

Help for Server-Side Java Developers

2nd Edition
Covers 2.2 & 2.3 Draft



Java[™] Servlet Programming

O'REILLY[®]

Jason Hunter
with William Crawford

Table of Contents

<i>Preface</i>	<i>xi</i>
1. Introduction	1
History of Web Applications	1
Support for Servlets	7
The Power of Servlets	11
2. HTTP Servlet Basics	14
HTTP Basics	15
The Servlet API	17
Page Generation	19
Web Applications	27
Moving On	34
3. The Servlet Lifecycle	35
The Servlet Alternative	35
Servlet Reloading	42
Init and Destroy	43
Single-Thread Model	50
Background Processing	53
Load on Startup	56
Client-Side Caching	57
Server-Side Caching	60

4. Retrieving Information	72
The Servlet	74
The Server	76
The Client	86
5. Sending HTML Information	129
The Structure of a Response	129
Sending a Normal Response	130
Using Persistent Connections	132
Response Buffering	133
Status Codes	136
HTTP Headers	139
When Things Go Wrong	146
Six Ways to Skin a Servlet Cat	159
6. Sending Multimedia Content	163
WAP and WML	163
Images	174
Compressed Content	193
Server Push	196
7. Session Tracking	200
User Authentication	201
Hidden Form Fields	202
URL Rewriting	205
Persistent Cookies	207
The Session Tracking API	212
8. Security	230
HTTP Authentication	231
Form-Based Authentication	238
Custom Authentication	242
Digital Certificates	250
Secure Sockets Layer (SSL)	252

9. Database Connectivity	261
Relational Databases	263
The JDBC API	265
Reusing Database Objects	280
Transactions	282
A Guestbook Servlet	292
Advanced JDBC Techniques	297
Beyond the Core	301
10. Applet-Servlet Communication	303
Communication Options	303
Daytime Server	310
Chat Server	346
11. Servlet Collaboration	366
Sharing Information	366
Sharing Control	370
12. Enterprise Servlets and J2EE	380
Distributing Load	381
Integrating with J2EE	384
13. Internationalization	391
Western European Languages	392
Conforming to Local Customs	395
Non-Western European Languages	397
Multiple Languages	402
Dynamic Language Negotiation	406
HTML Forms	416
14. The Tea Framework	422
The Tea Language	423
Getting Started	424
Request Information	426
Tea Administration	429
Tea Applications	434

A Tool Application	440
Final Words	451
15. WebMacro	453
The WebMacro Framework	454
Installing WebMacro	458
WebMacro Directives	464
WebMacro Templates	467
A Tool Application	472
Filters	478
16. Element Construction Set	480
Page Components as Objects	480
Displaying a Result Set	482
17. XMLC	494
A Simple XML Compile	495
The Manipulation Class	501
A Tool Application	506
18. JavaServer Pages	514
Using JavaServer Pages	515
Behind the Scenes	516
Expressions and Declarations	519
Directives	521
JSP and JavaBeans	526
Includes and Forwards	531
A Tool Application	533
Custom Tag Libraries	538
19. Odds and Ends	544
Parsing Parameters	544
Sending Email	550
Using Regular Expressions	553
Executing Programs	557
Using Native Methods	562

Acting as an RMI Client	563
Debugging	565
Performance Tuning	573
20. <i>What's New in the Servlet 2.3 API</i>	576
Changes in the Servlet API 2.3	576
Conclusion	591
A. <i>Servlet API Quick Reference</i>	593
B. <i>HTTP Servlet API Quick Reference</i>	624
C. <i>Deployment Descriptor DTD Reference</i>	653
D. <i>HTTP Status Codes</i>	685
E. <i>Character Entities</i>	692
F. <i>Charsets</i>	698
<i>Index</i>	701