

CST8221 – Java Application Programming

Unit 3 Part 3 – Event Sources in Swing

Swing Component Generated Events

Swing Component	Types of Events Component Can Generate										
	action	adjustment	component	container	focus	item	key	mouse	mouse motion	text	window
JButton	X		X		X		X	X	X		
JCheckbox	X		X		X	X	X	X	X		
JCheckboxMenuItem						X					
JComboBox			X		X	X	X	X	X		
JComponent			X		X		X	X	X		
JDialog			X	X	X		X	X	X		X
JFrame			X	X	X		X	X	X		X
JLabel			X		X		X	X	X		
JList	X		X		X	X	X	X	X		
JMenuItem	X										
JPanel			X	X	X		X	X	X		
JRadioButton	X		X		X	X	X	X	X		
JScrollBar		X	X		X		X	X	X		
JScrollPane			X	X	X		X	X	X		
JTextArea			X		X		X	X	X	X	
TextField	X		X		X		X	X	X	X	
JWindow			X	X	X		X	X	X		X

Typical Swing Component Listener Registration Methods

Swing Component	Typical Listener Registration Method
JButton	addActionListener (anActionListener), addMouseListener (aMouseListener)
JCheckbox	addItemListener (anItemListener), addActionListener (anActionListener), addChangeListener
JCheckboxMenuItem	addItemListener (anItemListener), addActionListener (anActionListener)
JComboBox	addItemListener (anItemListener)
JDialog	addWindowListener (aWindowListener)
JFrame	addWindowListener (aWindowListener)
JLabel	Not expected to handle events
JList	addListSelectionListener (ListSelectionEvent) addItemListener (anItemListener), addMouseListener (aMouseListener)
JMenuItem	addItemListener (anItemListener)
JPanel	addMouseListener (aMouseListener), addMouseMotionListener (aMouseMotionListener) addKeyListener (aKeyListener)
JRadioButton	addItemListener (anItemListener), addActionListener (anActionListener), addChangeListener
JScrollBar	addAdjustmentListener (anAdjustmentListener)
JScrollPane	addAdjustmentListener (anAdjustmentListener)
JTextArea	addKeyListener (aKeyListener)
TextField	addActionListener (anActionListener), addItemListener (anItemListener)
JWindow	addWindowListener (aWindowListener)

The events sources in JavaFX are very similar. Since all controls inherit from `Node` most of the methods related to the event handling can be found there. Similarly to Swing you can register an even handler using the generic method `addEventHandler()` or you can use one of the many convenience methods `setOnXXX()` where `XXX` is the name of the event – Action, Key, Mouse and so on. The mechanics of event handling is the same but in JavaFX all event handlers have a single method `handle()` that must be overridden. JavaFX also supports gestures and provides and an easy way to filter events. For more details see:

<http://docs.oracle.com/javafx/2/events/processing.htm>

<https://docs.oracle.com/javase/8/javafx/events-tutorial/processing.htm>