



J2EE Online Course in a true global setting.

Unit1: Introduction

- Introduction to Java
- Features of Java Language.
- JVM –The heart of Java

Unit2: Core Java EE

- Java EE 5 Platform Overview
- Java EE Platform – Distributed Multi-tiered Applications
- Java EE – Web & Business Components
- Java EE Containers – services & types
- Java EE Application Assembly & Deployment – Packaging Applications, Java EE modules
- Getting Started with Web Applications
- Model View Controller (MVC)2 Architecture & Packaging EJB Module

Unit3: Application Deployment

- Web application development and deployment Steps
- Configuring Web application – Web application deployment descriptor (web.xml file)
- Web Application Archive (*.WAR file) – *.WAR directory structure
- Building & Deploying Applications, Ant build tool

Unit4: Basic Language Elements

- Lexical Tokens, Identifiers
- Keywords, Literals, Comments
- Primitive Datatypes, Operators
- Assignments.

Unit5: Advanced Java EE – Web & Business Components Development

SERVLETS

- Servlet Overview
- Life cycle of Servlet
- Handling Client HTTP Request & Server HTTP Response
- Practical (Handson Working Examples)
- Initializing Parameters & ServletContext

- ServletContext initialization Parameters
- ServletContext Attributes (Context binder)
- Practical (Handson Working Examples)
- Session Management, Request Dispatcher & Redirecting
- Practical (Handson Working Examples)

JSP

- Overview of JSP
- JSP Architecture & life cycle
- Components of Java Server Pages
- Practical (Handson Examples)
- Implicit Objects & Standard JSP Tags
- Practical (Handson Working Examples)
- ~~Scope of JSP objects~~
- Practical (Handson Working Examples)

Unit6: Data Types, Variables, and Arrays

- Java Is a Strongly Typed Language
- The Primitive Types
- Integers
- byte
- short
- int
- long

Unit7: JDBC

- JDBC Overview & Architecture
- Step By Step Usage of JDBC API
- Connecting to Oracle 10g XE Database in Java
- Practical (Handson Working Examples)
- Prepared Statement & JDBC Transactions
- Practical (Handson Working Examples)
- Developing Web Application with MySQL / Oracle 10g XE Database by implementing Java
- Beans, DAO's & MVC2 Architecture

Unit8: Enterprise Java Beans (EJB 3.0)

- EJB 3.0 overview & Architecture
- Features of EJB 3.0
- About Session Beans
- EJB 3.0 Persistence Programming Model
- Java EE Application Assembly and Deployment – Anatomy of EJB Module & Packaging
- Java Persistence API
- Designing a Java Enterprise Application

Developing EJB3 Module using Stateless, Stateful Session Beans & Entity Beans. And creating an Enterprise Application Project using Eclipse Indigo 3.7.1 + JBOSS v5.0 + MySQL 5.0

Unit9: FRAMEWORKS

Struts2 FRAMEWORK

- Struts2 Basics & Architecture

- Struts Request Handling Life Cycle
- Struts2 Configuration, Struts2 Actions, Struts2 Interceptors, Struts2 Results,
- Struts2 Value Stack/OGNL

- Practical (Building Struts2 Framework Application)
- Struts2 Tag Libraries
- Struts2 XML Based Validations
- Practical (Building Struts2 XML based Validation Application)
- Struts2 Database Access

Unit10: Hibernate

- Introduction to Hibernate, ORM Overview, Hibernate Environment
- Hibernate Architecture & API, Hibernate Configuration,
- Hibernate Sessions, Persistent Class & Mapping Files
- Building Hibernate application, Hibernate Query Language (HQL)
- Hibernate O/R Mappings – Collection & Association Mappings
- ManyToOne
- OnetoOne
- ManyToMany

Implementing Hibernate in Java Web Applications using Eclipse Indigo 3.7.1 + JBOSS v5.0 with MySQL 5.5

- Hibernate Annotations

Unit11: Spring

- Introduction to Spring Framework Architecture
- Bean Definition, Bean Scopes & Bean Definition Inheritance
- Spring IoC Containers, Understanding inversion of control (IoC) – Dependency Injection(DI)
- Spring Setter Injection, Spring Constructor Injection
- IoC in Action
- Architecture of Spring Web MVC Framework
- Spring MVC Getting Started – constructing web MVC application using Spring Framework,
- AbstractController in Spring MVC
- Spring MVC Controllers hierarchy
- SimpleFormController, Spring DAO design pattern

Building Spring MVC Framework Applications by using Eclipse Indigo 3.7.1 + JBOSS v5.0