

# Java Enterprise Web Development with Spring and JavaServer Faces (code: SPRING-JSF)

## Overview

Mature technologies such as Spring, Hibernate and JavaServer Faces are cornerstones of many an enterprise system.

The four-day training covers all the technologies required to build advanced, modern web applications using Spring. Participants will be able to create solutions integrating database layer, business logic and web presentation tier.

In addition to the functional but devoid of eye-candy controls provided by the standard JSF library, participants will be using rich components from the Primefaces component suite.

## Duration

4 days

## Agenda

1. 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.
2. Introduction to Spring 3
  - Installation and configuration of Spring and the associated pitfalls;
  - Spring dependencies;
  - Supported types of dependency injection: setter, constructor, getter;
  - Configuration using XML files and tagged factories;
  - Design patterns often used in Spring applications (Facade, DAO, Application Service, Business Delegate);
  - Aspect oriented programming;
  - Transactions;
  - Creating Spring database applications using SQL;
  - Creating Spring database applications using Hibernate / JPA;
  - Weavers in an SE and EE.
3. The basic Spring integration with servlet (web) environment
  - Spring and JavaServer Faces;
  - Spring and Jersey (JAX-RS).
4. The presentation layer: JavaServer Faces 2.1:
  - *Facelets*: syntax, components, templates;
  - *Expression Language*, deferred expressions;
  - *Managed Beans*, scopes;
  - Components (inputs, selects, panels, iterators);
  - integration with JSR-303;

## Ask for details

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info@alx.training

- 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 using 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

- Online (English) – your home, office or wherever you want
- Warsaw (English) – Jasna 14/16A
- 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.