

**Instructor
Notes:**



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Course Goals and Non Goals



Course Goals

- Learning core concepts of Java Web Services version 2.0
- Developing applications using JWS2.0 API stack
- Developing REST WebService with Spring Framework

Course Non Goals

- Developing Enterprise applications

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Pre-requisites

- Java 1.6 or higher
- Servlet/JSP
- HTML/XML
- Spring Framework
- Concepts of Spring MVC framework
- Tools
 - Eclipse
 - Wildfly 8.0 or above

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Day Wise Schedule



Day 1

- Lesson 1: Introduction to Web Services
- Lesson 2: **Introduction to REST**
- Lesson 3: RESTFul Spring
- Lesson 4: Exception Handling in Spring REST

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- Lesson 1: Introduction to Web Services
 - 1.1. What are Web Services?
 - 1.2. HTTP and SOAP Messages
 - 1.3: Overview of JAX-WS and JAX-RS

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Lesson 2: **Introduction to REST**

- 2.1 REST fundamentals
- 2.2 Principle of REST
- 2.3 REST resources and their representations
- 2.4 HTTP methods
- 2.5 List of REST Frameworks
- 2.6 Benefits of RESTful Design

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Lesson 3: RESTful Spring

- 3.1 Spring MVC traditional workflow vs Spring MVC REST Workflow*
- 3.2 Using the @ResponseBody Annotation
- 3.3 Life cycle of a Request in Spring MVC Restful
- 3.4 Why REST Controller ?
- 3.5 Spring 4.x MVC RESTful Web Services Workflow*
- 3.6 REST Controller
- 3.7 RESTful URLs – HTTP methods
- 3.7 Cross-Origin Resource Sharing (CORS)
- 3.9 @RequestBody annotation

Lesson 4: Exception Handling in Spring REST

- 4.1 Exception handling at controller level
- 4.2 Exception handling at application level

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References

WebLinks:

[RESTful Java Web Services by Jose Sandoval](#)

<https://docs.oracle.com/javaee/6/tutorial/doc/giepu.html>

<https://docs.oracle.com/javaee/6/tutorial/doc/bnayl.html>

http://www.service-architecture.com/articles/web-services/web_services_explained.html

Books

RESTful Web Services (O'Reilly) By Richardson & Ruby

Spring REST by Sudha Belida, Balaji Varanasi



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Next Step Courses (if applicable)

Integrating Java Web Services with Spring based applications



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Other Parallel Technology Areas

Web services are often compared to remote procedure call
Web services can also be mapped to CORBA

Capgemini Internal