Glassfish, PrimeFaces. Building Applications for the Java Enterprise Edition (code: PRIMEFACES-GLASSFISH)

Ask for details
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Overview

At the end of the course participants will be able to build and deploy enterprise web applications based on the *Java Enterprise Edition 6*. The course strives to be vendor-neutral, so instead of proprietary tools only the official Java EE 6 SDK will be used (comprising of Netbeans IDE and Glassfish server.)

The training covers the three layers of a typical enterprise application:

- domain model, mapped to a relational database,
- services implementing the business logic,
- rich user interface available via web.

Parts of the application are built with three fundamental and a number of supporting technologies:

- EJB 3.1 (**Enterprise Java Beans**),
- JSF 2.1 (**JavaServer Faces**),
- JPA 2 (**Java Persistence Architecture**).
- EL, JSR-303, JTA, JNDI, CDI.

Knowledge acquired during the training can be applied in any standard Java EE 6 environment, using not only Glassfish, but also JBoss AE, Weblogic, Websphere, TomEE, Resin and any other EE6 certified application server. Also, in addition to Primefaces, any other component suite can be used, such as IceFaces, RichFaces

Duration

4 days

Agenda

1. High-level overview of the Java EE6 ecosystem, implementations and vendors:
   - common architecture of EE6-style enterprise applications;
   - essential patterns and good practices.
2. Domain model and the database layer - *Java Persistence Architecture 2*:
   - basic mappings and relations, life cycle of an entity;
   - complex mappings: inheritance, composition, uni- and bidirectional relations;
   - surrogate and natural primary keys, multicolumn keys, implied values;
   - JPQL queries;
   - typed queries: *Criteria API*;
   - collections of simple and embeddable types, ordering collections;
   - validation using *Bean Validation*:
     - built-in validators,
     - custom validators.
3. The service layer:
   - resources and the JNDI tree: *java:comp/env*, *java:global/env*, *java:app/env*;
   - EJB 3.1: stateless and stateful session beans;
   - remote, local and no-interface views, remote calls and argument passing;
   - desktop applications as remote EJB clients;
   - services using JPA, persistence context propagation;

- *Container Managed Transactions* and *Application Managed Transactions*;
- asynchronous calls, scheduling;
- CDI: managed beans, factories, dependency injection, events;
- coexistence of CDI and EJB beans;
- basic SOAP service with JAXB mapping;
- basic RESTful service (using JSON and XML).

4. The presentation layer: JavaServer Faces 2.1:
   - *Facelets*: syntax, components, templates;
   - *Expression Language*, deferred expresions;
   - *Managed Beans*, scopes;
   - Components (inputs, selects, panels, iterators);
   - integration with JSR-303;
   - JSF life cycle: building and restoring view, conversion, validation, actions, using *FacesContext*;
   - collections and the usual problems;
   - Using Ajax, with and without writing Javascript;
   - common patterns and pitfalls, solutions to typical problems, using OmniFaces utilities:
     - dependent inputs,
     - master/detail views,
     - paging large sets of data,
     - cross-component validation,
     - bookmarkable URLs,
     - custom converters for use in UISelectOne.

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Target audience and prerequisites

Participants should know the basics of HTML and SQL. Deeper knowledge of other web technologies and platforms is an advantage.

Good command of the Java language is required, participants are expected to write programs featuring classes, methods and attributes, enumerations, collections, operations on strings and numbers. However, knowledge of algorithms or design patterns is not necessary.

Certificates

Course participants receive completion certificates signed by ALX.

Locations

- Warsaw (English) – Jasna 14/16A
- Online (English) – your home, office or wherever you want
- any other location (London, UK, EU) on request

Price

1240 EUR

The price includes:

- course materials,
- snacks, coffee, tea and soft drinks,
- course completion certificate,
- one-time consultation with the instructor after course completion.