Bộ môn: Kỹ Thuật Phần Mềm

Lập trình
WWW *Java*

Spring
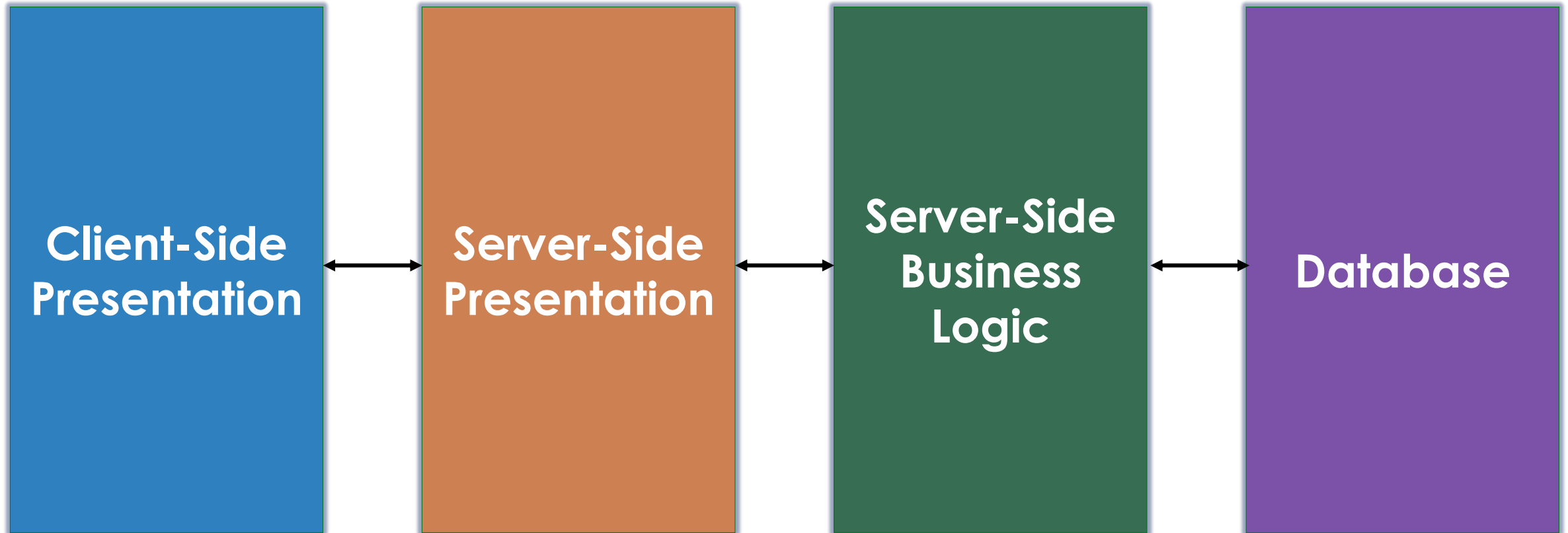
Overview

Why Spring?

» **Spring** is a very popular framework.

» Initially a **simpler**, **lightweight** alternative to J2EE.

» Provide large number of helper classes…make things easier.

What about J2EE or Java EE?

Client-Side Presentation ↔ Server-Side Presentation ↔ Server-Side Business Logic ↔ Database

What about J2EE or Java EE?

spring

J2EE 1.2	J2EE 1.3	J2EE 1.4	J2EE 5	J2EE 6	J2EE 7	J2EE 8
Servlet JSP EJB JMS RMI	EJB CMP JCA	Web Services	EJB3 JPA JSF JAXB JAX-WS	JAX-RS CDI Bean-Validation	JMS 2 WEB Sockets	JSON-B JSF2.3 CDI 2.0 Security API (support cloud, and PaaS paradigms)
1999	2001	2003	2006	2009	2013	2017

EJB v1 and v2 - Complexity

» Early versions of Enterprise JavaBeans, (v1, v2), **were extremely complexly**

» **Multiple deployment** descriptors (XML file)..

» **Multiple interfaces**

» **Poor performance** of Entity Beans

- **Home**
  Interface
- **Component**
  Interface
- **Bean Class**

J2EE Development without EJB

Rod Johnson, Founder of Spring. Wrote great books
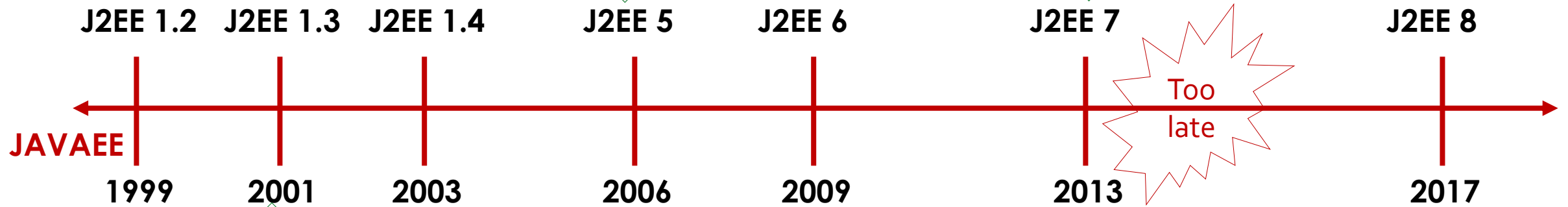
» **J2EE Development without EJB (2004)**

» **Java Development with the Spring Framework (2005)**

Release Timeline

EJB3: a rewrite for ease of use
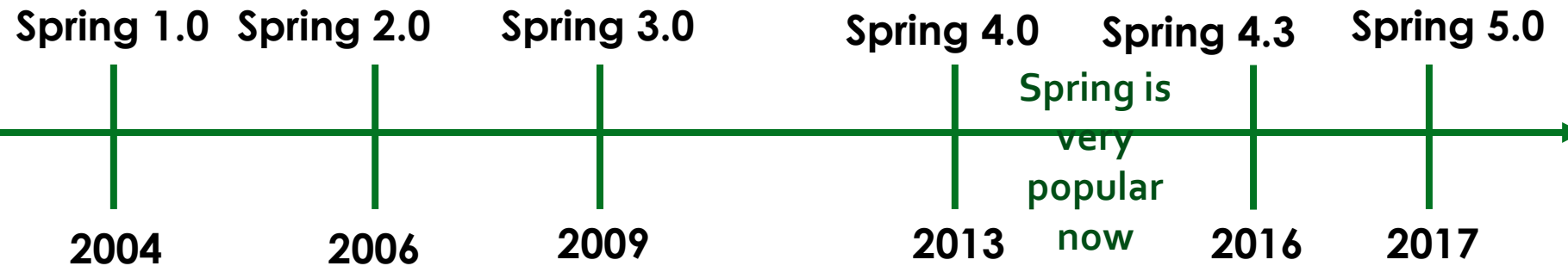
Similar features as core Spring

JAVAEE

J2EE 1.2	J2EE 1.3	J2EE 1.4	J2EE 5	J2EE 6	J2EE 7	J2EE 8
1999	2001	2003	2006	2009	2013	2017

Too late

EJB v2 & v2 was awful

Added CDI

Spring 1.0	Spring 2.0	Spring 3.0	Spring 4.0	Spring 4.3	Spring 5.0
2004	2006	2009	2013	2016	2017

Spring is very popular now

spring

QUESTIONS