Core Java, Advanced Java, Spring, Hibernate, JSP, Struts, Servlets, Web Services & Project Work

The course outline:

Core Java

• Introduction	• Inheritance
• History	• Super & final
• Features of Java	• Method overriding
• Tokens	• Multilevel Inheritance
• Java Literals	• Dynamic Method Dispatch
• First Java Program	• Abstract Classes
• Data Types	• Object Class

- Introduction
- What is data type?
- Variables
- Array
- Operators
- Introduction to operator
- Arithmetic operators
- Bit wise Operators
- Relational Operators
- Boolean Logical Operators
- Assignment Operator
- The ? Operator
- Control Statements
- Selection Statements
- If selection statements
- Switch selection statement
- Looping statements
- Jump Statements

Class

- Introduction to Class
- What is class?
- Declaring Objects
- Introduction to method
- Constructor
- Keywords
- Access Control

OOPS Concepts

- Complete Understanding OOPS concepts
- Polymorphism
- Inheritance
- Abstraction
- Classes and Methods
- Method overloading
- Constructor overloading
- More about method
- Call by value
- Call by reference
- Recursion
- Nested class
- Command Line Argument

- Polymorphism

Interfaces

- Introduction to Interfaces
- Defining interfaces
- Implementing interfaces
- Interface variables
- Extending interfaces
- Introduction to Packages
- Vector class
- Random class
- Date class
- Calendar & Gregorian class
- Math Class
- Hash table
- Wrapper Class
- Introduction
- Byte
- Short
- Integer
- Long
- Double
- Float
- Character
- Boolean
- String & String Buffer
- String Handling
- Methods & Examples
- String Buffer
- Exception Handling
- Introduction
- Try and catch
- Finally
- Throw
- Throws
- Multithreading
- Introduction to thread
- The Main Thread
- Thread Life Cycle
- Creating Thread
- Thread Priority

Advance Java Topics

- Reflection API
- Introduction
- Examples
- Generics
- Introduction
- Understanding and Examples
- JSP introduction
- Introduction to JSP
- JSP Architecture
- JSP life cycle
- JSP Elements
- Introduction
- JSP Scripting element
- JSP Directive elements
- JSP Standard Action elements
- Error handling
- Introduction
- By Mechanism
- By page directive
- In Deployment Descriptor
- Implicit objects
- Introduction
- List of implicit objects
- Scope of JSP objects
- Character Quoting
- Serialization
- Introduction
- Examples

- Introduction to JDBC
- Introduction
- Components & specification
- JDBC Architecture
- JDBC Driver Types
- JDBC API
- JDBC API
- Connection interface
- Statement Interface
- Prepared Statement in JDBC
- JDBC example
- JDBC example with access
- JDBC connection for MySQL
- Servlets
- Introduction
- Types of servlets
- Integration using jsp + servlet
- RMI Introduction
- RMI Introduction
- RMI Architecture
- RMI Components
- RMI RegistryAd
- RMI Program
- RMI Program in java
- RMI example

JSP and Servlets

- Java EE Overview
- Web Application Structure
- Servlet Basics
- JSP Basics
- Using Eclipse for Developing Web Applications
- Servlet Advanced
- Session Tracking

- Expression Language
- JSP Custom Tags
- JSTL
- Building Bookstore Sample Applications
- JDBC
- Security Basics
- Web Application Security

Spring, Struts & Hibernate Frameworks

- Spring Overview and Tools
- Spring Helloworld
- Spring Dependency Injection Basics
- Spring Dependency Injection Annotation
- Maven Basics
- Spring 3 and Maven
- Spring 3 MVC
- Spring 3 WebFlow
- Spring 3 AOP
- Spring 3 Database
- Spring 3 Transaction
- Spring 3 Testing
- Hibernate Step by Step
- Hibernate Basics

- Hibernate Mapping
- Hibernate Query Language
- Hibernate Transaction and Concurrency
- Hibernate Interceptors and Events
- Hibernate Join Fetch
- Hibernate Caching
- MVC (Model-View-Controller) Framework
- Struts Basics
- Step by Step Guide for Building a Simple Struts Application
- Struts Sample Applications
- Struts Tags
- Struts Validation
- Tiles Framework
- Struts Best Practices

Webservices

Part I: Web Tier	Part II: WS
- JSP introduction - Introduction to JSP - JSP Architecture - JSP life cycle - JSP Elements - Introduction - JSP Scripting element - JSP Directive elements - JSP Standard Action elements **Error handling** - Introduction - By Mechanism - By page directive - In Deployment Descriptor - Implicit Objects - Introduction **List of implicit objects** - Scope of JSP objects - Character Quoting **Introduction to JDBC** - Introduction - Components & Specification - JDBC Architecture - JDBC Driver Types - JDBC API - JDBC API - Connection interface - Statement Interface - Prepared Statement in JDBC - JDBC example - JDBC example with access - JDBC connection for MySQL **Servlets** - Introduction - Types of servlets - Integration using jsp + servlet	- XML - XML Namespace - XML Schema - XML Schema Design Pattern - XPath - XSLT - XSLT Advanced Usagev - Java APIs for XML Parsing and Transformation - JAXP, SAX, and DOM - StAX - SOAP and WSDL - SOAP Basics - SOAP Processing Model - SOAP Protocol Binding - WSDL Basics - WSDL Bindings - SoapUI Overview - SAAJ (SOAP with Attachments API for Java) - UDDI - JAX-WS - JAX-WS 2.x Basics - JAX-WS over Java SE 6 - JAX-WS with EJB - JAX-WS Handlers - Data binding (JAXB) - JAXB Basics - JAXB 2.x - REST - RESTful Web Service Primer - Bottom up web services understanding - Top down web services understanding - Understanding and installing AXIS 2 - Incorporating axis2 with bottom up and top down web services - Understanding TCP/IP Monitor - Using eclipse for building up top down and bottom up web services with Axis2 - Understanding Web Service Explorer and testing web services with WSE