

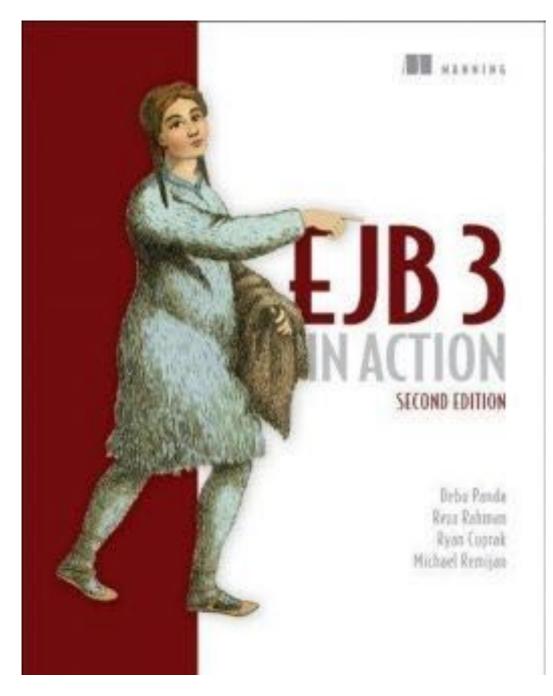
Java EE, EJB Basics

Philippe Collet, contains 78,3% of slides from Sébastien Mosser Lecture #3

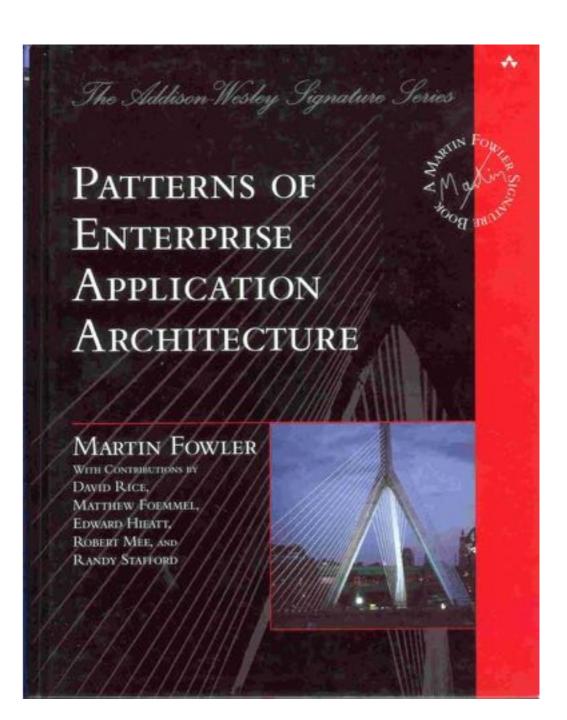




### Bibliography



[EJB3 in Action, 2nd ed., 2014]

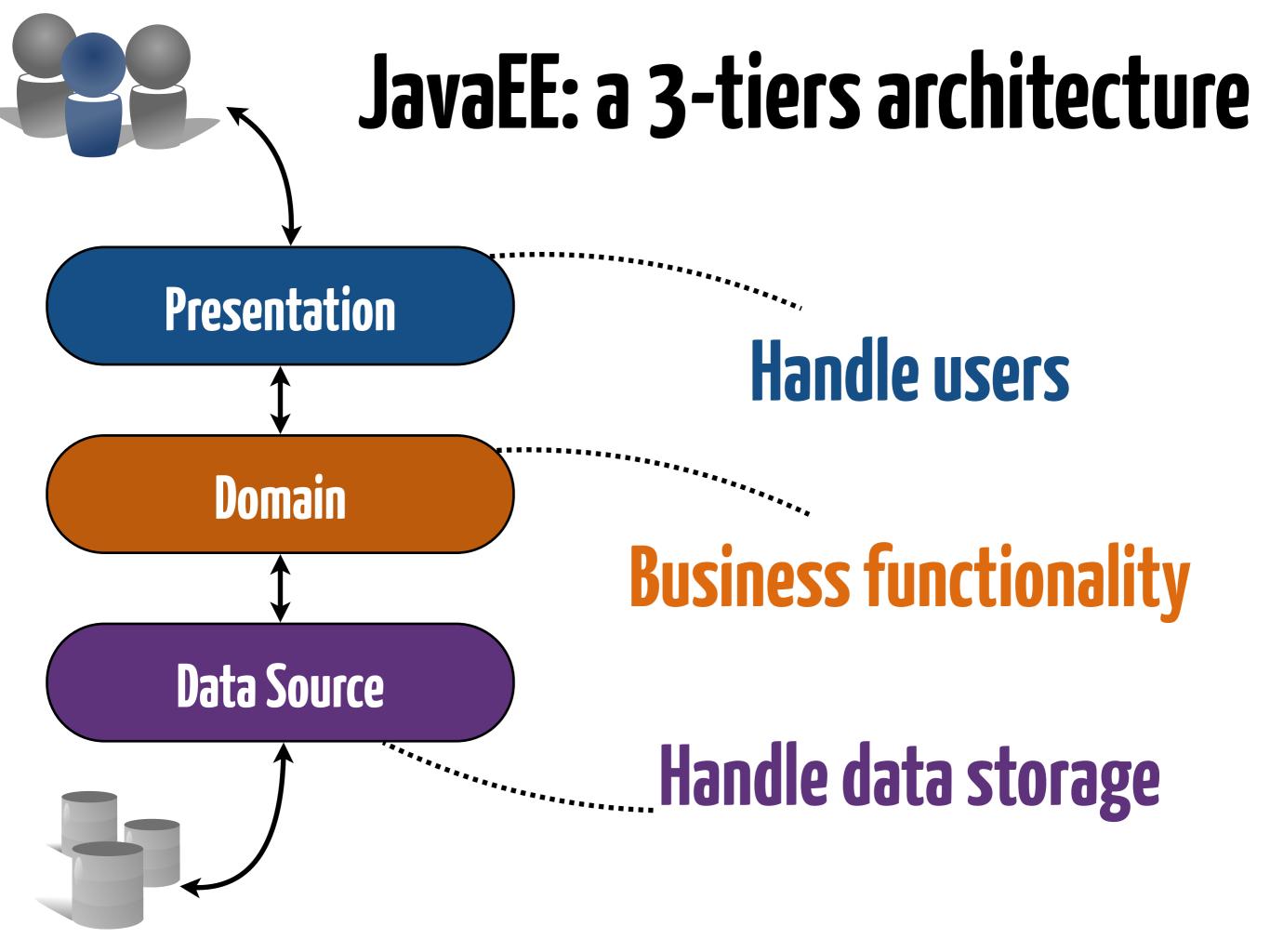


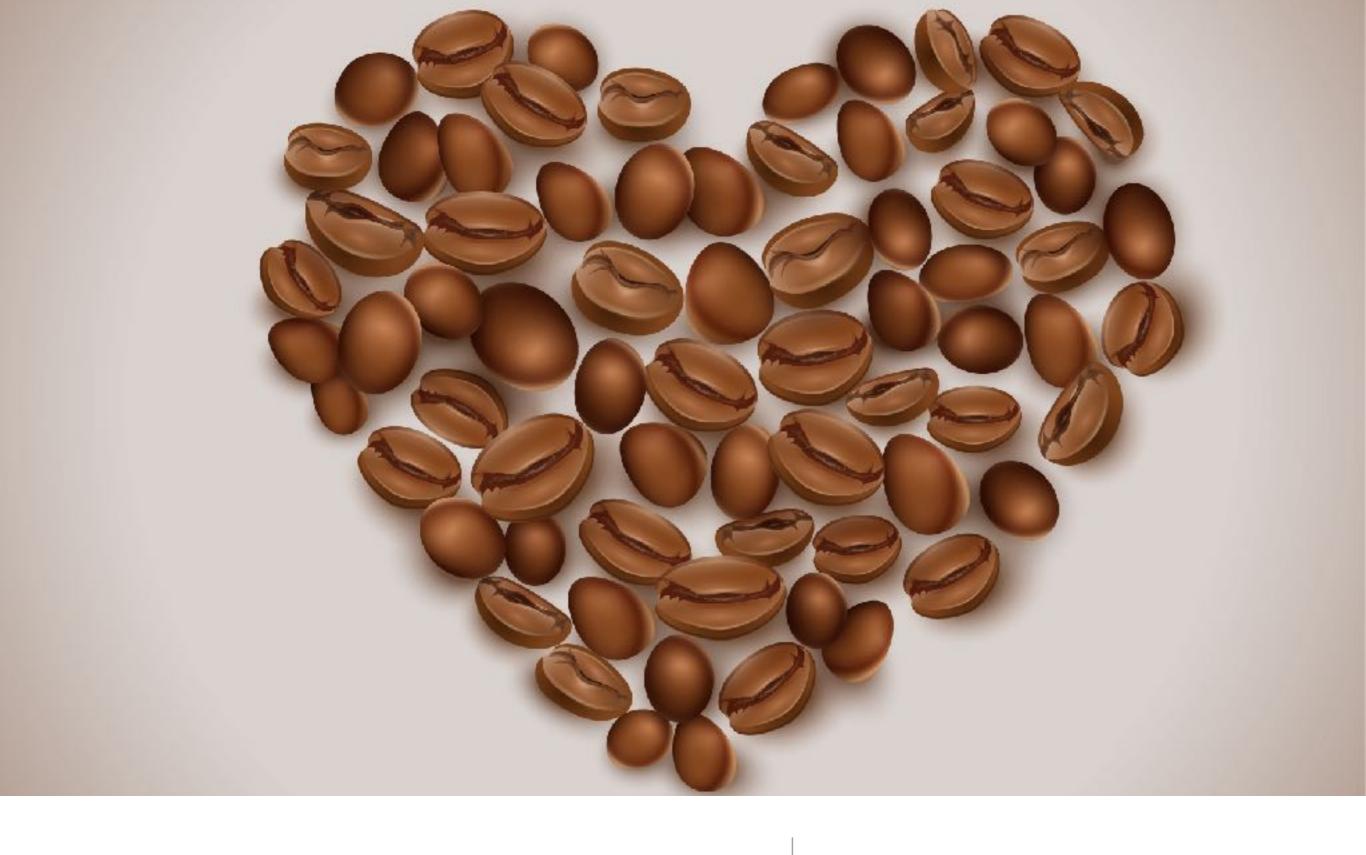
[PoEAA, 2002]

#### From J2EE to JavaEE

#### Stable Java EE 8 Java EE 7 Flexible Modernization Ease of use Ease of Java EE 6 **JSON** EDITION security Development Complete Pruning Java EE 6 Extensibility Java EE 5 Web Profiles Services Ease-of-dev Ease of EJB Lite Development RESTful WS J2EE 1.4 Annotations CDI EJB 3.0 Robustness Persistence API Web Services. New and Management, Updated J2EE 1.3 **Enterprise** Deployment, Web Services Java Async. Connector CMP. Platform Connector Web Profile **J2EE 1.2** Architecture & Servlet, JSP, Managed EJB, JMS Beans 1.0 **JPE** RMI/IIOP Project Dec 1999 Sep 2001 Nov 2003 May 2006 Dec 2009 April 2013 May 1998 August 2017 23 specs 28+ specs 34 specs 10 specs 13 specs 20 specs 28 specs

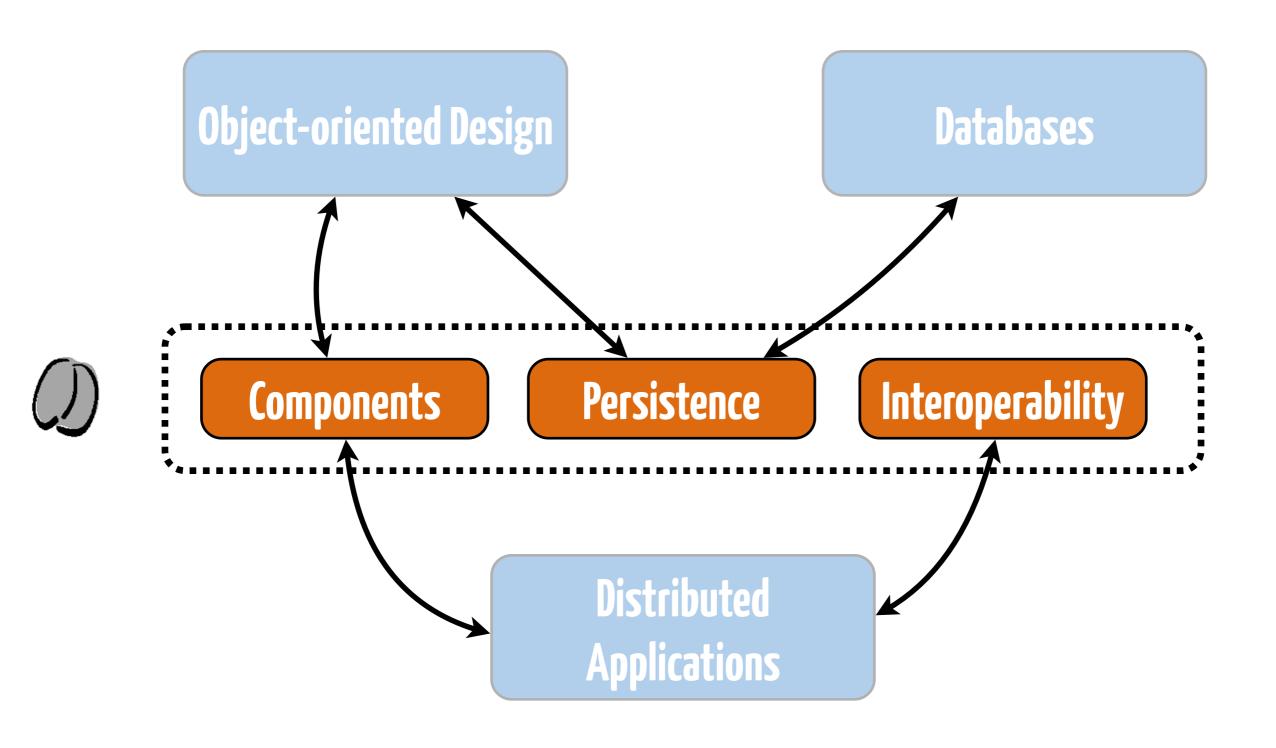
Modern





Enterprise Java Beans 101

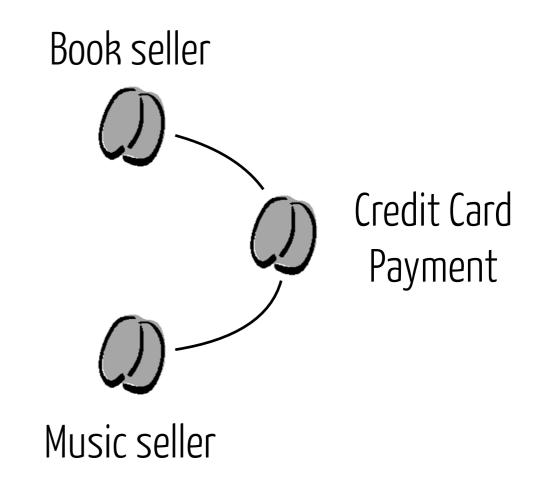
# Applications Server: Dependencies



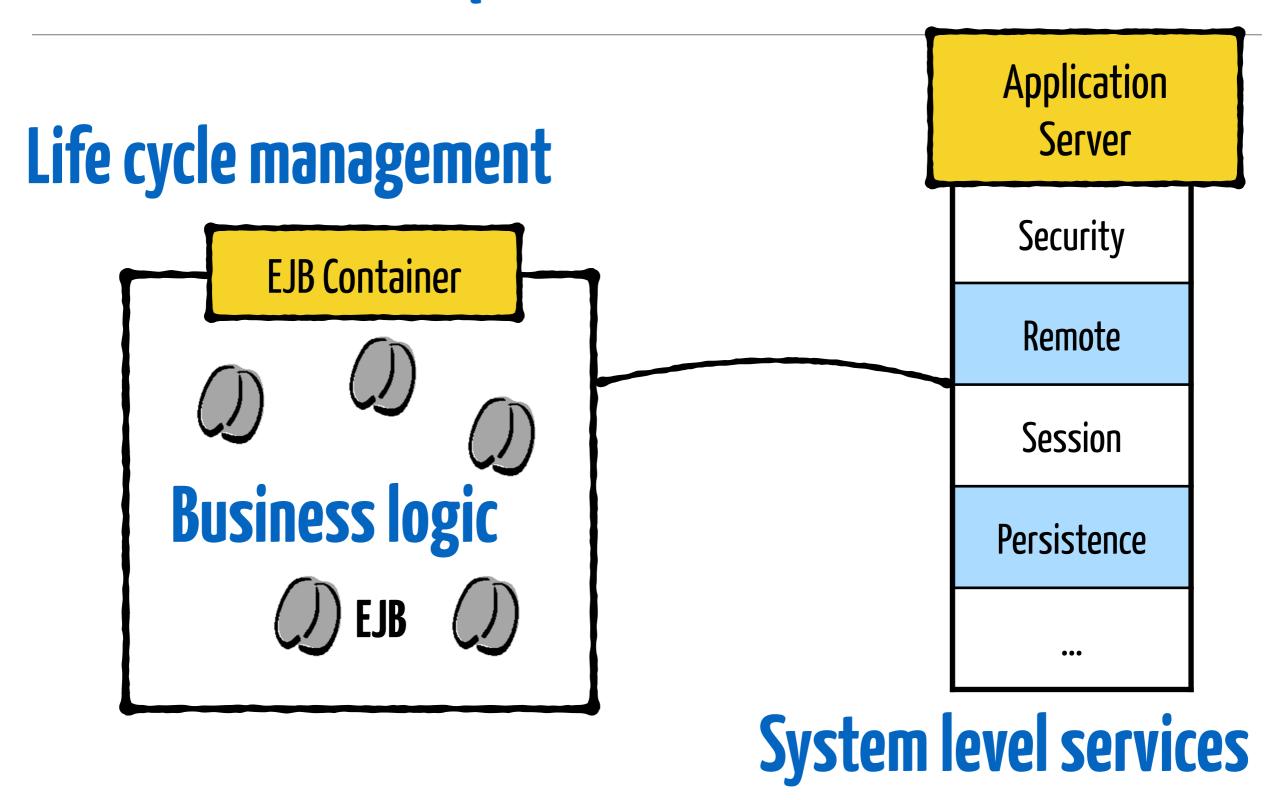
# EJB as Components

Interface reuse

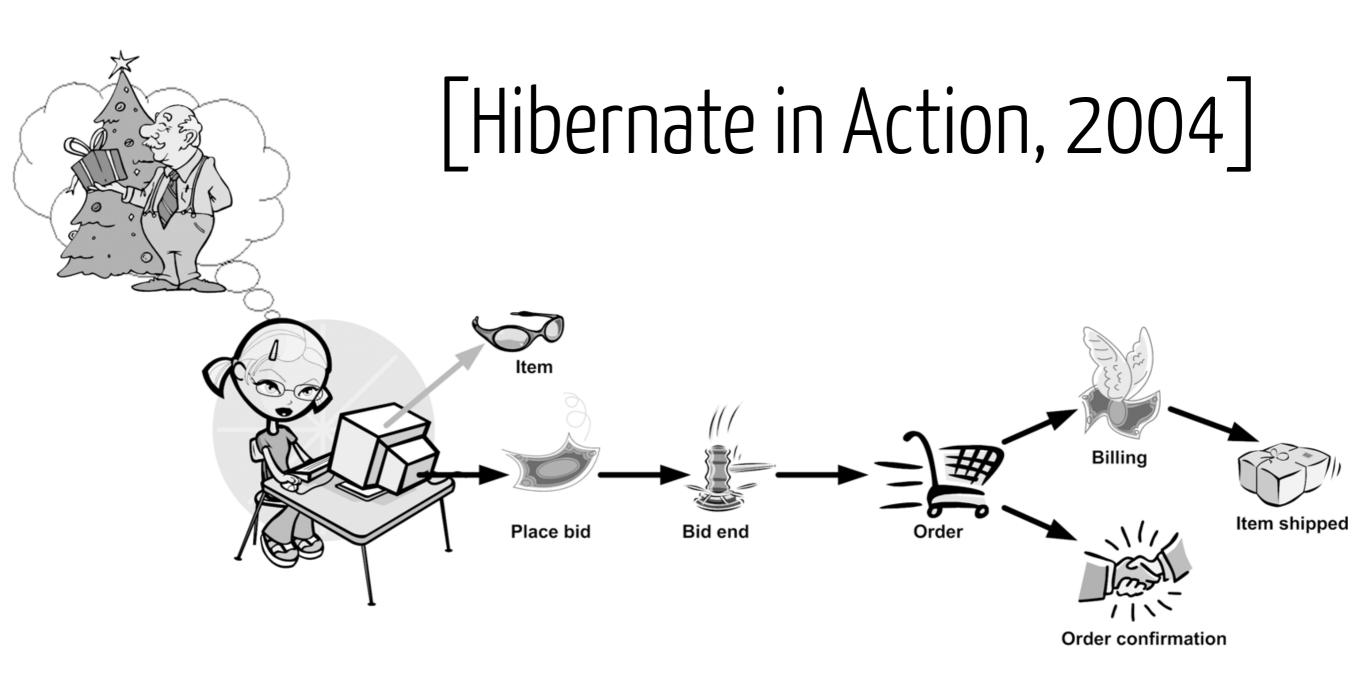
Encapsulate application
Behavior



## JavaEE as the specification for

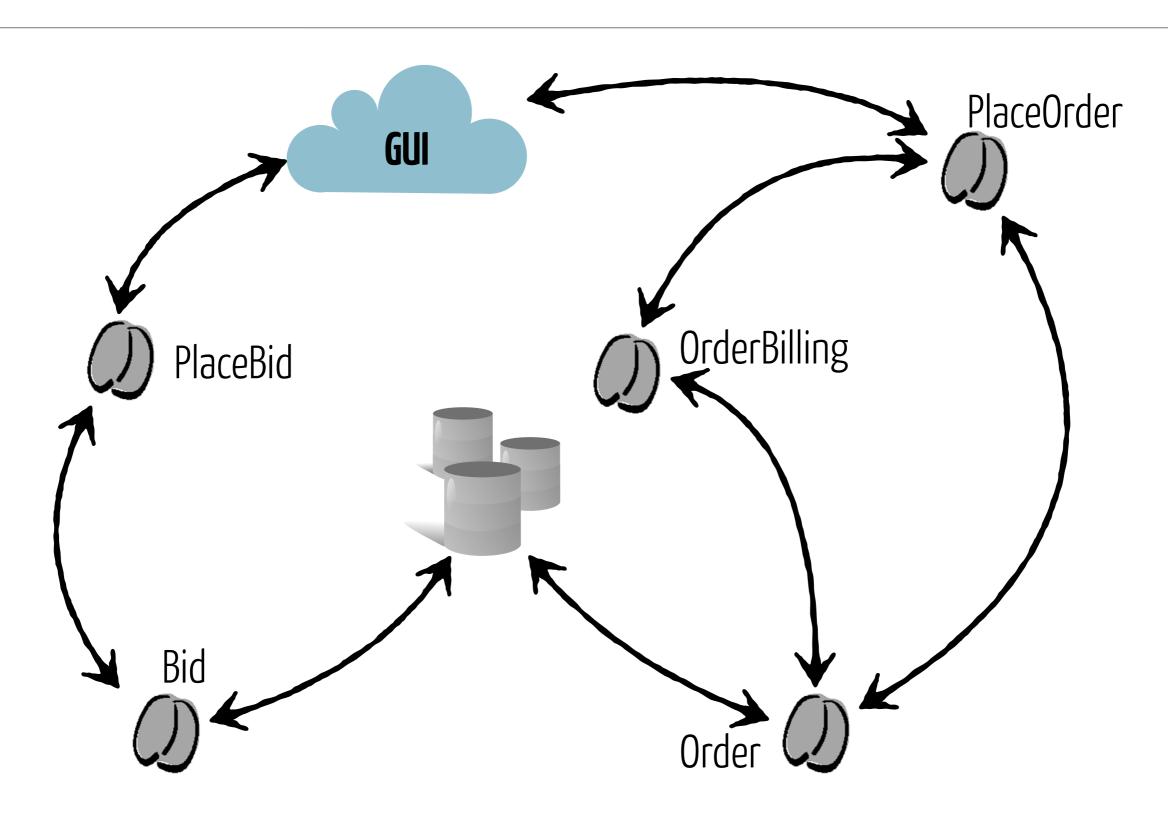


### The ActionBazaar example

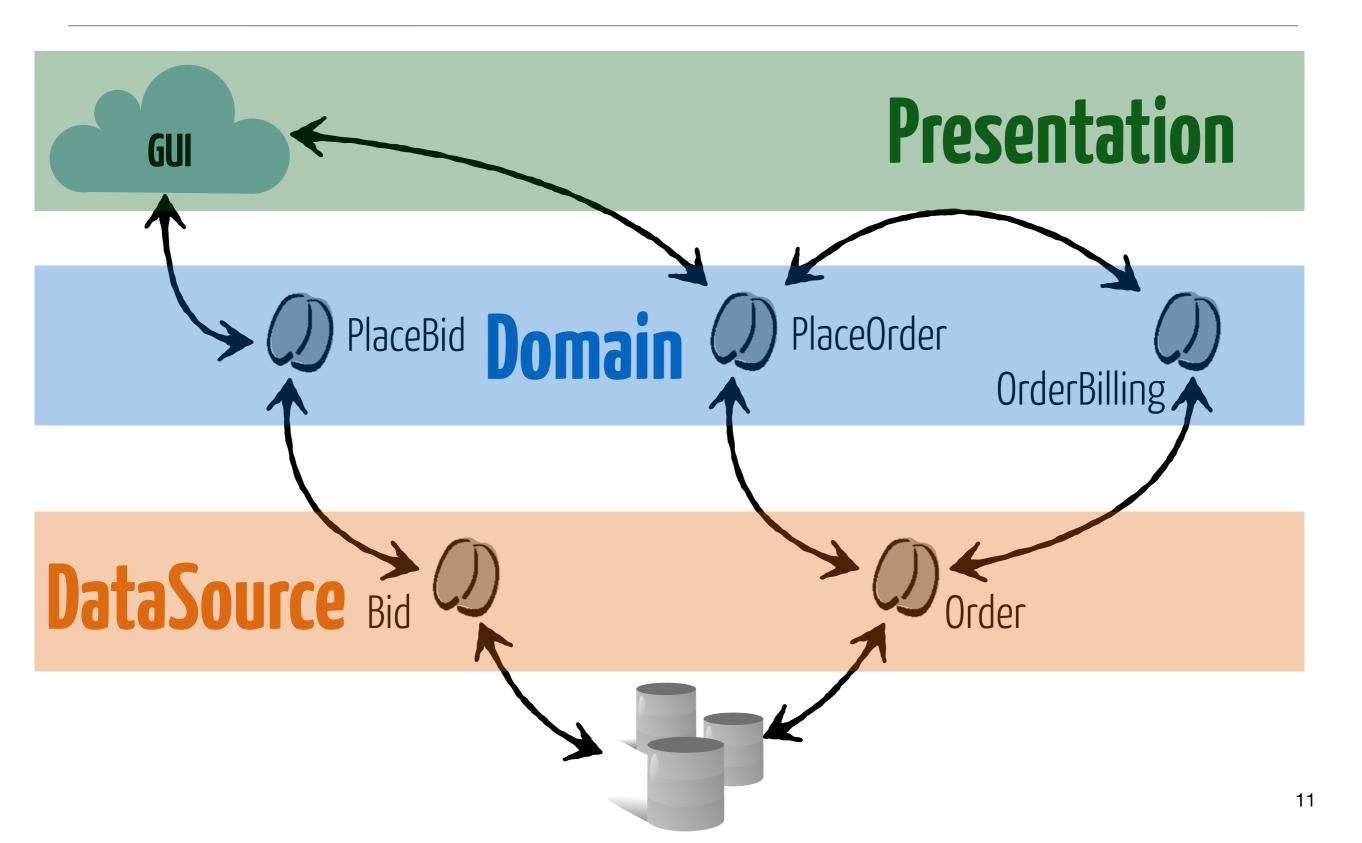




# Identifying Components



# 3-tiers Architecture



#### Rule of Thumb

# Domain Beans interfaces as Verbs

# DataSource Beans as Nouns

### What is a **POJO**?

# An ordinary Java Object

Not bound to any restriction such as

Extending some classes
Implementing some interfaces
Containing some annotations

### What is a **Bean**?

# A POJO that

is serializable has no-argument constructor

allows access to properties using **getters** / **setters** with a **simple naming convention** 

### What is a **Entreprise Java Bean**?



EJB v3 = "Plain Old Java Object on Steroids"

#### POJO on Steroids

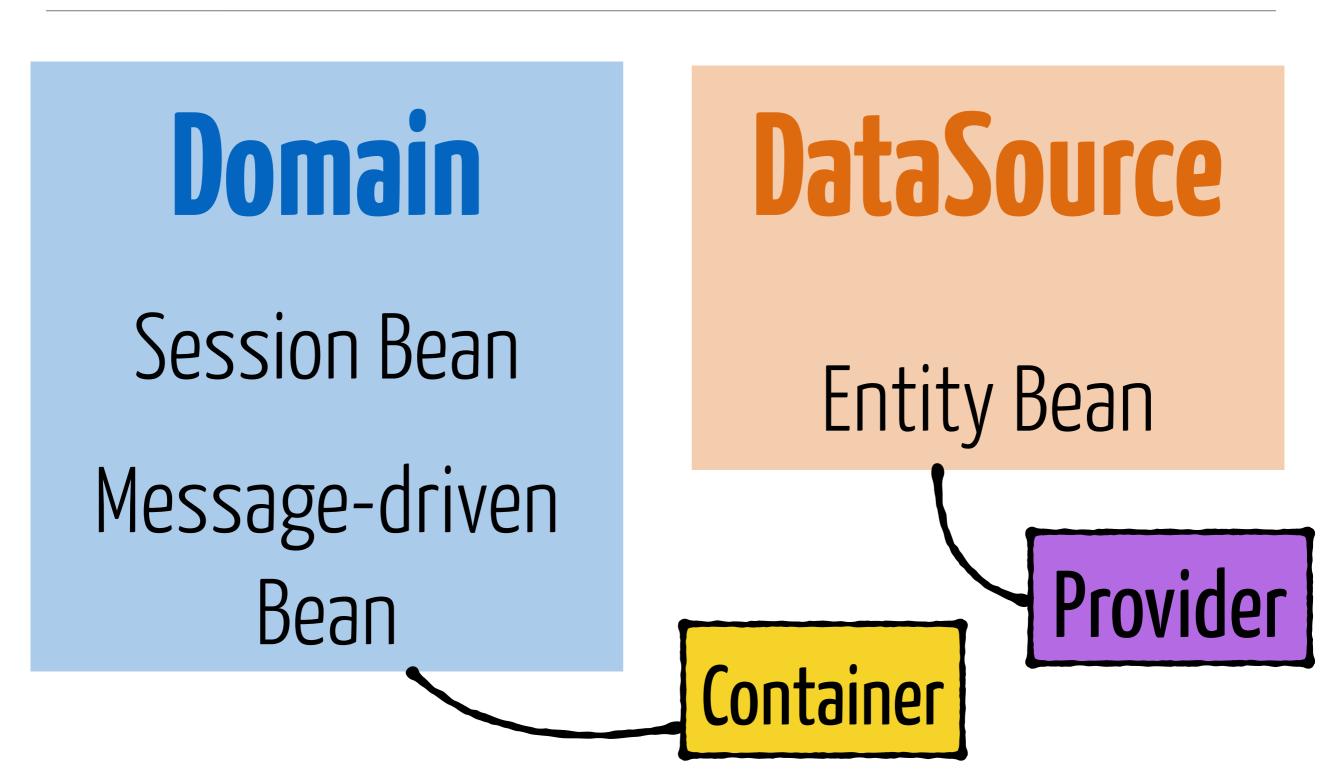


```
public interface HelloUser {
   public void sayHello(String n);
}
```

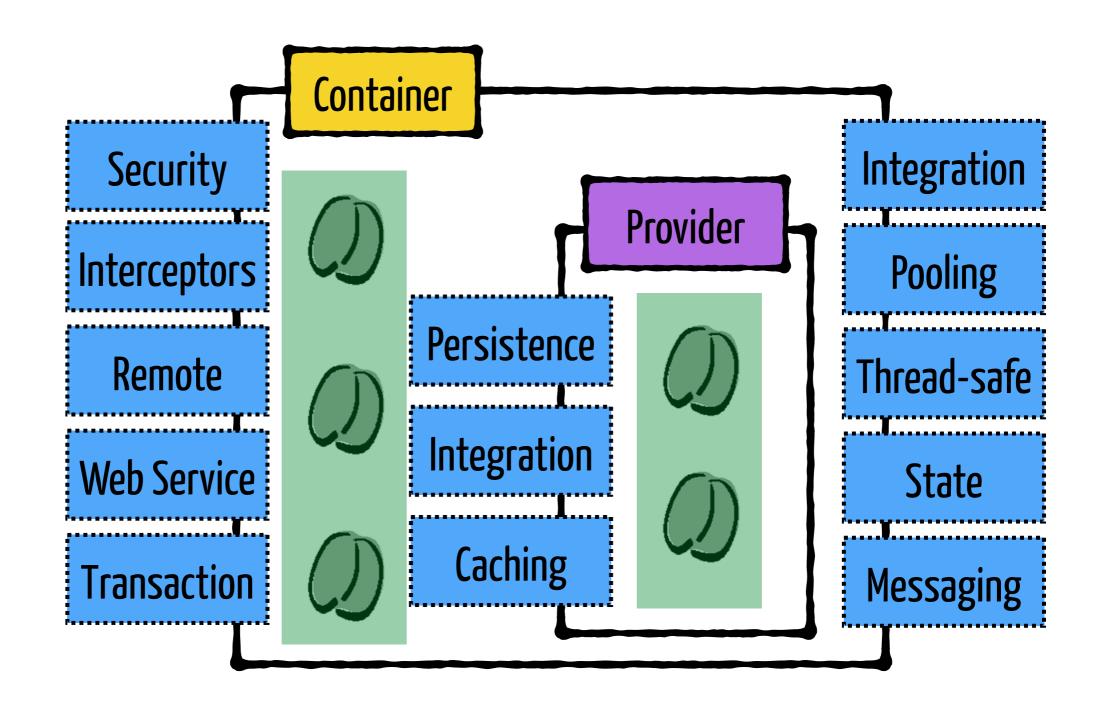
#### @javax.ejb.Stateless

```
public class HelloUserBean implements HelloUser{
  public void sayHello(String n) {
    System.out.println("Hello, " + n "!");
  }
}
```

### Different Flavors



## EJBs Services: focus on Business!





### **Session & Entity**

