HCL TALENTCARE

HCL TALENTCARE

Spring - Introduction

Objectives

After completing this chapter, you will be able to:

- Define Spring Framework
- Identify various modules in Spring Framework
- Analyze the benefits of using Spring framework in Java Project

Spring 3.0 Introduction: Overview

HCL TALENTCARE

- Spring Framework is a Java open source framework that provides comprehensive infrastructure support for developing Java applications.
- It handles the infrastructure so that you can focus on your application.
- Spring enables you to build applications from “plain old Java objects” (POJOs) and also apply enterprise services non-invasively to POJOs.

Do you know?

As an application developer when you are using Spring framework, you can:

- Make a Java method execute in a database transaction without having to deal with transaction APIs.
- Make a local Java method a remote procedure without having to deal with remote APIs.
- Make a local Java method a management operation without having to deal with JMX APIs.
- Make a local Java method a message handler without having to deal with JMS APIs.

Tools

The resources that you need for this training are:

- Eclipse IDE
- Jdk 1.7
- Spring Framework 3.x
- Derby DB
- Tomcat 7.0

What is spring?

- Spring is an open source, lightweight, application framework.
- It is intended to help structure an entire application in a consistent manner, pulling together the best of breed single-tier frameworks in a coherent architecture.

Spring Framework Overview (1/2)

HCL TALENTCARE

- Complexity of solution
- Timeline
- Maintainability
- Familiarity with Framework
- Community and Documentation

Spring Framework Overview (2/2)

HCL TALENTCARE

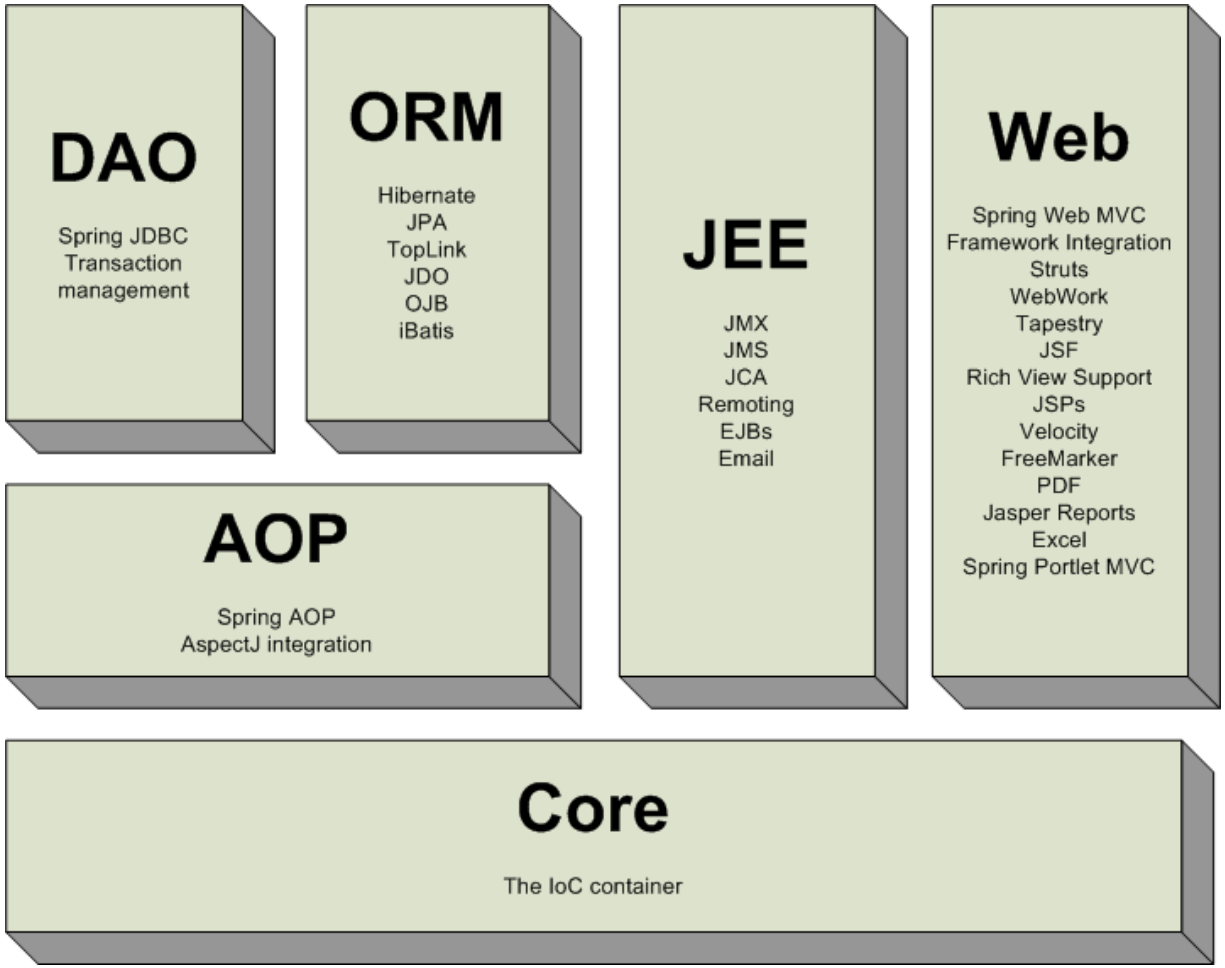
- Spring aims at making JavaEE development easier.
- Spring provides enterprise service to Plain Old Java Objects (POJO)
- Spring has a nice balance between constraint and freedom.
  A good framework should provide guidance with respect to good practice, making the right thing easy to do.
- However, it should not be overly restrictive, placing requirements on code, using it, causing lock in and constraining developers in appropriate ways.

Module Components

Modules of the framework consists of:

- IoC container
- Aspect-Oriented Programming framework (AOP)
- Data access abstraction and JDBC simplifications
- Transaction Management
- MVC web framework
- Simplification for working with J2EE APIs such as JNDI, JTA etc.

Spring Framework modules



Spring Benefits

HCL TALENTCARE

- Benefits of Spring are:
  - Non-invasive framework – code works outside framework, minimal lock-in, easy migration
  - Consistent model in any environment
  - Promotes code reuse and deferment of architectural decisions
  - Facilitates OO code and good practices such as programming to interfaces
  - Extraction of configuration to consistent xml model
  - Promotes Architectural choice- choose best of breed frameworks
  - Does not reinvent the wheel – O/R, logging, etc.

Summary

HCL TALENTCARE

- The chapter has covered the following topics:
  - The features of Spring Framework and its flexibility in providing solutions at various Layers of JEE applications.
  - The various modules in Spring framework, the Spring release roadmap and various Spring offerings
  - The benefits of Spring framework that really makes the following statement true

    “Spring is the one stop solution for all JEE problems.”