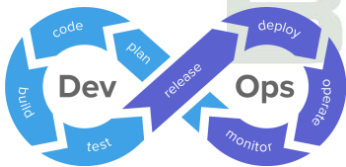


Apache Tomcat



Servlets



{ REST:API }

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# JAVA 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



## 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

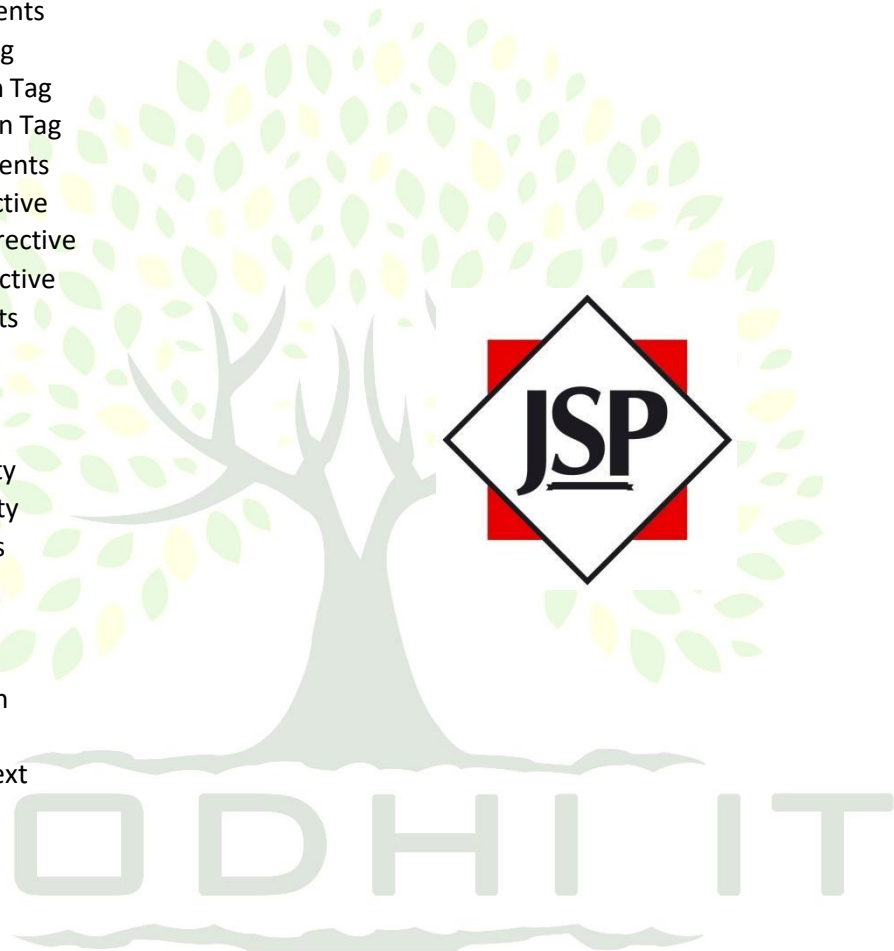
- Introduction to Web Technologies
- Ways to create a Servlet
  - Implementing Servlet Interface
  - Extending GenericServlet
  - Extending HttpServlet



- 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

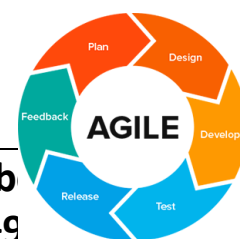
- Spring Boot Introduction
- Spring Boot + Maven – Hello World Example
- Creating a RESTful Web Service Example
- Common Application Properties
- How to Change Default Tomcat Server Port
- How to Change Default Context Path
- How to Reload Changes Without Restarting the Server
- How to Create/Configure 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
- Log4J
- GitHub
- Jira

**Maven™**

**JIRA**



### Databases

- MongoDB
- MySQL



### UI Technologies

- Html
- JavaScript
- TypeScript
- Angular



### Softwares required

- JDK 1.8
- Eclipse
- Apache tomcat
- MySQL database



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## 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



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