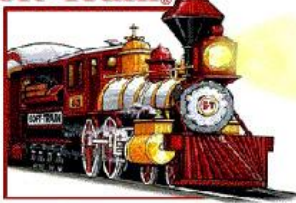


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# Introduction to Java Server Pages (5 Days) ST80009

**COURSE GOAL:** To prepare students to use the language of Java Sever Page in a web design environment.

**RECOMMENDED**

**PREREQUISITES:** Knowledge of other programming languages, HTML and database programming

**LEARNING OBJECTIVES:**

Upon completion of this course the student will be able to:

- Using Arrays
- HTTP and Servlets
- Using Methods
- Defining Classes
- Destroying and Finalizing Objects
- Understand Subclasses and Inheritance
- Declaring Variables
- Understanding Java Security
- Use Custom Tag Libraries and Standard Tag Library

## Key Topics:

### I. Why Use Servlets & JSPs

- A. What Web Servers and Clients do
- B. Two0Min Guide to HTML
- C. What is HTTP Protocol
- D. Anatomy of HTTP GET and POST Request and HTTP Responses
- E. Locating Web Pages Using URLs
- F. Web Server, Static Web Pages, and CGI

### II. Web App Architecture

- A. What is a Container and What Does It Give You
- B. How it Looks in Code
- C. Naming Servlets and Mapping them to URLs Using the DD
- D. A Model-View-Controller (MVC) Overview and Example
- E. How J2EEE Fits Into All This

### III. Mini MVC Tutorial

- A. MVC Application, The First Design
- B. Create the Development and Deployment Envirments
- C. Create and Test the HTML for the Initial Form Page
- D. Create the Deployment Descriptor (DD)
- E. Create, Compile, Deploy, and Test the Controller Servlet

- F. Design, Build, and Test the Model Component
- G. Enhance the Controller to Call the Model

#### **IV. Servlet**

- A. Servlet's Life in the Container
- B. Servlet Initialization and Threads
- C. Non-idempotent Request
- D. Sending and Using Parameters
- E. Servlet Redirect vs. Request Dispatcher

#### **V. Being a Web App**

- A. Init Parameters and ServletConfig
- B. JSP Servlet Init Parameters
- C. ServletConfig vs. ServletContext
- D. ServerContextListener
- E. Compile, Deploy, and Test your Listener
- F. What is an Attribute
- G. Synchronization
- H. The SingleThreadModel

#### **VI. Conversational State**

- A. Session IDs, Cookies, and Other Sessions Basics
- B. URL Rewriting
- C. HttpSession
- D. HttpSessionBindingListener
- E. Session Migration

#### **VII. Being a JSP**

- A. Creating a Simple JSP
- B. JSP Expression, Variables, and Declarations
- C. JSP-Generated Servlet
- D. Lifecycle and Initialization of JSP

#### **VIII. Script-Free Pages**

- A. UseBean, GetProperty, SetProperty
- B. Param Attribute
- C. Converting Properties
- D. Expression Language
- E. Using (.) Operator to Access Properties and Map Values
- F.

#### **IX. Custom Tags**

- A. Looping Without Scripting <C:forEach>
- B. Conditional Control with <c:if> and <c:choose>
- C. Using the <c:set> and <c:remove> tags
- D. <c:param>
- E. Hyperlink <c:url>