicates that the mouse wheel was rotated in a component.
<a href="#"><u>PaintEvent</u></a>	The component-level paint event.
<a href="#"><u>TextEvent</u></a>	A semantic event which indicates that an object's text changed.
<a href="#"><u>WindowAdapter</u></a>	An abstract adapter class for receiving window events.
<a href="#"><u>WindowEvent</u></a>	A low-level event that indicates that a window has changed its status.

## Class Event

static int	<a href="#"><u>ACTION_EVENT</u></a>	This event indicates that the user wants some action to occur.
static int	<a href="#"><u>ALT_MASK</u></a>	This flag indicates that the Alt key was down when the event occurred.
<a href="#"><u>Object</u></a>	<a href="#"><u>arg</u></a>	An arbitrary argument of the event.
static int	<a href="#"><u>BACK_SPACE</u></a>	The BackSpace key.
static int	<a href="#"><u>CAPS_LOCK</u></a>	The Caps Lock key, a non-ASCII action key.
int	<a href="#"><u>clickCount</u></a>	For MOUSE_DOWN events, this field indicates the number of consecutive clic
static int	<a href="#"><u>CTRL_MASK</u></a>	This flag indicates that the Control key was down when the event occurred.
static int	<a href="#"><u>DELETE</u></a>	The Delete key.
static int	<a href="#"><u>DOWN</u></a>	The Down Arrow key, a non-ASCII action key.
static int	<a href="#"><u>END</u></a>	The End key, a non-ASCII action key.
static int	<a href="#"><u>ENTER</u></a>	The Enter key.
static int	<a href="#"><u>ESCAPE</u></a>	The Escape key.
<a href="#"><u>Event</u></a>	<a href="#"><u>evt</u></a>	The next event.
static int	<a href="#"><u>F1</u></a>	The F1 function key, a non-ASCII action key.
static int	<a href="#"><u>F10</u></a>	The F10 function key, a non-ASCII action key.
static int	<a href="#"><u>F11</u></a>	The F11 function key, a non-ASCII action key.
static int	<a href="#"><u>F12</u></a>	The F12 function key, a non-ASCII action key.
static int	<a href="#"><u>F2</u></a>	The F2 function key, a non-ASCII action key.
static int	<a href="#"><u>F3</u></a>	The F3 function key, a non-ASCII action key.
static int	<a href="#"><u>F4</u></a>	The F4 function key, a non-ASCII action key.
static int	<a href="#"><u>F5</u></a>	The F5 function key, a non-ASCII action key.
static int	<a href="#"><u>F6</u></a>	The F6 function key, a non-ASCII action key.
static int	<a href="#"><u>F7</u></a>	The F7 function key, a non-ASCII action key.
static int	<a href="#"><u>F8</u></a>	The F8 function key, a non-ASCII action key.
static int	<a href="#"><u>F9</u></a>	The F9 function key, a non-ASCII action key.
static int	<a href="#"><u>GOT_FOCUS</u></a>	A component gained the focus.
static int	<a href="#"><u>HOME</u></a>	The Home key, a non-ASCII action key.
int	<a href="#"><u>id</u></a>	Indicates which type of event the event is, and which other Event variables are relevant
static int	<a href="#"><u>INSERT</u></a>	The Insert key, a non-ASCII action key.
int	<a href="#"><u>key</u></a>	The key code of the key that was pressed in a keyboard event.
static int	<a href="#"><u>KEY_ACTION</u></a>	The user has pressed a non-ASCII <i>action</i> key.
static int	<a href="#"><u>KEY_ACTION_RELEASE</u></a>	The user has released a non-ASCII <i>action</i> key.
static int	<a href="#"><u>KEY_PRESS</u></a>	The user has pressed a normal key.
static int	<a href="#"><u>KEY_RELEASE</u></a>	The user has released a normal key.
static int	<a href="#"><u>LEFT</u></a>	The Left Arrow key, a non-ASCII action key.
static int	<a href="#"><u>LIST_DESELECT</u></a>	An item in a list has been deselected.

static int	<a href="#"><u>LIST_SELECT</u></a>	An item in a list has been selected.
static int	<a href="#"><u>LOAD_FILE</u></a>	A file loading event.
static int	<a href="#"><u>LOST_FOCUS</u></a>	A component lost the focus.
static int	<a href="#"><u>META_MASK</u></a>	This flag indicates that the Meta key was down when the event occurred.
int	<a href="#"><u>modifiers</u></a>	The state of the modifier keys.
static int	<a href="#"><u>MOUSE_DOWN</u></a>	The user has pressed the mouse button.
static int	<a href="#"><u>MOUSE_DRAG</u></a>	The user has moved the mouse with a button pressed.
static int	<a href="#"><u>MOUSE_ENTER</u></a>	The mouse has entered a component.
static int	<a href="#"><u>MOUSE_EXIT</u></a>	The mouse has exited a component.
static int	<a href="#"><u>MOUSE_MOVE</u></a>	The mouse has moved with no button pressed.
static int	<a href="#"><u>MOUSE_UP</u></a>	The user has released the mouse button.
static int	<a href="#"><u>NUM_LOCK</u></a>	The Num Lock key, a non-ASCII action key.
static int	<a href="#"><u>PAUSE</u></a>	The Pause key, a non-ASCII action key.
static int	<a href="#"><u>PGDN</u></a>	The Page Down key, a non-ASCII action key.
static int	<a href="#"><u>PGUP</u></a>	The Page Up key, a non-ASCII action key.
static int	<a href="#"><u>PRINT_SCREEN</u></a>	The Print Screen key, a non-ASCII action key.
static int	<a href="#"><u>RIGHT</u></a>	The Right Arrow key, a non-ASCII action key.
static int	<a href="#"><u>SAVE_FILE</u></a>	A file saving event.
static int	<a href="#"><u>SCROLL_BEGIN</u></a>	The scroll begin event.
static int	<a href="#"><u>SCROLL_END</u></a>	The scroll end event.
static int	<a href="#"><u>SCROLL_LINE_DOWN</u></a>	The user has activated the <i>line down</i> area of a scroll bar.
static int	<a href="#"><u>SCROLL_LINE_UP</u></a>	The user has activated the <i>line up</i> area of a scroll bar.
static int	<a href="#"><u>SCROLL_LOCK</u></a>	The Scroll Lock key, a non-ASCII action key.
static int	<a href="#"><u>SCROLL_PAGE_DOWN</u></a>	The user has activated the <i>page down</i> area of a scroll bar.
static int	<a href="#"><u>SCROLL_PAGE_UP</u></a>	The user has activated the <i>page up</i> area of a scroll bar.
static int	<a href="#"><u>SHIFT_MASK</u></a>	This flag indicates that the Shift key was down when the event occurred.
static int	<a href="#"><u>TAB</u></a>	The Tab key.
<a href="#"><u>Object</u></a>	<a href="#"><u>target</u></a>	The target component.
static int	<a href="#"><u>UP</u></a>	The Up Arrow key, a non-ASCII action key.
long	<a href="#"><u>when</u></a>	The time stamp.
static int	<a href="#"><u>WINDOW_DEICONIFY</u></a>	The user has asked the window manager to de-iconify the window.
static int	<a href="#"><u>WINDOW_DESTROY</u></a>	The user has asked the window manager to kill the window.
static int	<a href="#"><u>WINDOW_EXPOSE</u></a>	The user has asked the window manager to expose the window.
static int	<a href="#"><u>WINDOW_ICONIFY</u></a>	The user has asked the window manager to iconify the window.
static int	<a href="#"><u>WINDOW_MOVED</u></a>	The user has asked the window manager to move the window.
int	<a href="#"><u>x</u></a>	The <i>x</i> coordinate of the event.
int	<a href="#"><u>y</u></a>	The <i>y</i> coordinate of the event.