

# Syllabus for Advanced JAVA Programming



## Course Duration for Advanced JAVA Programming Course

- 6 weeks

## Objective For Advanced JAVA Programming Course

- Getting the student to be well trained in JAVA

## Eligibility for Advanced JAVA Programming Course

- Any Technical Graduates or Undergraduate (BSc, BCS, BCA, BE, B Tech, MSc, MCS, MCA, M Tech)

## Course overview For Advanced JAVA Programming Course

### Programming in Advanced JAVA

#### Swing

- Swing GUI Components
- Using Swing API

#### Applet

- Life cycle of an Applet
- A "Hello Word" Applet

#### JDBC

- Creating a Database and Tables
- Getting Information from Database
- Obtaining Result Set Information
- Connecting a Java program to a Database
- Prepared Statements and Statement Classes in Java
- Inserting, Updating & Deleting Table data

#### Servlets

- What is a Web Application
- Java Servlets
- What is a Servlet
- Servlet Lifecycle
- Servlet Context
- Session management
- Building the first servlet
- Deploying the servlet

#### JSP

- What is a JSP Page
- Basic HTML Tags
- JSP Tag Library
- JSP Page Life cycle
- Creating the first dynamic page using JSP
- MVC architecture, 3-tier architecture

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## JAVA FRAMEWORK

### Jakarta Struts Workshop

- Introduction to MVC1 & MVC2 Architecture
- Overview of Struts Framework
- Components of Model, View & Controller
- Action Classes
- Handling Application Requests
- Generating Dynamic Views
- Validating User Input
- Validator Plug-in
- Working with Tiles
- Deployment Descriptors

### Spring Workshop

- Introduction to Spring Framework
- Spring Framework Architecture
- Spring bean wiring
- AOP with Spring
- Transactions management
- Spring with database

### Hibernate Workshop

- Introduction to Hibernate
- Object Related Mapping
- Persistent Classes
- Mapping Collections
- Hibernate Query language
- Caching and Transactions
- Hibernate with web applications

## Project on Advance JAVA Programming Course

Student will be assigned a project which they will have to execute under the guidance of the faculty.