2. Spring Core

1. Overview

Spring Framework

- The **Spring Framework** is an open source application framework and inversion of control container for the Java platform

- It is a lightweight solution for building your enterprise applications

- The core features of the Spring Framework can be used by any Java application, but there are extensions for building web applications on top of the Java EE platform

- Main goal - to make developing Java EE applications **easier**.

Spring Framework

- It has become popular in the Java community as an alternative to, replacement for, or even addition to the Enterprise JavaBean (EJB) model.

- Spring is a portable framework that allows you to introduce as much or as little as you want to your application.

- Promotes decoupling and reusability

Spring History

- Spring 1.0 - March 2004
- Spring 2.0 - October 2006
- Spring 2.5 - November 2007
- Spring 3.0 - December 2009
- Spring 3.1 - December 2011
- Spring 4.0 - December 2013
- The current version is 4.1 - August 2014

JavaBeans -> EJB -> POJO

- JavaBeans 1.00-A specification (December 1996, Sun Microsystems)

- Enterprise JavaBeans (EJB) specification (March 1998, Sun Microsystems)

- *POJO* (Plain Old Java Object) - an ordinary Java Object, not a special object (September 2000, Martin Fowler, Rebecca Parsons and Josh MacKenzie)
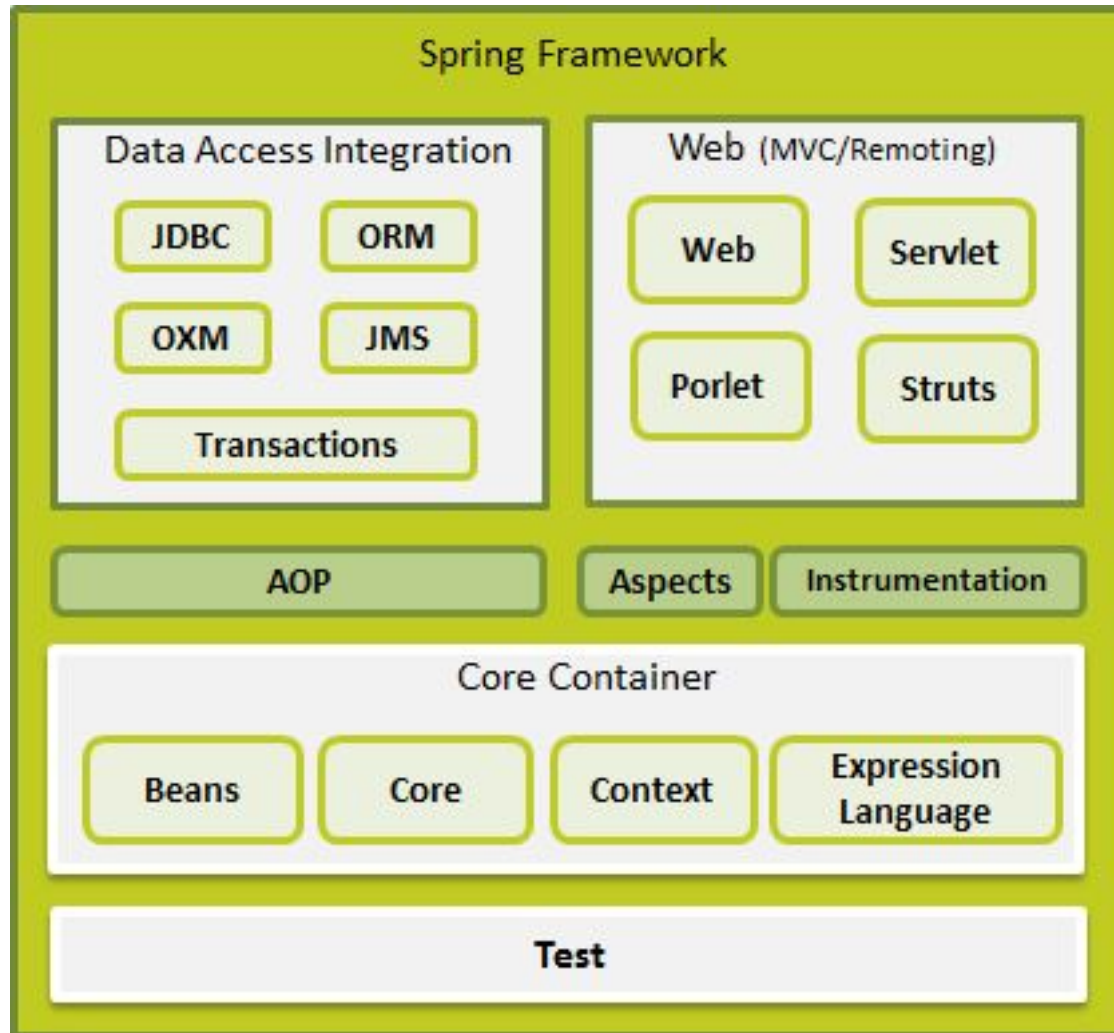
Java Development Simplification

- Lightweight and minimally invasive development with (POJOs)

- Loose coupling through dependency injection and interface orientation

- Declarative programming through aspects and common conventions

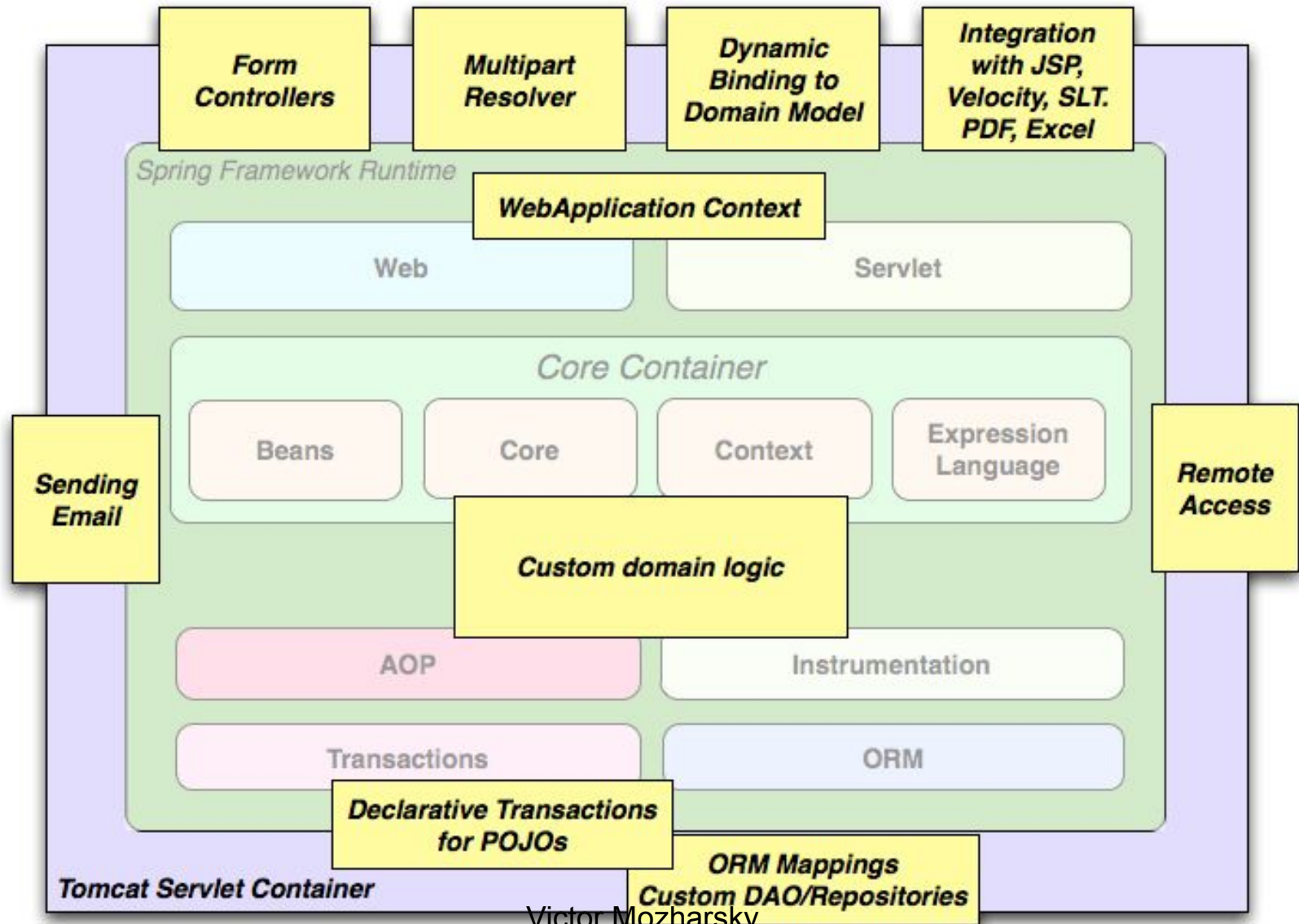- Boilerplate reduction through aspects and templates

Spring Modules

- **Inversion of control container**
- **Aspect-oriented programming**
- **Data access**
- **Transaction management**
- **Model–view–controller**
- **Testing**
- **Remote management**
- **Messaging**

Spring Framework Architecture

Typical Spring web application