

Java Full Stack Course Content

Course Content:

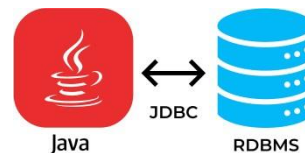
Core Java

- Introduction to Java
- Data Types and Variables
- Classes and Objects
- Object Oriented Programming
- Constructors
- Control Statements
- Abstract Classes
- Interfaces
- Packages
- Exception Handling
- Multi-threading
- Collection Framework
- Generics
- Input Output Streams
- Java 8 Features
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JDBC

- Introduction to SQL
- Introduction to JDBC
- Architecture of JDBC
- Types of Drivers
 - JDBC-ODBC Bridge Driver
 - Native-API Driver
 - Network Protocol Driver
 - Thin Driver
- CRUD Operations using JDBC in Java
- Batch Processing
- Transaction Management



Servlets

- Introduction to Web Technologies
- Ways to create a Servlet
 - Implementing Servlet Interface
 - Extending GenericServlet
 - Extending HttpServlet
- Html with Servlet Communication
- Html with Servlet and Database Communication
- Servlet with Servlet Communication
- ServletConfig & ServletContext
- Session Tracking



JSP

- Introduction to JSP
- Architecture of JSP
- JSP Scripting Elements
 - Scriptlet Tag
 - Expression Tag
 - Declaration Tag
- JSP Directive Elements
 - page Directive
 - include Directive
 - taglib Directive
- JSP Action Elements
 - forward
 - include
 - bean
 - setProperty
 - getProperty
- JSP Implicit objects
 - request
 - response
 - config
 - application
 - session
 - pageContext
 - page
 - exception
- JSP and JDBC



Hibernate

- Introduction to Hibernate
- Architecture of Hibernate
- Database CRUD Operations
- Inheritance
 - Table per Hierarchy
 - Table per Sub Class
 - Table per Concrete Class
- Hibernate Relationships
 - One-to-one
 - One-to-many
 - Many-to-one
 - Many-to-many
- HQL and Restrictions
- Criteria in Hibernate



Spring

- Introduction to Spring
- Spring Core (Basic Concepts)
- Spring Core (Advanced Concepts)
- Spring Core (3.0 Annotations)
- Spring MVC
- Spring AOP
- Spring ORM
- Spring Transaction
- Spring JDBC
- Creating Views in Spring MVC



Spring Boot & REST API

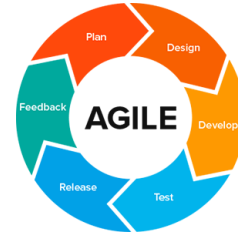
- Spring Boot Introduction
- Spring Boot + Maven – Hello World Example
- Creating a RESTful Web Service Example
- Common Application Properties
- How to Change Default Tomcat Server Port
- How to Change Default Context Path
- How to Reload Changes Without Restarting the Server
- How to Create/Configure a Data Source
- How to Configure Multiple Data Source
- Spring Boot + Spring Security – RESTful Web Service with basic Authentication
- Spring Boot + Spring Security – RESTful Web Service with Database Authentication
- Spring Boot + Spring MVC + JSP Hello World Example
- Spring Boot - RESTful Web Service with POST Request in JSON Example



{ **REST:API** }

Agile Methodology

- Agile Methodology Introduction
- Advantages & Disadvantages of Agile
- Agile Manifesto
- Agile Characteristics
- Agile SDLC
- Agile Scrum
- Agile Daily stand-up
- Product Management



Tools

Maven™

JUnit

JIRA

- Maven
- JUnit
- Log4J
- GitHub
- Jira



Databases

- MongoDB
- MySQL



UI Technologies

- Html
- JavaScript
- TypeScript
- Angular



Softwares required

- JDK 1.8
- Eclipse
- Apache tomcat
- MySQL database



AWS Cloud Fundamentals

- AWS Cloud Practitioner Essentials
- Introduction to Amazon web services
- Compute in the Cloud
- Global Infrastructure and Reliability
- Networking
- Storage and Databases
- Security



DevOps Fundamentals

- Introduction to DevOps
- DevOps Architecture
- DevOps Lifecycle
- Pipeline and Methodology
- Jenkins

