Java Web Component Developer (40 Hours)

(Exam code : 1z0-899 - Oracle Certified Expert Webcomponent Developer)

What will you learn ?

This Web Component Development With Servlet and JSP(TM) Technologies, Java EE6 course is designed for experienced developers of Java technology applications. You'll gain the knowledge and skills to quickly build web applications suited to any Java EE 6 application server using JSP and servlet technologies.

Course Objectives

- Write servlets using the Java programming language (Java servlets)
- Create robust web applications using MVC architecture, session management, filters, and database integration
- Write JSP pages
- Create easy to maintain view components using JSP pages, the Expression Language, and elements of the JSP Standard Tag Library (JSTL)
- Create secure web applications using the features of the Java EE web container

Required Prerequisites:

- Write Java technology applications, demonstrating significant programming ability
- Integrate existing Java code (for example, reuse existing classes created by other team members)
- Design Java technology applications
- Functionally describe the benefits of an n-tier architecture
- Java Programming Language, Java SE 6
- Developing Applications for the Java EE 6 Platform

Suggested Prerequisites:

- Write a web page using HTML
- Object-Oriented Analysis and Design Using UML

Learn To:

- Analyze, design, develop and deploy web applications with Java technologies.

- Construct and deploy small-to-medium scale web applications found in intranet and low-volume commercial sites.
- Engage in hands-on exercises with Java EE 6 technology.
- Use the Java EE 6 SDK and the Glassfish Application Server.
- Work with JavaServer Pages(TM) (JSP(TM) page) technology and servlets, the key web-tier technologies defined in the Java(TM) Platform, Enterprise Edition (Java EE platform).

Hands-On Lab Exercises

- Throughout this course, you'll perform lab exercises using the NetBeans (TM) Integrated Development Environment (IDE). It's an excellent way to prepare for the Oracle Certified Professional, Java Platform, Enterprise Edition 6 JavaServer Pages and Servlet Developer certification examinations.

Students Who Benefit from this Course

- Java Developers creating web components (such as servlets and custom tags).
- Java Developers preparing for the Oracle Certified Professional, Java Platform, Enterprise Edition 6 JavaServer Pages and Servlet Developer examination.

Course Topics

Introduction to Java Servlets

- Describe web applications, CGI, and the role of Java
- Describe benefits of Java servlet technology
- Create a simple Java Servlet
- Define three-tier architecture
- Define Model-View-Controller (MVC) architecture

Introduction to Java Server Pages

- Describe why Servlets are not the whole solution
- Describe essentials of JSPs
- Understand the fundamentals and reasons for MVC architecture

Implementing an MVC Design

- Code a controller using a servlet

- Code a view using a JSP
- Forward control from a servlet to a JSP
- Understand fundamentals of EL
- Implement a simple MVC system

The servlet's environment

- Understand more details of the HTTP protocol
- Understand fundamentals of HTML forms
- Understand fundamentals of the HttpServlet and related APIs
- Write code that manages client sessions and cookies

Container facilities for servlets and JSPs

- Understand the purpose and structure of deployment descriptors
- Control context root and servlet mapping
- Create and use context and init parameters
- Use annotations to configure servlets

More view facilities

- Understand the four data scopes
- Understand and use EL dot and array access operators with Java Beans, arrays, and collections
- Understand and use EL implicit objects
- Create and use arithmetic expressions in EL
- Identify the need for iteration and selection in the view, and use JSTL tags to address those needs

Developing JSP pages

- Understand the origins, benefits, and weaknesses of JSPs
- Describe JSP technology, the conversion of JSPs to servlets, and the lifecycle of JSPs
- Understand JSP scripting elements, declarations and directives
- Use JSP implicit variables
- Understand and use jsp: tags

Developing JSP pages using custom tags

- Relate the JSTL to common job roles in web application development and understand the use of tags in JSP development
- Recognize correct syntax for tags
- Configure a JSP to use tags from the JSTL
- Write JSP code using several standard tags
- List capabilities of JSTL tags

More Controller facilities

- Understand the servlet lifecycle
- Describe and use more advanced elements of the servlet APIs
- Create filters and use them in web applications
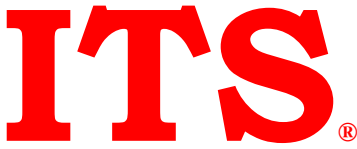
More options for the Model

- Understand the roles of JDBC and JPA
- Understand the many elements that make up the model
- Understand fundamentals of connecting to a database using JDBC or JPA

Asynchronous web applications

- Understand the interactions that are essential to asynchronous web pages
- Understand the role of AJAX-style client side programming
- Implement asynchronous servlets using the facilities of Java EE 6

Web application security

- Understand the role of the container in security
- Describe and implement four authentication models
- Force the use of encryption between a web application and the client browser
- Understand the role of JAAS in pluggable/extensible authentication for web applications

Exam Details

Exam No	Exam Name	Exam Objectives	Duration	No of Questions	Passing Score
1Z0-899	Java EE 6 Web Component Developer Certified Expert Exam This exam directly replaces exam 1Z0-894 Java Platform, Enterprise Edition 6 JavaServer Pages and Servlet Developer Certified Expert Exam.	**Objectives**	**120**	**57**	**61%**