Developing Java Web Applications

Course: **00001**

Filter: **Beginner**

Duration: **3 days**

Category:: **Programming**

Price: **3000,00 €**

About Course

In this training course, you acquire the experience needed to implement high-performing, scalable, and secure transactional web-based applications, as well as gain an in-depth understanding of how to integrate JPA and EJB with modern web technologies, and how Java Enterprise Edition (Java EE) offers a simple and comprehensive approach to building state-of-the-art enterprise applications.

What you'll learn

- Build robust, data-driven web applications by integrating key components of Java EE
- Create dynamic, session-managed, data-driven web applications with servlets
- Build dynamic web page views with JSP
- Implement the MVC design pattern for Java web applications
- Configure listeners to initialize web sessions and applications

Pre-requisites

- Three to six months of Java programming experience
- You should have an understanding of Java classes and the inheritance model
- You should have the ability to use standard Java APIs
- Familiarity with intranet/internet development technologies, such as HTML, HTTP, and TCP/IP

Curriculum

Module 1: Web application development

- The requirements of a web application
- Components of an n-tier architecture

Module 2: Getting started with servlets

- Integrating servlets into the web application architecture.
- Configuring the servlet development environment
- Avoiding common servlet pitfalls

Module 3: Utilizing the Java Servlet API

- Servlet life cycle methods
- Accessing servlet environment variables

Module 4: Creating web-based forms for user input

- Adding text fields and drop-down lists
- Retrieving form data in the servlet

Module 5: Extending servlets with Java Database Connectivity

- Connecting to the database
- Submitting SQL statements
- Retrieving and processing data

Module 6: Formatting database results

- Constructing an HTML table
- Adding drill-down features

Module 7: Writing cookies to personalize web content

- Retrieving cookies from a client request
- Sending cookies to the client
- Circumventing cookie limitations

Module 8: Managing application state with sessions

- Creating a unique session for each user
- Storing and retrieving Java objects within sessions
- Controlling a session's life span
- Creating application and session event listeners
- Implementing a shopping cart

Module 9: Key components of Java EE for web development

- Servlets
- JSP
- XML

Module 10: JSP fundamentals

- Using JSP scriptlets, expressions and declarations
- Communicating with the client using built-in JSPserver objects
- Leveraging the JSP 2 Expression Language (EL)
- Accessing cookies and sessions
- Storing common application data

Module 11: Integrating JSP and JavaBeans

- Promoting object reuse
- Separating application logic from the presentation

Module 12: Calling JSP from servlets

- Forwarding Java objects to JSP
- Using JavaBeans to transfer data
- Servlet and JSP design patterns

Module 13: Leveraging the Tag Extension mechanism

- The role of JSP custom tags
- Applying the JSP Standard Tag Library (JSTL)

Module 14: Developing custom tags

- Creating custom tags with JSP 2 tag files
- Customizing tag behavior with attributes

Module 15: JSF framework overview

- Identifying the JSF core components
- Managing application flow using JSF navigation model

Module 16: Building JSF components

- Developing back beans
- Creating views with JSF custom tags