

## **Spring and Hibernate for Beginners (includes Spring Boot)**

### **1.Course Introduction**

### **2.Spring Overview**

- Why Spring
- Spring 5 Update
- Spring Core Framework
- Spring Platform

### **3.Setting up your development environment**

- Dev Environment Overview
- Installing Tomcat
- Installing Eclipse
- Connecting Tomcat to Eclipse

### **4.Spring Inversion of Control- XML Configuration**

- Dev Environment Overview
- Installing Tomcat
- Installing Eclipse
- Connecting Tomcat to Eclipse

### **5.Spring Dependency Injection- XML Configuration**

- What is Inversion of Control
- Code Demo- Rough Prototype
- Spring Inversion of Control
- HEADS UP - Add Logging Messages in Spring 5.1

### **6.Spring Bean Scopes and Lifecycle**

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- Setter Injection- Overview
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### **7.Spring Configuration with Java Annotations - Inversion of Control**

- Annotations Overview - Component Scanning
- Annotations Project Setup
- Default Component Names - Overview

## 8.Spring Configuration with JAVa Annotations - Dependency Injection

- Constructor Injection - Overview
- Setter Injection - Overview
- Qualifiers for Dependency Injection - Overview

## 9.Spring Configuration with Java Annotations - Bean Scopes and Lifecycle Methods

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- Special Note about @PostConstruct and @PreDestroy Method Signatures
- Special Note about Destroy Lifecycle and Prototype Scope
- Bean Lifecycle Method Annotations - Overview

## 10.Spring Configuration with Java Code (no xml)

- Spring Configuration with Java Code (no xml) - Overview
- Heads Up - Add Logging Messages in Spring 5.1 - All Java Config Version
- Defining Spring Beans with Java Code (no xml) - Overview
- Injecting Values from Properties File - Overview

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- Spring MVC - Overview and Behind the Scenes
- Development Environment Checkpoint
- Download Spring MVC Starter Files
- Spring MVC Configuration - Overview, JAR Files and Configuration Files

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- Creating a Spring Home Controller and View - Overview
- Reading HTML Form Data - Overview
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## 16.Spring MVC Form Validation - Validating Number Ranges and Regular Expressions

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- Applying Regular Expressions - Overview
- How to make Integer Field Required: freePasses
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## 17.Spring MVC Form Validation- Creating Custom Validation Rules

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## 18.Introduction to Hibernate

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- Hibernate and JDBC

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- Hibernate 5.2 Requires Java 8
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- Installing MySQL on MS Windows
- Installing the MySQL Database on Mac

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- Hibernate Annotations
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- Primary Keys - Overview
- Reading Objects with Hibernate

## 22.Hibernate Advanced Mappings

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## 25.Hibernate Advanced Mappings - Eager vs Lazy Loading

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- Eager vs Lazy Loading - Coding - Lazy
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- List Customers - Injecting DAO into Controller
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- Making it Pretty with CSS - Overview

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- Comparing Spring AOP and AspectJ

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- AOP: @Before Advice - Add and Test AOP Aspect

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- AOP - Pointcut Expressions - Match only DAO addAccount - Match any add\* Method

### 36. AOP: Pointcut Declarations

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### 37. AOP Ordering Aspects

- AOP: Ordering Aspects - Overview

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- Maven - How to Find Dependencies
- Maven Archetypes
- How to Install the m2eclipse Plugin

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- Spring Security - Project Downloads and Setup
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- Spring Security - Dev and Testing with New Private Window
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- Spring Security - Create Request Mapping for Login Form

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- Spring Security - Bootstrap CSS Login Form - Customizing Form
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