

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
One	Introduction to Java	1
	- Usage of Java	2
	- Structure of Java	4
	- Flexibility of Java Programming	5
	- Swing and AWT in Java	7
	- Using Eclipse	9
Two	Dialog Boxes	10
	- Using Dialog Boxes	11
	- Using Message Dialogs	13
	- Using ImageIcons with Message Dialogs	18
	- Using Confirm Dialogs	21
	- Using Input Dialogs	26
	- Using Input Dialogs with Icons and Lists	28
	- Using Option Dialogs	30
	- Making a Beep in Java	36
	- <i>Exercise One</i>	37
Three	Dimensions	42
	- The Dimension Datatype	43
	- Examples of Using Dimensions	44
	- Methods for Dimensions	45
Four	JFrame	47
	- getScreenSize()	48
	- Using JFrame	49
	- setDefaultCloseOperation()	50
	- setVisible()	51
	- Exiting JFrames	52
	- setResizable()	53
	- setLocation()	54
	- setBounds()	56
	- Centering JFrames	57
	- JFrame Example	58
	- setLocationRelativeTo() for Centreing	59
	- dispose()	60
	- Using setIconImage()	61
	- Using Constructors in Java Swing	62
	- serialVersionUID	63
- Creating a Constructor Method	64	
- JFrame Constructor	66	
- @SuppressWarnings	67	
- <i>Exercise Two</i>	72	
Five	JComponent	74
	- Introduction	75
	- Methods to Change Appearance	76
Six	- Methods to Process Components	80
	Colour and Fonts	84
	- Using Color	85
Seven	- Using Color with JFrame	87
	- Using Font	88
	JLabel	91
- Using JLabel	92	
- getContentPane().add()	93	
- Creating a message in JLabel	95	
- Using HTML with JLabel	96	
- Changing the position in a JLabel	99	
- Adding an Icon to a JLabel	101	
- Changing a JLabel's Colour and Font	103	

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
	- Icon only JLabel	105
	- setVerticalAlignment()	106
	- pack()	108
	- <i>Exercise Three</i>	109
Eight	Borders	112
	- BorderFactory	113
	- createEmptyBorder()	116
	- createLineBorder()	117
	- createRaisedBevelBorder()	119
	- createRaisedSoftBevelBorder()	120
	- createBevelBorder()	121
	- createDashedBorder()	123
	- createStrokeBorder()	126
	- createEtchedBorder()	130
	- createMatteBorder()	132
	- createTitledBorder()	134
	- Nested createTitledBorder()	144
	- Fonts with createTitledBorder()	145
	- createCompoundBorder()	146
	- <i>Exercise Four</i>	149
Nine	Mid-Level Containers	153
	- Containers	154
	- JPanels	156
	- JScrollPanels	158
	- Scroll Bar policy	161
	- <i>Exercise Five</i>	163
Ten	Absolute Layouts	165
	- Introduction	166
	- setBounds()	167
	- <i>Exercise Six</i>	171
Eleven	Layouts	172
	- JPanel and Layouts	173
	- FlowLayout	175
	- Some FlowLayout Methods	179
	- GridLayout	181
	- Some GridLayout Methods	186
	- BorderLayout	187
	- Defining BorderLayouts since Java 1.4	192
	- Some BorderLayout Methods	194
	- <i>Exercise Seven</i>	195
	- BorderLayout	198
	- SpringLayout	201
	- putConstraint()	205
Twelve	Box	209
	- Introduction	210
	- createRigidArea()	212
	- createVerticalStrut()	213
	- createHorizontalStrut()	214
	- createGlue()	215
	- createHorizontalGlue() / createVerticalGlue()	217
	- Using Box.Filler	218
	- Using Box as a Container	221
	- <i>Exercise Eight</i>	223
Thirteen	JButton	225
	- Introduction	226
	- Example	227

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
	– Using Insets to re-size JButtons	229
	– Using Icons with JButtons	231
	– Using AbstractButton with JButtons	232
	– Using SwingConstants with JButtons	236
	– Some Methods for JButtons	237
	– Using HTML with JButton	240
	– Advanced Icons with JButtons	241
	– Using Rollover with JButtons	243
	– JButtons and ToolTips	244
	– BasicArrowButton	245
Fourteen	Event Handling with Listeners	247
	– Listening for Events	248
Fifteen	Private Event Listeners for JButtons	253
	– Introduction	254
	– java.awt.event.*	255
	– Example of Private Listener	256
	– ActionEvent	258
	– Recording the Event	259
	– Which Component fired the Listener	260
	– Using getActionCommand()	261
	– getValueIsAdjusting()	262
	– getWhen()	263
	– <i>Exercise Nine</i>	264
Sixteen	Public Event Listeners	266
	– Introduction	267
	– Example of Public Listener	268
Seventeen	Implemented Event Listeners	270
	– Introduction	271
	– Example of Implemented Listener	272
Eighteen	Listener Events	274
	– Introduction	275
	– Multiple Events with Listeners	276
	– <i>Exercise Ten</i>	279
Nineteen	JTextComponent	281
	– Methods in JTextComponent	282
Twenty	Input Components	283
	– Introduction	284
	– JTextField	285
	– JTextField Example	286
	– JTextField Initialisation	288
	– Other Methods for JTextField	289
	– Processing JTextField using getText()	291
	– Listeners for JTextField	292
	– FocusListener with JTextField	293
	– ActionListener with JTextField	295
	– JPasswordField	298
	– JPasswordField Example	299
	– setEchoChar()	301
	– JTextArea	302
	– JTextArea Example	303
	– JTextArea and setFocusable()	305
	– Wrapping text in JTextArea	307
	– Listeners with JTextArea	310
	– Some methods for JTextArea	311
	– JFormattedTextField	314
	– Initialising JFormattedTextField	315

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
	– Populating JFormattedTextField	318
	– Using setValue()	320
	– Listeners with JFormattedTextField	321
	– Using MaskFormatter	322
	– Using setFocusLostBehavior	324
	– requestFocusInWindow()	326
	– <i>Exercise Eleven</i>	327
Twenty One	GroupLayout	329
	– Introduction	330
	– Sequential and Parallel Groups	331
	– addGap()	334
	– setAutoCreateGaps()	335
	– Changing Direction of Components	336
	– Chained Invocation or Method Chaining	337
	– Adding further Groups with addGroup()	338
	– Controlling Resizing with addComponent()	343
	– Using LinkSize to standardise sizing	346
	– Alignment	347
Twenty Two	Selection Components	348
	– JComboBox	349
	– Using addItem() with JComboBox	352
	– getSelectedItem() with JComboBox	353
	– ComboBoxModel with JComboBox	354
	– Some methods for JComboBox	355
	– ItemListener with JComboBox	357
	– JCheckBox	358
	– JCheckBox Example	359
	– Initialising JCheckBox	360
	– Using HTML with JCheckBox	361
	– Images with JCheckBox	362
	– ItemListener with JCheckBox	363
	– JToggleButton	365
	– Initialising JToggleButton	366
	– Listeners with JToggleButtons	367
	– JRadioButton	368
	– JRadioButton Example	370
	– Initialising JRadionButtons	372
	– Icons with JRadioButtons	373
	– ActionListener with JRadioButton	375
	– Using setActionCommand()	376
	– setActionCommand() Example	377
	– Using Enumeration	379
	– Using AbstractButton	382
	– <i>Exercise Twelve</i>	383
	– JList	388
	– JList Example	389
	– setLayoutOrientation() with JList	391
	– setSelectionMode() with JList	393
	– setPrototypeCellValue() with JList	395
	– setFixedCellWidth with JList	396
	– DefaultListModel with JList	397
	– DefaultListModel Example	398
	– Icons with DefaultListModels	400
	– Using Vectors	402
	– Methods for Vectors	403
	– getSelectedIndices() in JList	408

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
	- JList Listeners	409
	- ListSelectionListener	410
	- Using getSelectedValuesList()	411
	- ListDataListener	412
	- ListDataListener Example	413
	- <i>Exercise Thirteen</i>	415
	- JSpinner	418
	- SpinnerNumberModel	419
	- SpinnerNumberModel Example	420
	- Methods for SpinnerNumberModel	421
	- Change Orientation of JSpinner	422
	- ChangeListener with JSpinner	423
	- SpinnerListModel	424
	- SpinnerListModel Example	425
	- setPreferredSize()	426
	- ArrayLists with SpinnerListModel	428
	- SpinnerDateModel	429
	- SpinnerDateModel Example	431
	- DateEditor with SpinnerDateModel	433
	- JSlider	438
	- Initialising JSlider	439
	- ChangeListener with JSlider	441
	- Placing Numbers on the JSlider	442
	- Placing ticking on the JSlider	443
	- setMinorTickSpacing() with JSlider	444
	- Customising the JSlider ticks	445
	- Some more JSlider methods	446
	- JSeparator	448
	- JSeparator Example	449
	- Using Box with JSeparator Example	451
	- <i>Exercise Fourteen</i>	453
Twenty Three	JMenus and JPopupMenu	456
	- Introduction	457
	- JMenuBar	458
	- JMenuBar Example	460
	- JMenu	461
	- JMenu Example	462
	- JMenuBar and JTextField	463
	- Mnemonic with JMenus	464
	- MenuListener	465
	- MenuListener Example	466
	- JMenuItem	468
	- JMenuItem Example	469
	- JMenuItem with Images	470
	- Mnemonic with JMenuItem	471
	- Accelerator with JMenuItem	472
	- Listeners with JMenuItem	474
	- JMenuItem and MenuKeyListener	475
	- Sub-Menus in JMenus	476
	- JCheckBoxMenuItems in JMenus	477
	- JCheckBoxMenuItems with Images	479
	- JCheckBoxMenuItems with ItemListener	480
	- JRadioButtonMenuItem in JMenus	481
	- JRadioButtonMenuItem Example	482
	- JRadioButtonMenuItem with JMenu Example	483
	- JRadioButtonMenuItem with Images	484

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
	– JRadioButtonMenuItem and Listeners	485
	– Using getActionCommand() with JRadioButton	486
	– Using Enumeration	487
	– JPopupMenu	488
	– JPopupMenu with MouseListener	489
	– MouseListener Examples	490
	– Event.isPopupTrigger()	492
	– PopupMenuListener	493
	– JToolBar	494
	– JToolBar Example	496
	– JToolBar and setFloatable()	498
	– JToolBar and Listeners	499
	– JToolBar and Icons	500
	– JToolBar Orientation	501
	– JToolBar with JTextFields	502
	– addSeparator() with JToolBar	504
	– <i>Exercise Fifteen</i>	505
Twenty Four	Look and Feel (LAF)	508
	– Using setLookandFeel()	509
	– Standard LAF Styles	511
	– javax.swing.plaf.metal.MetalLookAndFeel	513
	– javax.swing.plaf.nimbus.NimbusLookAndFeel	514
	– com.sun.java.swing.plaf.motif.MotifLookAndFeel	515
	– com.sun.java.swing.plaf.windows.WindowsLookAndFeel	516
	– com.sun.java.swing.plaf.windows.WindowsClassicLookAndFeel	517
	– Defaulting the LAF permanently in Java	518
	– Using Third Party LAFs	519
Twenty Five	GridBagLayouts	520
	– Introduction	521
	– GridBagConstraints	522
	– GridBagConstraints Example	525
	– gridx and gridy	530
	– gridx and gridy example	531
	– gridwidth and gridheight	534
	– gridwidth and gridheight example	535
	– GridBagConstraints.REMAINDER	538
	– fill	539
	– fill example	540
	– anchor	541
	– anchor examples	542
	– insets	544
	– insets example	545
	– ipadx and ipady	546
	– ipadx and ipady example	547
	– weightx and weighty	548
	– Final example	552
Twenty Six	JTable	558
	– Introduction	559
	– JTable Example	560
	– Default Settings	563
	– setPreferredSize() and setMinimumSize()	564
	– java.lang.ArrayIndexOutOfBoundsException	565
	– Problems with the TableColumnModel	566
	– Adding to a JPanel	567
	– Using DefaultTableModel()	568
	– Using addColumn()	569

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
	– setAutoCreateColumnsFromModel()	571
	– Changing the Width of Columns	572
	– setResizable()	574
	– Some Methods for JTable	575
	– Moving Columns Programmatically	576
	– Moving Rows Programmatically	577
	– Setting the Selection Mode	578
	– isCellEditable()	581
	– Accessing Cells	583
	– Determining the Current Cell	584
	– ListSelectionListener	585
	– ListSelectionListener Example	586
	– TableModelListener	590
	– TableModelListener Example	592
	– <i>Exercise Sixteen</i>	595
Twenty Seven	Mouse Double Click	598
	– Introduction	599
	– Double Click Example	600
Twenty Eight	JTree	602
	– Introduction	603
	– JTree Example	604
	– Populating a JTree (Top to Bottom)	606
	– Expand()	609
	– Populating a JTree (Bottom to Top)	610
	– Populating a JTree with more levels	611
	– TreeExpansionListener	613
	– getLastSelectedPathComponent()	614
	– TreeSelectionListener	615
	– Customising the JTree	616
Twenty Nine	CardLayouts	618
	– Introduction	619
	– CardLayout Example	620
	– <i>Exercise Seventeen</i>	624
Thirty	More Containers	629
	– Introduction	630
	– JSplitPane	631
	– setDividerLocation() with JSplitPane	635
	– Using setResizeWeight with JSplitPane	636
	– JSplitPanes within JSplitPanes	637
	– JTabbedPane	639
	– JTabbedPane Example	641
	– Using addTab() with JTabbedPane	643
	– Inserting Tabs into a JTabbedPane	646
	– Removing Tabs in JTabbedPane	647
	– Positioning the Tabs	648
	– setTabLayoutPolicy for JTabbedPane	651
	– setMnemonic() with Tabs	653
	– Some Methods for JTabbedPane	654
	– ChangeListener with JTabbedPane	658
Thirty One	More Frames	660
	– JInternalFrame	661
	– Using LAF with JInternalFrame	663
	– JInternalFrame Behaviour	664
	– Some JInternalFrame Methods	667
	– Adding Components to JInternalFrame	668
	– setJMenuBar() for JInternalFrame	669

Java 14 Swing with Eclipse 2020-03 Index

Section	Title	Page
	- InternalFrameListener	670
	- isVisible() with JInternalFrame	672
	- JLayeredPane	673
	- JLayeredPane Example	677
	- Layouts in JLayeredPane	679
	- More methods for JLayeredPane	680
	- JDesktopPane	683
	- showInternalMessageDialog	684
	- showInternalConfirmDialog	687
	- <i>Exercise Eighteen</i>	692
Thirty Two	JWindow	694
	- Using JWindow	695
Thirty Three	Swing Timers and Progress Bars	697
	- Introduction	698
	- Methods for Swing Timers	701
	- Timers and Coalesce	703
	- JProgressBar	704
	- JProgressBar Example	705
	- JProgressBar Methods	707
	- Displaying text in the JProgressBar	708
	- JProgressBar Orientation	710
	- JProgressBar and ChangeListener	711
	- Using Threads to create a Splash screen	712
	- Cursors	714
	- Scope of Cursors	717
	- Creating a Custom Cursor	718
Thirty Four	System Tray	719
	- Introduction	720
	- System Tray Example	722
Thirty Five	Java Built-in Choosers	725
	- JColorChooser	726
	- ChangeListener	732
	- setPreviewPanel()	735
	- Using setColor()	736
	- Using AbstractColorChooserPanel	737
	- JFileChooser	739
	- setFileSelectionMode()	744
	- setControlButtonsAreShown()	746
	- FileFilter	747
	- setAcceptAllFileFilterUsed()	749
	- addChoosableFileFilter	750
	- Some Methods for JFileChooser	751
	- ActionListener with JFileChooser	752
	- <i>Exercise Nineteen</i>	755