I dedicate this book to my son (Ali), my daughter (Nada), my beautiful wife (Naglaa), and the wonderful JSF and Java EE community.

—Hazem Saleh

For my beautiful wife (Sau Kibuka), my son (Nikholai Mukalazi), and my daughter (Mackenzie Ndiga).

—Allan Lykke Christensen

For my daughter, Eva.

—Zubin Wadia
Contents at a Glance

About the Authors ........................................................................................................................................... xiii
About the Technical Reviewer ........................................................................................................................... xv
Introduction ...................................................................................................................................................... xvii

■ Chapter 1: JSF Introduction ........................................................................................................................... 1
■ Chapter 2: JSF Under the Hood—Part 1 ........................................................................................................ 29
■ Chapter 3: JSF Under the Hood—Part 2 ........................................................................................................ 63
■ Chapter 4: JSF Under the Hood—Part 3 ........................................................................................................ 93
■ Chapter 5: JSF 2.2: What’s New? .................................................................................................................. 123
■ Chapter 6: Going Deep: JSF Custom Components ....................................................................................... 145
■ Chapter 7: Basic JSF2 HTML5 Components ................................................................................................. 167
■ Chapter 8: Advanced JSF2 HTML5 Components ......................................................................................... 191
■ Chapter 9: JSF Component Libraries .......................................................................................................... 215
■ Chapter 10: Creating a Basic JSF 2.2 Application ....................................................................................... 241
■ Chapter 11: JSF2 Advanced Topics ............................................................................................................... 267
■ Chapter 12: JSF2 Security and Performance ............................................................................................... 289
■ Chapter 13: Applying It All: The Mega App ................................................................................................. 307

Index ............................................................................................................................................................... 385
Contents

About the Authors .................................................................................................................. xiii
About the Technical Reviewer ............................................................................................... xv
Introduction ............................................................................................................................ xvii

Chapter 1: JSF Introduction .................................................................................................. 1
  What Is JSF? ......................................................................................................................... 1
  JSF Evolution: 1.0–2.2 ......................................................................................................... 3
  JSF Architecture ................................................................................................................ 5
  Developing Your First JSF Application ............................................................................. 6
    Required Software ............................................................................................................. 6
    Developing the firstApplication ...................................................................................... 7
    Building and deploying the firstApplication ................................................................ 19

JSF Life Cycle ........................................................................................................................ 20
  Restore View ....................................................................................................................... 21
  Apply Request Values ....................................................................................................... 23
  Process Validations .......................................................................................................... 24
  Update Model Values ....................................................................................................... 24
  Invoke Application ............................................................................................................ 25
  Render Response .............................................................................................................. 26
  The Immediate Attribute ................................................................................................. 26

Summary ................................................................................................................................. 28
## Chapter 2: JSF Under the Hood—Part 1 ................................................................. 29

### Managed Beans
- Declaring Managed Beans ................................................................. 29
- Initializing Managed Beans ............................................................... 31
- Managing Managed Beans Dependency ............................................. 34
- Accessing Managed Beans from Java Code ......................................... 36
- @Named and @inject Annotations ....................................................... 36

### Expression Language ................................................................. 37
- Unified Expression Language ............................................................ 38
- Value Expression ............................................................................... 40
- Method Expression ........................................................................... 42
- The Flash Scope ................................................................................ 46

### Navigation .................................................................................... 51
- Implicit Navigation ............................................................................ 51
- Rule-Based Navigation ..................................................................... 52
- Advanced Navigation ....................................................................... 55

### Exception Handling ................................................................. 58

### Summary ...................................................................................... 61

## Chapter 3: JSF Under the Hood—Part 2 .................................................. 63

### Conversion and Validation in the JSF LifeCycle .................................. 63

### Conversion ..................................................................................... 64
- Converter Interface ........................................................................... 64
- Standard JSF Converters ................................................................. 66
- Building Custom JSF Converter ....................................................... 70

### Validation ...................................................................................... 74
- Validator Interface ............................................................................ 75
- Standard JSF Validators ................................................................... 76
- Building Custom JSF Validator ....................................................... 77
- JSR 303 Bean Validation with JSF ................................................... 80
Overriding Standard Messages ................................................................. 88
Summary ........................................................................................................... 92

Chapter 4: JSF Under the Hood—Part 3 .......................................................... 93
JSF Events ........................................................................................................ 93
  Faces Events ................................................................................................ 96
  Phase Events ............................................................................................... 107
  System Events ............................................................................................ 110
View Parameters ............................................................................................ 117
Summary ........................................................................................................... 122

Chapter 5: JSF 2.2: What’s New? ................................................................. 123
Big Ticket Features ......................................................................................... 123
  HTML5-Friendly Markup ........................................................................... 124
  Resource Library Contracts ...................................................................... 127
  Faces Flows ............................................................................................... 132
  Stateless Views ......................................................................................... 136
Other Significant Changes ............................................................................. 137
  UIData supports the Collection Interface rather than List......................... 137
  WAI-ARIA support .................................................................................. 137
  <f:viewAction /> ...................................................................................... 138
  File Upload ............................................................................................... 140
  Ajax request delay ................................................................................... 142
  New XML namespaces ............................................................................. 142
Backwards Compatibility .............................................................................. 143
Summary ........................................................................................................... 143

Chapter 6: Going Deep: JSF Custom Components ...................................... 145
Understanding the JSF Component Architecture ........................................ 145
The RandomText Custom Component ....................................................... 146
  Step 1—Create the Component Model and Logic ..................................... 147
  Step 2—Creating the Custom Component ............................................... 150
  Step 3—Create a Custom Renderer Class .................................................. 156
CONTENTS

Step 4—Create a Tag Library Descriptor ................................................................. 158
Example of using the RandomText component .................................................. 161
Packaging Components ......................................................................................... 166
Summary .................................................................................................................. 166

Chapter 7: Basic JSF2 HTML5 Components ............................................................ 167
Input Color Custom Component ............................................................................. 168
  Creating the Composite Component ................................................................. 169
  Using the Composite Component ...................................................................... 169
  Supporting Lists ................................................................................................... 171
  Ajax-enabling the Component ............................................................................ 172
  Fallback for Unsupported Browsers ..................................................................... 174
Input Date Picker Custom Component ................................................................. 176
  Creating the Composite Component ................................................................. 177
  Creating a Backing Bean for the Composite Component .................................... 178
  Using the Composite Component ...................................................................... 180
  Fallback for Unsupported Browsers ..................................................................... 182
Slider Custom Component ..................................................................................... 184
  Creating the Composite Component ................................................................. 185
  Using the Composite Component ...................................................................... 186
Spinner Custom Component ................................................................................... 187
  Creating the Composite Component ................................................................. 188
  Using the Composite Component ...................................................................... 189
Summary .................................................................................................................. 190

Chapter 8: Advanced JSF2 HTML5 Components .................................................. 191
Media Component .................................................................................................. 191
  Media Elements Introduced in HTML5 ............................................................... 191
  Creating the JSF Media Component ................................................................... 195
Progress Bar Component ....................................................................................... 208
Summary .................................................................................................................. 214
Chapter 9: JSF Component Libraries ................................................................. 215
PrimeFaces ........................................................................................................ 215
    Component Overview .............................................................................. 216
    Integrating and Customizing PrimeFaces .............................................. 221
RichFaces ........................................................................................................ 226
    Component Overview .............................................................................. 229
    Integrating and Customizing RichFaces ................................................. 233
Summary ........................................................................................................... 240

Chapter 10: Creating a Basic JSF 2.2 Application ............................................. 241
Structuring Weather Application ................................................................... 241
Constructing JSF Pages ............................................................................... 245
Leveraging Faces Flow ................................................................................ 254
Composing Managed Beans (JPA Entity Beans) ............................................ 260
Application Back End (EJB 3.2 + JPA 2.1) .................................................. 263
Summary ........................................................................................................... 266

Chapter 11: JSF2 Advanced Topics ................................................................ 267
Design Considerations for JSF Applications ................................................. 267
    Minimizing Use of Session-Scope ......................................................... 267
    Container-Managed Security ................................................................. 268
    State Saving ......................................................................................... 270
    Contexts and Dependency Injection (CDI) .............................................. 271
Ajaxifying JSF Applications .......................................................................... 272
    Using the <f:ajax> tag ........................................................................ 272
    Using the JavaScript API ...................................................................... 273
Testing JSF Applications ............................................................................ 278
    What Is Arquillian? ............................................................................. 279
    Setting Up Arquillian and Drone .......................................................... 279
    Writing Tests Using Arquillian and Drone ............................................ 282
Summary ........................................................................................................... 287
# Chapter 12: JSF2 Security and Performance

JSF Application Security ................................................................. 289
  Authentication ................................................................. 290
  Authorization ................................................................. 291
  Data Protection ................................................................. 293
  Applying Managed Security in the Weather Application ................. 293

JSF Application Performance ............................................................. 300
  Refresh Period ................................................................. 300
  Skip Comments ................................................................. 300
  Project Stage ................................................................. 301
  State Saving Method .......................................................... 301
  Response Buffer ................................................................. 301
  Number of Views in a Session .................................................. 302
  Apache MyFaces Specific Tuning ............................................. 303
  Stateless JSF ................................................................. 304
  Best Practices ................................................................. 305

Summary ................................................................. 305

# Chapter 13: Applying It All: The Mega App

Mega App Specification ................................................................. 307

Mega App Wireframes ................................................................. 309

Mega App Architecture ................................................................. 315

Constructing Data Model ............................................................. 317

Constructing Service Layer (EJBs) ............................................... 320

Composing Page Templates .......................................................... 347

Composing JSF Pages and Backing Beans ......................................... 351

Applying Security ................................................................. 377

Error Handling ................................................................. 380

Composing JSF Components .......................................................... 380

Packaging and Deploying the Mega App ........................................... 382

Summary ................................................................. 384

Index ................................................................. 385
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This book is an ideal resource for Java developers intending to build sophisticated, enterprise-grade web experiences with HTML5-enabled JSF. Java web developers today have an unprecedented variety of libraries, frameworks, and components available for creating rich and meaningful applications. The result is an ecosystem that delivers incredible productivity at an individual level.

That being said, most software is built in team environments with shared code bases, multiple service endpoints, complex views, and diverse functional areas. A multitude of choices can end up being counterproductive in team environments, resulting in the accrual of technical debt and multiple implementation patterns for similar use-cases. Component-based frameworks like JavaServer Faces (JSF) are designed to curb such behavior in team environments, while still giving developers latitude to customize when a use-case requires it.

In Pro JSF and HTML5 we show you how to leverage the full potential of JSF, a server-side component-oriented Java web framework that sets the standard for developer team productivity. It offers developers a rich array of standard and third-party interface components that can be used to compose complex views in an intuitive, reusable, and repeatable way. The latest standard, JSF 2.2, allows HTML5-enabled components to be used in the composition of views. We demonstrate how a developer can couple the power and expressivity of HTML5 with the discipline and repeatability of JSF components to deliver rich user experiences.

This book provides solid coverage for foundational and advanced topics of JavaServer Faces (especially JSF 2.2). The first four chapters cover the JSF life cycle, architecture, managed beans and integration with CDI (Context and Dependency Injection), expression language, exception handling, conversion and validation, JSF events (Faces events, Phase events, and System events), and view parameters. Chapter 5 covers the new features of JSF 2.2, such as faces flow, resource library contracts, HTML5 friendly markup, and Ajax file uploading.

Chapters 6, 7, and 8 detail the process of creating HTML5-enabled components in the JSF 2.2 world with a number of interactive examples. Chapter 9 covers the basics of two popular JSF component libraries (PrimeFaces and RichFaces) with two interactive examples.

In Chapter 10, a basic JSF 2.2 application is developed that utilizes Java EE 7 technologies (CDI, JPA 2.1, and EJB 3.2) in order to facilitate bean management, transaction management, and persistence in the JSF application. Chapter 11 covers JSF advanced topics such as application design considerations, unit testing, and Ajax queuing.

Chapter 12 covers important topics relating to JSF application security including authentication, authorization, and data protection. The chapter shows how to apply container-managed security in an example application. Chapter 12 also covers JSF performance considerations to help ensure that your applications run smoothly and responsively.

Finally, Chapter 13 gathers most of the topics covered in the book and puts them into practice in the form of an advanced application that implements real-world use-cases.

We want this book to serve as a progressive guide to the component-oriented framework beginner, and as a reference for the seasoned JSF developer who is looking to maximize JSF 2.2’s significantly upgraded capabilities. We wish you happy reading and productive coding!