

## **Advance Java**

### **Servlet**

#### **Basics of Servlet**

- Servlet: What and Why?
- Basics of Web
- Servlet API
- Servlet Interface
- GenericServlet
- HttpServlet
- Servlet Life Cycle
- Working with Apache Tomcat Server
- Steps to create a servlet in Tomcat
- How servlet works?
- servlet in Myeclipse
- servlet in Eclipse
- servlet in Netbeans
- ServletRequest
- **ServletRequest methods**
- **Registration example with DB**
- **Servlet Collaboration**
- **RequestDispatcher**
- **sendRedirect**
- **ServletConfig**
- **ServletConfig methods**
- **ServletConfig example**

ServletContext

ServletContext methods

ServletContext example

Attribute

- **How to set, get and remove example?**

- Session Tracking

Cookies

Hidden Form Field

URL Rewriting

HttpSession

Filter

- Filter
- Authentication Filter
- FilterConfig
- Useful examples

ServletInputStream and ServletOutputStream

Annotation Servlet

Project Development

*JSP*

**Basics of JSP**

**Life cycle of JSP**

**JSP API**

**JSP in Eclipse and other IDE's**

**Scripting elements**

- scriptlet tag
- expression tag
- declaration tag
  
- Implicit Objects
- out
- request
- response
- config
- application
- session

- pageContext
- page  
    exception

### **Directive Elements**

page directive  
include directive  
taglib directive

### **Exception Handling**

### **Action Elements**

- jsp:forward
- jsp:include
- Bean class
- jsp:useBean
- jsp:setProperty &
- jsp:getProperty
- Displaying applet in JSP

### **Expression Language**

### **MVC in JSP**

### **JSTL**

### **Custom tags**

### **Custom Tag : What and Why?**

### **Custom Tag API?**

### **Custom Tag Example**

### **Attributes**

### **Iteration**

### **Custom URI**

### **Project Development in JSP**

### **JavaMail API**

- JavaMail API

- Sending Email
- Sending email through Gmail server
- Receiving Email
- Sending HTML content

## Design Pattern

### Design Pattern

- Singleton
- DAO
- DTO
- MVC
- Front Controller
- Factory Method
- etc.

JUnit

LPIT Software Solutions

### JUnit

- JUnit: What and Why?
- Types of Testing
- Annotations used in JUnit
- Assert class
- Test Cases

## Maven

### Maven

- Maven: What and Why?
- Ant Vs Maven

- How to instal 1 Maven?
- Maven Reposi tory
- Understanding pom.xml
- Maven Example
- Maven Web App Example
- Maven using Ecl ipse

## Struts 2

### Basics of Struts2

- Struts : What and Why?
- Model1 vs Model2
- Struts2 Features
- Steps to create Struts2 appl ication
- Understanding Action class
- Understanding struts.xml file

### Core Components

- Interceptors
- ValueStack
- ActionContext
- ActionInvocation
- OGNL

## Struts 2 Architecture

### Struts2 Action

- **Action Interface**
- **ActionSupport clas**

### Struts2 Configuration

- Multi configuration
- Multi namespace

### Interceptors

- Custom Interceptor : Li fe Cycle of Interceptor
- params interceptor
- execAndWai t interceptor
- prepare interceptor
- modelDriven interceptor
- exception interceptor
- fi leUpload interceptor

### Struts 2 Validation

- Custom Val idation : workflow interceptor
- Input Val idation : val idation interceptor
- Ajax Val idation : jsonVal idation interceptor

### Aware Interfaces

- ServletActionContext
- SessionAware
- Login and Logout Application
- ServletContextAware

## Struts2 with I18N

### Zero Configuration

- By convention
- By annotation
- Struts2 with Tiles2
- Hibernate with Struts2
- Spring with Struts2
- Project Development in Struts2

### Working with IDE

- Eclipse IDE
- Netbeans IDE
- Myeclipse IDE

### Working with Servers

- Servers
- Apache Tomcat
- Glassfish Server
- JBoss Server
- Weblogic Server

### EJB3

Introduction to JavaEE

The Need for JavaEE.

### **Overview on the JavaEE Architecture**

- 1 tier
- 2 tier
- 3 tier
- N tier
- JavaEE Key Standard

### Introduction to EJB3

- The EJB Model
- Key Services of the Application Server

### Developing Session Beans

- Stateless Session Beans
- Stateful Session Beans
- Packaging
- Writing Clients

### Using Dependency Injection

- No More JNDI
- Injection of EJBContext



## JMS

- JMS Overview
- JMS Messaging Domains
- Example of JMS using Queue
- Example of JMS using Topic

## Message Driven Beans

## Persistence Introduction to JPA

- Object Relational Mapping
- Mapping configurations
- Embedded Objects
- EJBQL

Web Technology

## HTML 5

- Introduction to HTML
- HTML Tags
- Creating Forms

## CSS

- Introduction to CSS
- Three ways to use CSS
- CSS Properties
- Designing website
- Working with Template

## Javascript

- Introduction to Javascript
- Three ways to use Javascript
- Working with events
- Client-side Validation

## JQuery

- Introduction to JQuery
- Validation using JQuery
- JQuery Forms
- JQuery Examples

## AJAX

- Introduction to AJAX
- Servlet and JSP with AJAX
- Interacting with database