Java Web Development - Servlets & JSP

Duration: 5 Days      Course Code: JVWD

Overview:
The Java Web Development - Servlets & JSP course introduces delegates to JEE 6 versions of these popular and extensively used aspects of the Java Enterprise Edition platform. It explains the design, development and deployment of web applications using these core Java technologies. Using a hands-on workshop approach, delegates learn the fundamentals of Java server side web development and understand those issues and approaches associated with these technologies.

Target Audience:
The Java Web Development - Servlets & JSP course is aimed at programmers who need to understand and program in the Java enterprise architecture.

Objectives:
- Write code to generate dynamic HTML pages
- Create web applications using Servlets
- Use tag libraries to develop Java Server Pages
- Investigate web applications using Java Server Faces
- Use MVC architecture
- Use session management and filters in web applications
- Integrate web applications with the database
- Create view components using JSP EL and JSTL
- Understand web application security

Prerequisites:
- JVP, Java Programming

Testing and Certification:
- The Java Web Development - Servlets & JSP course helps delegates to prepare for the Java Platform, Enterprise Edition 6 JavaServer Pages and Servlet Developer Certified Expert Exam (1Z0-894) which leads to the Oracle Certified Expert (OCE), Java Platform, Enterprise Edition 6 JavaServer Pages and Servlet Developer certification, equivalent to the former Sun Certified Web Component Developer (SCWCD).
- Exams are not included as part of the course.

Follow-on-Courses:
- JEE, Developing Applications with Java EE
Content:

Session 1: INTRODUCTION TO JAVA WEB TECHNOLOGY
- Web Applications, CGI and the Role of Java
- 3-tier Architecture
- Understand Model-View-Controller (MVC) Architecture
- Why Use Servlets and JSP

Session 2: WEB TECHNOLOGY PRECURSORS
- Java Web Containers
- Web Servers
- HTML and HTTP
- HTTP Methods: Request and Response
- Web Technology Basics
- Web Application Structures

Session 3: INTRODUCING JAVA SERVLETS
- Understand the Benefits of Java Servlet Technology
- Servlet Concerns
- Static and Dynamic Content
- The Constituents of a Servlet
- Creating Simple Servlets

Session 4: DEVELOPING JAVA SERVLETS
- Writing HTTP Servlets
- Deploy HTTP Servlets
- Run HTTP Servlets

Session 5: THE SERVLET ENVIRONMENT
- HttpServlet and Related API’s
- Servlet Form Processing
- State/Session Management
- Cookies

Session 6: WEB CONTAINER FACILITIES
- 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

Session 7: CONTROLLER FACILITIES
- Servlet Lifecycle
- Describe Advanced Elements of Servlet API’s
- Filters and Listeners

Session 8: INTRODUCTION TO JAVASERVER PAGES
- Describe why Servlets are not the whole solution
- Describe JSP Technology
- Core JSP Essentials

Session 9: JSP ESSENTIALS
- Understand JSP Scripting Elements, Declarations and Directives
- Use JSP Implicit Variables
- Understand and Use jsp: Tags

Session 10: DEVELOPING JAVA SERVER PAGES
- Understand the use of Tags in JSP Development
- Recognize Correct Tag Syntax
- Configure a JSP for JSTL
- Write JSP Using Standard Tags
- List Capabilities of JSTL Tags

Session 11: USING CUSTOM TAGS
- Understand the use of Tags in JSP Development
- Recognize Correct Tag Syntax
- Configure a JSP for JSTL
- Write JSP Using Standard Tags
- List Capabilities of JSTL Tags

Session 12: VIEW FACILITIES
- Understanding Data Scope
- Using JSP EL
- EL Implicit Objects
- Using JSTL
- Using JavaBean Components

Session 13: IMPLEMENT MVC DESIGN
- A Simple MVC Design Scenario
- Create a Servlet Controller
- Incorporate a JavaBean Model

Session 14: BUILDING AN MVC APPLICATION
- Code a Servlet Controller
- Code Views with JSP
- Forward Control From Servlet to JSP
- Understand Fundamentals of EL
- Implement a simple MVC System

Session 15: EXTENDING AN MVC SYSTEMS
- Building Database Access
- Understanding Alternative Data Modelling Approaches
- Options for Data Management
- Web Application Layering and Concerns

Session 16: MODEL OPTIONS
- Understand the Roles of JDBC and JPA
- Understand the Elements that Compose the Model
- Understand Fundamentals of Connecting to a Database using JDBC or JPA

Session 17: WEB APPLICATION DEVELOPMENT
- Web Application Directory Structure
- Descriptor Elements
- WAR Content and Construction

Session 18: ASYNCHRONOUS WEB APPLICATIONS
- Understand Asynchronous Environment Interactions
- Understand AJAX-Style Client Side Programming
- Asynchronous Java EE 6 Servlets

Session 19: WEB APPLICATION SECURITY
- Container Security
- Four Authentication Models
- Web Application Encryption
- Understand the Role of JAAS in Authentication

Session 20: WEB APPLICATION DESIGN PATTERNS
- Common Approaches
- Web Framework Alternatives
- Web Application Frameworks Investigation
Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931
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