

Struts and Enterprise Web Technologies	1
Technology Stew	1
JavaServer Pages	2
Servlets	3
Custom Tag Libraries	3
XML	4
Web and Application Servers	4
Model-View-Controller	5
General Flow	6
The Model	7
The View	7
The Controller	7
Application Model	7
Introduction to Struts 1.1	8
Moving On	9
Framework Components Overview.....	11
Controlling Flow with the ActionServlet Component.....	11
Working with the Model Components	12
org.apache.struts.action.ActionMapping	13
org.apache.struts.action.Action	15
org.apache.struts.action.ActionForward	15
org.apache.struts.action.ActionError	16
org.apache.struts.action.ActionMessage	17
View Components	18
org.apache.struts.action.ActionForm	18
Summary	19
Struts Development Plan	21
The Premise	21
Identify the Applicability	22
Ten-Step Development Program	23
Gather and Define the Application Requirements	23
Define and Develop Each Screen Requirement.....	24
Determine All the Access Paths for Each Screen.....	25
Define the ActionMappings	26
Create the ActionForms.....	26
Develop Actions.....	26
Develop the Application Business Logic	27
Create JSPs	27
Build the Appropriate Configuration Files	28
Build, Test, Deploy	29

Summary	29
Creating and Building Actions	31
Creating an Action	32
Execute Method	33
Execution Steps in Execute	35
When Bad Things Happen to Good Actions	38
ActionErrors	38
Declarative Exception Handling	39
Handling Tokens	41
Design Rules of Thumb	42
Summary	43
Creating and Building ActionForms	45
Defining ActionForms	46
ActionForm validate() method	48
ActionForm reset() Method	49
Design Rules of Thumb	50
Wizards, and We re Not Talking Oz	51
Other Wizard Variations	56
DynaActionForms	57
Summary	58
Configuring Struts	59
Web.xml	59
Using Subapplications	60
Other Initialization Parameters	62
Defining the Servlet Mapping	63
The Welcome File List	64
Defining the Custom Tag Libraries	65
Other Elements	66
Struts-con.g.xml	66
Defining Data Sources	66
Defining Form Beans	67
Defining Global Forwards	67
Defining Action Mappings	68
Action Attributes	69
Controller Con.guration	71
Defining a PlugIn	73
Summary	74
Building Struts-Enabled JSPs	75
Setting Up a JSP	76

Making Tags Available	76
Taglib Definitions	77
Summary	78
Working with the Struts Custom Tag Libraries	79
When Tags Throw Exceptions	80
Using Property Referencing	80
Using the Struts-html Tag Library	81
Using and Accessing Form-Related Tags	82
Working with Errors and Messages	84
Completed Sample	85
Using the Struts-bean Tag Library	88
Using Bean Tags	89
Using the Struts-logic Tag Library	91
Value Comparisons	92
Substring Matching	93
Presentation Location	93
Collection Manipulation	94
Using the Struts-nested Tag Library	97
Using the Struts-template Tags	100
Creating Pages with Template Structure	101
Summary	103
Internationalizing Your Struts Application	105
However You Say It: Hello, Bon Jour, Hola, Ni Hao	105
UTF-8	106
Locales	106
PropertyResourceBundles	107
Formatted Messages	109
The MessageResources Class	110
Summary	110
Configuring, Testing, and Rolling out Your Application...	111
The WAR File	111
Setting Up the WAR Layout	112
Building to Deploy	113
Jar Files	113
The Struts.jar File	114
Using Logging for Debugging	114
Unit Testing	116
Maintaining Your Application	118
Keeping Up with the Joneses	118

Summary	119
Additional Useful Struts Packages and Extensions.....	121
Tiles	121
Validator	122
Uploading Files	123
Commons Utilities.....	123
Bean Utilities	123
Collection Utilities	123
Digester	124
Workflow.....	125
Other Items of Interest	125
Summary	126
Closing Thoughts	126
Appendix A Struts 1.1 UML Diagram	127
Appendix B Web Resources	129
B.1 Development Tools	129
B.2 Design Patterns	129
B.3 EJB.....	129
B.4 JavaBeans	130
B.5 JSP/Servlets.....	130
B.6 Helpful Tools and Resources	130
B.7 I18N	131
B.8 Logging and Testing	131
B.9 MVC	131
B.10 Sample Application	131
B.11 Struts Extensions	131
B.12 Struts Mailing List	132
B.13 UML.....	132
B.14 Upcoming Technologies.....	132
B.15 XML	132
Index	133