

# Spring Framework



## Session Plan

- ✓ Introduction
- ✓ Container Extensions Points
- ✓ Spring Expression Language (SpEL)
- ✓ Spring AOP
- ✓ DAO Introduction
- ✓ Spring Transaction Management
- ✓ Spring Web Integration
- ✓ RESTful Services with Spring



Day 1

# Introduction to Spring



# Introduction

- Overview of Spring Technology
- The Motivation for Spring, Spring Architecture
- The Spring Framework
- Declaring and Managing Beans
- Inversion of Control Pattern
- BeanFactory vs ApplicationContext
- Dependencies and Dependency Injection (DI)
- XML Configuration of DI
- Spring Bean Autowiring
- Injection with @Autowire
- Java Based Configuration (@Configuration + @Bean)



## Container Extensions Points

- Bean Scope and Lifecycle
- Singleton, Prototype, and Other Scopes
- Configuring Scope
- Bean Lifecycle / Callbacks



Day 2

# Spring Expression Language (SpEL), Spring AOP



# Spring Expression Language (SpEL)

- Introduction To SpEL
- SpEL Features
- SpEL expression evaluation against a specific object instance
- SpEL in Bean Definition



## Spring AOP

- Introduction of Aspect Oriented Programming (The Proxy Pattern)
- AOP Terminology
- Types of Advice
- Custom Logging support Aspect Implementation





## Day 3

# Spring DAO, Spring ORM, Spring TX



# DAO Introduction

- Introduction
- Plain JDBC limitations
- Spring JDBC/DAO Advantages
- Working with different Data Sources
- JdbcTemplate
- NamedParameterJdbcTemplate
- Spring JDBC/DAO with Annotations



# Spring Transaction Management

- Introduction to Transaction Management
- Local Transaction Vs Distributed Transaction
- Need of Spring Transaction Management
- Spring ORM with HibernateTemplate
- Implementing of Spring Transaction management using Annotation Driven Approach
- Transaction Attributes



Day 4

# Spring Web Integration



- Introduction To MVC
- Understanding MVC1, MVC2 Architectures
- Front Controller Design Pattern
- Spring MVC Basics
- Configuration and the DispatcherServlet
- @Controller, @RequestMapping (Handlers)
- @RequestParam and Parameter Binding
- View Resolvers
- Controller Details - @RequestParam, @PathVariable
- Model Data and @ModelAttribute



Day 5

# RESTful Services with Spring



# RESTful Services with Spring

- RESTful Services with Spring
- REST Overview, URI Templates
- REST and Spring MVC
- Spring support for REST
- `@RequestMapping/@PathVariable`, `@RequestBody`, `@ResponseBody`
- URI Templates and `@PathVariable`
- Controllers with `@RestController`



## THANK YOU

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