Course Design Document

Course Code	
Course Name	Java Back-end Development (Servlets, JSP and JSTL)

Duration (in days)	6	Proficiency Level	Fundamental
Pre-requisites	Core Java	Target Audience	Campus Hires

Learning Outcome

At the end of the program, participants will learn

- Brief Introduction on J2EE Architecture
- Introduction to Servlet Technology
- Building and Deploying Your First Servlet
- Working with Form and Query String Data
- Handling HTTP Requests and Responses
- Intercepting HTTP Request with Filters
- Handling Exceptions in Servlets
- Tracking Session Data
- Receiving and Processing File Uploads
- Packaging Servlets for Deployment
- Debugging Servlets
- Globalizing Servlets
- Providing Servlet Metadata Using Annotations
- Understanding Asynchronous Servlet Processing
- Introduction to JSP Technology
- JSP Building Blocks
- Using JavaBeans in JSP
- The Expression Language
- The Java Standard Tag Library
- Writing Tag Libraries

Day-wise Session Plan

Day	Unit	Objectives	Hours
1	Servlet Introduction	- Introduction to Server-Side Scripting - Servlet Life Cycle - Types of Servlet - Working with deployment descriptor web.xml - Configuring Servlets in web.xml - Configuring Servlets using annotations - Reading request data from html	4
	Servlet Scopes	- Types of scopes in Servlet - ServletConfig VS ServletContext	4

	Servlet Chaining	• Working with RequestDispatcher • Using include(), forward(), redirect()	2

2	Session Management	• Http stateless protocol
		• Session Tracking using
		    ○ Hidden Form Fields
		    ○ URL Rewriting Technique
		    ○ Cookies
		    ○ HttpSession Scope
			4

	Filters	• Understanding Interceptors and Intercepting Filter Pattern • Filter Life Cycle • Perform pre and post processing of Servlet using Filter • Filter Chaining	4

3	Listeners	• Introduction to Listener
		• Listeners based on
		  -ServletContext scope
		  -ServletRequest scope
		  -HttpSession scope
			4

	Servlet App	• Build a sample app using html(frontend), servlet(middleware), Dao (using jdbc) and oracle(backend)	6
4	JSP API	• Introduction and Life Cycle of JSP. • JSP Tags. • JSP implicit objects. • JSP Actions and Directives. • JSP EL • Building a custom tag using JSP.	8
5	JSTL	• Overview of JSTL • JSTL core, sql and other tags	6
	JSP APP	• Building Up a 3 Tier Based App using Servlet - JSP - JDBC with business standards and pattern (make use of the same app built using servlet recently)	6
		Total Hours	48