FORM OF TRAINING | MATERIALS | PRICE | DURATION
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Traditional | Hardcopy | 1150 EUR | 5 days
Traditional | CTAB Tablet | 1250 EUR | 5 days
Distance learning | Hardcopy | 1150 EUR | 5 days
Distance learning | CTAB Tablet | 1150 EUR | 5 days

LOCATIONS

Krakow - 5 Tatarska Street, II floor, hours: 9:00 am - 4:00 pm
Warsaw - 17 Bielska Street, hours: 9:00 am - 4:00 pm

TRAINING GOALS:

Version 2.0

This comprehensive course shows Java programmers how to build web applications with JavaServer Faces 2.0. We develop the best-practice concepts that are formalized by the JSF architecture, from model/view/controller to the UI component framework and request-handling lifecycle. Students start to discover that there is a "JSF way" of doing things, and we learn not just APIs and tag libraries but the habit of slicing application logic into its most reusable forms: managed beans, event listeners, converters, validators, and more.

Students acquire a firm command of JSF development, learning to work with JSF's list and table components, building reusable composite components, and building Ajax applications. Simple, high-level Ajax functionality is covered, and students also work more directly with JSF's JavaScript API and resource-management framework.

CONCEPT:

- Chapter 1. Overview
  - Java EE and Web Applications
  - Perspectives: Servlets and JSP
  - Perspectives: MVC Frameworks
  - Perspectives: AWT and JFC
  - JSF Value Proposition
  - JSF Configuration
Issues with JSP and JSF

Facelets

Chapter 2. Lifecycle
  - The JSF Request/Response Cycle
  - Lifecycle Phases
  - Phase Listeners
  - The FacesContext Class
  - Who Does What
  - Partial Request Cycles

Chapter 3. UI Components
  - The UIComponent Class
  - Behavioral Interfaces
  - The Core and HTML Tag Libraries
  - Relationship to CSS
  - ID, Client ID, and Label
  - UISelectItem(s)
  - Navigating the UI Tree
  - The binding Attribute

Chapter 4. Page Navigation
  - View Selection
  - Navigation Rules
  - Implicit Navigation
  - Problems with POSTback
  - Post/Redirect/Get
  - Support for HTTP GET
  - Conditional Navigation

Chapter 5. Managed Beans
  - JavaBeans and JSF
  - Backing Beans
  - Configuring Managed Beans
  - @ManagedBean and Related Annotations
  - The Unified Expression Language
  - Value and Method Expressions
  - Implicit Objects

Chapter 6. Scopes
  - Managed-Bean Scopes
○ Lifecycle Annotations
○ View Parameters
○ The Flash

○ Chapter 7. Dependency Injection
  ○ Managed Properties
  ○ Values, Lists, and Maps
  ○ Using Dynamic Expressions
  ○ Dependencies and Bean Scopes
  ○ The @ManagedProperty Annotation

○ Chapter 8. Facelets
  ○ Migrating from JSP
  ○ View Definition Languages
  ○ Facelets
  ○ Tag Libraries
  ○ Writing and Using Custom Tags

○ Chapter 9. Events and Listeners
  ○ JSF Event Model
  ○ Event Types and Timing
  ○ Event Queueing
  ○ ActionEvent and ActionListener
  ○ Action Methods
  ○ Connecting Controllers to Beans
  ○ ValueChangeEvent and ValueChangeListener
  ○ Deferring Event Processing
  ○ Limitations of FacesListeners

○ Chapter 10. Lists and Tables
  ○ Working with Collections
  ○ Why We Don't Use
  ○ vs.
  ○ Defining Columns and Facets
  ○ One Command Per Row
  ○ Reading the Row Number
  ○ Pseudo-Maps
  ○ Working with Persistent Data
  ○ Concurrency and Caching
  ○ Limiting the Scope of Queries
- Paging

- Chapter 11. Converters
  - The Converter Interface
  - Life of a Datum
  - Standard Converters
  - Custom Converters
  - The @FacesConverter Annotation
  - Timing of Conversion
  - Representing Persistent Objects by ID

- Chapter 12. Validators
  - The Validator Interface
  - Standard Validators
  - Using Regular Expressions
  - Producing Error Messages
  - Message Keys
  - Presenting Error Messages
  - Posting Error Messages from Anywhere
  - Custom Validators
  - The @FacesValidator Annotation
  - Validating Multiple Inputs
  - JSR-303 Support: "Bean Validation"

- Chapter 13. Resources
  - Resource Libraries
  - Deploying Images, Scripts, and Stylesheets
  - Addressing Resources

- Chapter 14. Composites
  - Limitations of Custom Tags
  - Composite Components
  - Encapsulation
  - Deploying and Using Composites
  - Interface and Implementation
  - Impact on the UI Tree
  - Attributes
  - Retargeting

- Chapter 15. Ajax
  - What is Ajax?
- The XMLHttpRequest Object
- Ajax and the JSF Lifecycle
- Using
  - `execute` and `render` Attributes
  - Ajax Listeners
- Chapter 16. The JSF JavaScript API
  - The JSF JavaScript API
  - Triggering Ajax Requests
  - Refining with Callbacks
  - `onEvent` and `onerror` Attributes
  - The Ajax Request/Response Process
  - Using Hidden Inputs
  - Other JavaScript Functions

**REQUIREMENTS:**

**General note:** This course is intended primarily for experienced **Java application developers**. Page authors, component developers, and others who may have little or no Java experience (but perhaps are stronger on **HTML**, **JavaScript**, and **JSP**) may well find this to be a valuable training experience, though without solid Java skills many of the coding exercises will be difficult to follow.

- **Java programming** experience is essential to understanding the JSF API as presented here - Course 103 is excellent preparation.
- General understanding of servlets and **JSP** is recommended, but not required - consider courses Course 110 and Course 112.
- Basic knowledge of XML will be helpful, as will any previous experience with HTML.

**Difficulty level**

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**CERTIFICATE:**

The participants will obtain certificates signed by Capstone Courseware.

**TRAINER:**

Authorized Capstone Courseware Trainer.