

## Java 1.9 Swing Index

Section	Title	Page
<b>One</b>	<b>Introduction to Java</b>	2
	– Usage of Java	3
	– Structure of Java	4
	– Flexibility of Java Programming	5
	– Swing and AWT in Java	6
<b>Two</b>	<b>Using Java in DOS</b>	9
	– Using the DOS window	10
	– DOS Operating System Commands	11
	– Compiling and Executing Java Programs in DOS	13
	– Using JAVAC to Compile Java Programs	14
<b>Three</b>	<b>Dialog Boxes</b>	20
	– Using Dialog Boxes	21
	– Using Message Dialogs	23
	– Using ImageIcon with Message Dialogs	28
	– Using Confirm Dialogs	31
	– Using Input Dialogs	36
	– Using Input Dialogs with Icons and Lists	38
	– Using Option Dialogs	40
	– Making a Beep in Java	46
	– <i>Exercise One</i>	47
	<b>Four</b>	<b>Dimensions</b>
– The Dimension Datatype		53
– Examples of Using Dimensions		54
– Methods for Dimensions		55
– getSize()		57
<b>Five</b>	<b>JFrame</b>	58
	– Using JFrame	59
	– setDefaultCloseOperation()	60
	– setVisible()	61
	– Exiting JFrames	62
	– setResizable()	63
	– setLocation()	64
	– setBounds()	66
	– Centering JFrames	67
	– JFrame Example	68
	– setLocationRelativeTo() for Centreing	69
	– dispose()	70
	– Using setIconImage()	71
	– Using Constructors in Java Swing	72
	– serialVersionUID	73
– Creating a Constructor Method	74	
– JFrame Constructor	76	
– @SuppressWarnings	77	
– <i>Exercise Two</i>	81	
<b>Six</b>	<b>JComponent</b>	83
	– Introduction	84
	– Methods to Change Appearance	85
	– Methods to Process Components	89
<b>Seven</b>	<b>Colour and Fonts</b>	93
	– Using Color	94
	– Using Color with JFrame	96
	– Using Font	97

## Java 1.9 Swing Index

Section	Title	Page
<b>Eight</b>	<b>JLabel</b>	103
	- Using JLabel	104
	- getContentPane().add()	105
	- Creating a message in JLabel	107
	- Using HTML with JLabel	108
	- Changing the position in a JLabel	111
	- Adding an Icon to a JLabel	113
	- Changing a JLabel's Colour and Font	115
	- Icon only JLabel	117
	- setVerticalAlignment()	118
	- pack()	120
	- <i>Exercise Three</i>	121
<b>Nine</b>	<b>Borders</b>	124
	- BorderFactory	125
	- createEmptyBorder()	128
	- createLineBorder()	129
	- createRaisedBevelBorder()	131
	- createRaisedSoftBevelBorder()	132
	- createBevelBorder()	133
	- createDashedBorder()	135
	- createStrokeBorder()	138
	- createEtchedBorder()	142
	- createMatteBorder()	144
	- createTitledBorder()	146
	- Nested createTitledBorder()	156
	- Fonts with createTitledBorder()	157
	- createCompoundBorder()	158
	- <i>Exercise Four</i>	161
<b>Ten</b>	<b>Mid-Level Containers</b>	165
	- Containers	166
	- JPanels	168
	- JScrollPanes	170
	- Scroll Bar policy	173
	- <i>Exercise Five</i>	175
<b>Eleven</b>	<b>Absolute Layouts</b>	177
	- Introduction	178
	- setBounds()	179
	- <i>Exercise Six</i>	183
<b>Twelve</b>	<b>Layouts</b>	184
	- JPanel and Layouts	185
	- FlowLayout	187
	- Some FlowLayout Methods	191
	- GridLayout	193
	- Some GridLayout Methods	198
	- BorderLayout	199
	- Defining BorderLayouts since Java 1.4	204
	- Some BorderLayout Methods	206
	- <i>Exercise Seven</i>	207
	- BoxLayout	210
	- SpringLayout	213
	- putConstraint()	217
<b>Thirteen</b>	<b>Box</b>	221
	- Introduction	222
	- createRigidArea()	224
	- createVerticalStrut()	225

## Java 1.9 Swing Index

Section	Title	Page
	- createHorizontalStrut()	226
	- createGlue()	227
	- createHorizontalGlue() / createVerticalGlue()	229
	- Using Box.Filler	230
	- Using Box as a Container	233
	- <i>Exercise Eight</i>	235
<b>Fourteen</b>	<b>JButton</b>	237
	- Introduction	238
	- Example	239
	- Using Insets to re-size JButtons	241
	- Using Icons with JButtons	243
	- Using AbstractButton with JButtons	244
	- Using SwingConstants with JButtons	248
	- Some Methods for JButtons	249
	- Using HTML with JButton	252
	- Advanced Icons with JButtons	253
	- Using Rollover with JButtons	255
	- JButtons and ToolTips	256
	- BasicArrowButton	257
<b>Fifteen</b>	Event Handling with Listeners	259
	- Listening for Events	260
<b>Sixteen</b>	Private Event Listeners for JButtons	265
	- Introduction	266
	- java.awt.event.*	267
	- Example of Private Listener	268
	- ActionEvent	270
	- Recording the Event	271
	- Which Component fired the Listener	272
	- Using getActionCommand()	273
	- getValueIsAdjusting()	274
	- getWhen()	275
	- <i>Exercise Nine</i>	276
<b>Seventeen</b>	Public Event Listeners	278
	- Introduction	279
	- Example of Public Listener	280
<b>Eighteen</b>	Implemented Event Listeners	282
	- Introduction	283
	- Example of Implemented Listener	284
<b>Nineteen</b>	Listener Events	286
	- Introduction	287
	- Multiple Events with Listeners	288
	- <i>Exercise Ten</i>	289
<b>Twenty</b>	JTextComponent	291
	- Methods in JTextComponent	292
<b>Twenty One</b>	Input Components	293
	- Introduction	294
	- JTextField	295
	- JTextField Example	296
	- JTextField Initialisation	298
	- Other Methods for JTextField	299
	- Processing JTextField using getText()	301
	- Listeners for JTextField	302
	- FocusListener with JTextField	303
	- ActionListener with JTextField	305
	- JPasswordField	308

## Java 1.9 Swing Index

Section	Title	Page
	- JPasswordField Example	309
	- setEchoChar()	311
	- JTextArea	312
	- JTextArea Example	313
	- JTextArea and setFocusable()	315
	- Wrapping text in JTextArea	317
	- Listeners with JTextArea	320
	- Some methods for JTextArea	321
	- JFormattedTextField	324
	- Initialising JFormattedTextField	325
	- Populating JFormattedTextField	328
	- Using setValue()	330
	- Listeners with JFormattedTextField	331
	- Using MaskFormatter	332
	- Using setFocusLostBehavior	334
	- requestFocusInWindow()	336
	- <i>Exercise Eleven</i>	337
<b>Twenty Two</b>	GroupLayout	339
	- Introduction	340
	- Sequential and Parallel Groups	341
	- addGap()	344
	- setAutoCreateGaps()	345
	- Changing Direction of Components	346
	- Chained Invocation or Method Chaining	347
	- Adding further Groups with addGroup()	348
	- Controlling Resizing with addComponent()	353
	- Using LinkSize to standardise sizing	356
	- Alignment	357
<b>Twenty Three</b>	Selection Components	358
	- JComboBox	359
	- Using addItem() with JComboBox	362
	- getSelectedItem() with JComboBox	363
	- ComboBoxModel with JComboBox	364
	- Some methods for JComboBox	365
	- ItemListener with JComboBox	367
	- JCheckBox	368
	- JCheckBox Example	369
	- Initialising JCheckBox	370
	- Using HTML with JCheckBox	371
	- Images with JCheckBox	372
	- ItemListener with JCheckBox	373
	- JToggleButton	375
	- Initialising JToggleButton	376
	- Listeners with JToggleButtons	377
	- JRadioButton	378
	- JRadioButton Example	380
	- Initialising JRadionButtons	382
	- Icons with JRadioButtons	383
	- ActionListener with JRadioButton	385
	- Using setActionCommand()	386
	- setActionCommand() Example	387
	- Using Enumeration	389
	- Using AbstractButton	392
	- <i>Exercise Twelve</i>	393
	- JList	398

## Java 1.9 Swing Index

Section	Title	Page
	- JList Example	399
	- setLayoutOrientation() with JList	401
	- setSelectionMode() with JList	403
	- setPrototypeCellValue() with JList	405
	- setFixedCellWidth with JList	406
	- DefaultListModel with JList	407
	- DefaultListModel Example	408
	- Icons with DefaultListModels	410
	- Using Vectors	412
	- Methods for Vectors	413
	- getSelectedIndices() in JList	418
	- JList Listeners	419
	- ListSelectionListener	420
	- Using getSelectedValuesList()	421
	- ListDataListener	422
	- ListDataListener Example	423
	- <i>Exercise Thirteen</i>	425
	- JSpinner	428
	- SpinnerNumberModel	429
	- SpinnerNumberModel Example	430
	- Methods for SpinnerNumberModel	431
	- Change Orientation of JSpinner	432
	- ChangeListener with JSpinner	433
	- SpinnerListModel	434
	- SpinnerListModel Example	435
	- setPreferredSize()	436
	- ArrayLists with SpinnerListModel	438
	- SpinnerDateModel	439
	- SpinnerDateModel Example	441
	- DateEditor with SpinnerDateModel	443
	- JSlider	448
	- Initialising JSlider	449
	- ChangeListener with JSlider	451
	- Placing Numbers on the JSlider	452
	- Placing ticking on the JSlider	453
	- setMinorTickSpacing() with JSlider	454
	- Customising the JSlider ticks	455
	- Some more JSlider methods	456
	- JSeparator	458
	- JSeparator Example	459
	- Using Box with JSeparator Example	461
	- <i>Exercise Fourteen</i>	463
<b>Twenty Four</b>	JMenus and JPopupMenu	466
	- Introduction	467
	- JMenuBar	468
	- JMenuBar Example	470
	- JMenu	471
	- JMenu Example	472
	- JMenuBar and JTextField	473
	- Mnemonic with JMenus	474
	- MenuListener	475
	- MenuListener Example	476
	- JMenuItem	478
	- JMenuItem Example	479
	- JMenuItemItems with Images	480

## Java 1.9 Swing Index

Section	Title	Page
	- Mnemonic with JMenuItem	481
	- Accelerator with JMenuItem	482
	- Listeners with JMenuItem	484
	- JMenuItem and MenuKeyListener	485
	- Sub-Menus in JMenus	486
	- JCheckBoxMenuItems in JMenus	487
	- JCheckBoxMenuItems with Images	489
	- JCheckBoxMenuItems with ItemListener	490
	- JRadioButtonMenuItem in JMenus	491
	- JRadioButtonMenuItem Example	492
	- JRadioButtonMenuItem with JMenu Example	493
	- JRadioButtonMenuItem with Images	494
	- JRadioButtonMenuItem and Listeners	495
	- Using getActionCommand() with JRadioButton	496
	- Using Enumeration	497
	- JPopupMenu	498
	- JPopupMenu with MouseListener	499
	- MouseListener Examples	500
	- Event.isPopupTrigger()	502
	- PopupMenuListener	503
	- JToolBar	504
	- JToolBar Example	506
	- JToolBar and setFloatable()	508
	- JToolBar and Listeners	509
	- JToolBar and Icons	510
	- JToolBar Orientation	511
	- JToolBar with JTextFields	512
	- addSeparator() with JToolBar	514
	- <i>Exercise Fifteen</i>	515
<b>Twenty Five</b>	Applets	518
	- Introduction to using Applets	519
	- Embedding Java in HTML	520
	- Using Appletviewer in DOS	521
	- Using the <applet> tag in HTML	523
	- Using showStatus() (Short status strings)	525
	- Passing Parameters to the Applet	526
	- Using getParameter() with JApplet	527
	- Reading Parameters in the Applet	529
	- Using the <object> tag in HTML	530
	- Appletviewer Options	531
	- Converting a basic Application to an Applet	532
	- InvocationTargetException and Images	538
	- Using URL with Images	539
	- Dialog Boxes converted to JApplet	540
	- JInternalFrames (with LAF) converted to JApplet	541
	- JMenus converted to JApplet	542
	- JTrees converted to JApplet	543
	- JColorChooser converted to JApplet	544
	- Choosing Applet or Application in Eclipse	545
	- Using start(), stop(), paint(), init() and destroy()	549
	- Accessing System Properties in Applets	552
	- <i>Exercise Sixteen</i>	554
<b>Twenty Six</b>	Look and Feel (LAF)	557
	- Using setLookAndFeel()	558
	- Standard LAF Styles	560



## Java 1.9 Swing Index

Section	Title	Page
	- javax.swing.plaf.metal.MetalLookAndFeel	562
	- javax.swing.plaf.nimbus.NimbusLookAndFeel	563
	- com.sun.java.swing.plaf.motif.MotifLookAndFeel	564
	- com.sun.java.swing.plaf.windows.WindowsLookAndFeel	565
	- com.sun.java.swing.plaf.windows.WindowsClassicLookAndFeel	566
	- Defaulting the LAF permanently in Java	567
	- Using Third Party LAFs	568
	- Installing the LAF in the Operating System	569
	- Identifying the Look and Feel Class in the Jar file	570
	- Using the third party LAF in Java	571
	- <i>Exercise Seventeen</i>	572
<b>Twenty Seven</b>	GridBagLayouts	573
	- Introduction	574
	- GridBagConstraints	575
	- GridBagConstraints Example	578
	- gridx and gridy	583
	- gridx and gridy example	584
	- gridwidth and gridheight	587
	- gridwidth and gridheight example	588
	- GridBagConstraints.REMAINDER	591
	- fill	592
	- fill example	593
	- anchor	594
	- anchor examples	595
	- insets	597
	- insets example	598
	- ipadx and ipady	599
	- ipadx and ipady example	600
	- weightx and weighty	601
	- Final example	605
<b>Twenty Eight</b>	JTable	611
	- Introduction	612
	- JTable Example	613
	- Default Settings	616
	- setPreferredSize()	617
	- java.lang.ArrayIndexOutOfBoundsException	618
	- Problems with the TableColumnModel	619
	- Adding to a JPanel	620
	- Using DefaultTableModel()	621
	- Using addColumn()	622
	- setAutoCreateColumnsFromModel()	624
	- Changing the Width of Columns	625
	- setResizable()	627
	- Some Methods for JTable	628
	- Moving Columns Programmatically	629
	- Moving Rows Programmatically	630
	- Setting the Selection Mode	631
	- isCellEditable()	634
	- Accessing Cells	636
	- Determining the Current Cell	637
	- ListSelectionListener	638
	- ListSelectionListener Example	639
	- TableModelListener	643
	- TableModelListener Example	645
	- <i>Exercise Eighteen</i>	648

## Java 1.9 Swing Index

Section	Title	Page
<b>Twenty Nine</b>	Mouse Double Click	651
	– Introduction	652
	– Double Click Example	653
<b>Thirty</b>	JTree	655
	– Introduction	656
	– JTree Example	657
	– Populating a JTree (Top to Bottom)	659
	– Expand()	662
	– Populating a JTree (Bottom to Top)	663
	– Populating a JTree with more levels	664
	– TreeExpansionListener	666
	– getLastSelectedPathComponent()	667
	– TreeSelectionListener	668
– Customising the JTree	669	
<b>Thirty One</b>	CardLayouts	671
	– Introduction	672
	– CardLayout Example	673
	– <i>Exercise Nineteen</i>	677
<b>Thirty Two</b>	More Containers	682
	– Introduction	683
	– JSplitPane	684
	– setDividerLocation() with JSplitPane	688
	– Using setResizeWeight with JSplitPane	689
	– JSplitPanes within JSplitPanes	690
	– JTabbedPane	692
	– JTabbedPane Example	694
	– Using addTab() with JTabbedPane	696
	– Inserting Tabs into a JTabbedPane	699
	– Removing Tabs in JTabbedPane	700
	– Positioning the Tabs	701
	– setTabLayoutPolicy for JTabbedPane	704
	– setMnemonic() with Tabs	706
	– Some Methods for JTabbedPane	707
– ChangeListener with JTabbedPane	711	
<b>Thirty Three</b>	More Frames	713
	– JInternalFrame	714
	– Using LAF with JInternalFrame	716
	– JInternalFrame Behaviour	717
	– Some JInternalFrame Methods	720
	– Adding Components to JInternalFrame	721
	– setJMenuBar() for JInternalFrame	722
	– InternalFrameListener	723
	– isVisible() with JInternalFrame	725
	– JLayeredPane	726
	– JLayeredPane Example	730
	– Layouts in JLayeredPane	732
	– More methods for JLayeredPane	733
	– JDesktopPane	736
	– showInternalMessageDialog	737
	– showInternalConfirmDialog	740
	– <i>Exercise Twenty</i>	745
<b>Thirty Four</b>	JWindow	747
	– Using JWindow	748



## Java 1.9 Swing Index

Section	Title	Page	
<b>Thirty Five</b>	Swing Timers and Progress Bars	750	
	– Introduction	751	
	– Methods for Swing Timers	754	
	– Timers and Coalesce	756	
	– JProgressBar	757	
	– JProgressBar Example	758	
	– JProgressBar Methods	760	
	– Displaying text in the JProgressBar	761	
	– JProgressBar Orientation	763	
	– JProgressBar and ChangeListener	764	
	– Using Threads to create a Splash screen	765	
	– Cursors	767	
	– Scope of Cursors	770	
	– Creating a Custom Cursor	771	
	<b>Thirty Six</b>	System Tray	772
		– Introduction	773
– System Tray Example		775	
<b>Thirty Seven</b>	Java Built-in Choosers	778	
	– JColorChooser	779	
	– ChangeListener	785	
	– setPreviewPanel()	788	
	– Using setColor()	789	
	– Using AbstractColorChooserPanel	790	
	– JFileChooser	792	
	– setFileSelectionMode()	797	
	– setControlButtonsAreShown()	799	
	– FileFilter	800	
	– setAcceptAllFileFilterUsed()	802	
	– addChoosableFileFilter	803	
	– Some Methods for JFileChooser	804	
	– ActionListener with JFileChooser	805	
– <i>Exercise Twenty One</i>	808		