Building JSF Applications
Architecting JSF Based Web Applications for the Real World

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Agenda

- JSF Overview
  - Patterns & Architecture of JSF
  - JSF Request/Response Lifecycle
  - Components

- Separation of Concerns
  - JSF User Interface
  - Services
  - Connecting
What Is JSF?

- Standard Web Application Framework
  - Defines the Programming Model
  - Reusable Components
  - Builds HTML from Components
  - Validation & Conversion
  - Component Tree
Goals of JSF

- Ease/Simplify Development
- Support from/by tools
- Events easily tied to server side code
- Ease of extension
- Manage UI state
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Patterns & Architecture of JSF

- Model-View-Controller
- Composite Component Tree
- Server Side Events
Standard MVC

- Major Benefits
  - Separation of Concerns
  - Loose coupling
- Won’t work on the web
  - Browsers don’t listen to server events
  - What objects would observe models?
- So what to do to get the benefits?
Enter JSF Web MVC
JSF Provides Web MVC

- Controller
  - FacesServlet
  - LifeCycle
  - Application
  - NavigationHandler
  - ActionListener
  - Conversion and Validation
JSF Provides Web MVC

- View
  - RenderKit
  - Renderers

- Model
  - JavaBeans
  - EJB’s

- Extension Points
  - View & Controller are extensible
Typical Implementation
Composite Component Tree

- Client view is simple
  - Whole tree looks like one
- Implementation
  - Simplified
Server Side Events

- Events are cued & consumed server side
  - Typically from user actions (button clicks, *etc.*)
  - Possible to add programatically

- Observer Pattern
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JSF Request/Response Lifecycle

- Restore View
- Apply Request Values
- Process Validations
- Update Model Values
- Invoke Application
- Render Response
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UIComponent

- Hub of the framework
- Typically Delegate
  - Rendering
  - Validating
  - Converting
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Running Example

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Full Story...

U.S. stocks slide under pressure from technology
Technology weakness pressured Wall Street Monday following a Merrill Lynch downgrade of the semiconductor sector that included chip giant Intel Corp.
Full Story...
UIComponent Instances
Implementation
To the Code!