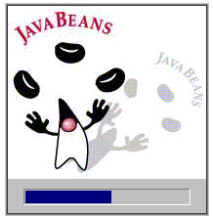
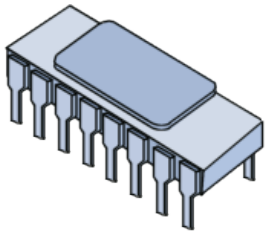
Architecture des Systèmes d'Information

JSP Actions

JSP Backing Beans



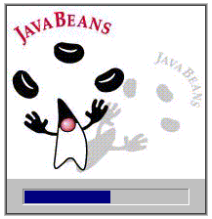


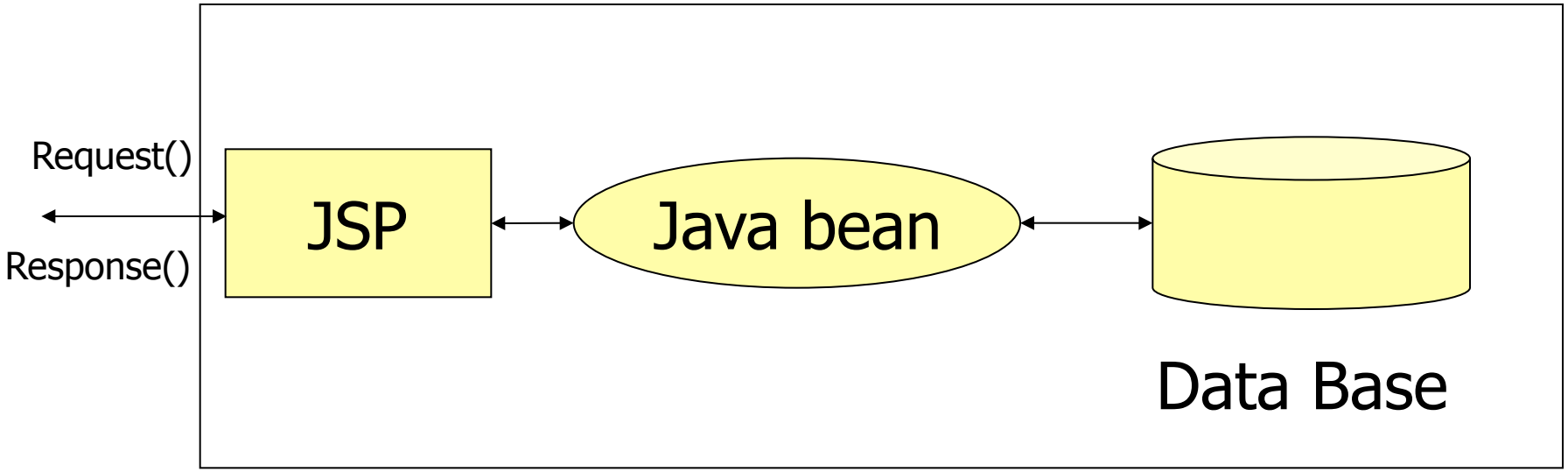
Traduction en cours

JSP Actions

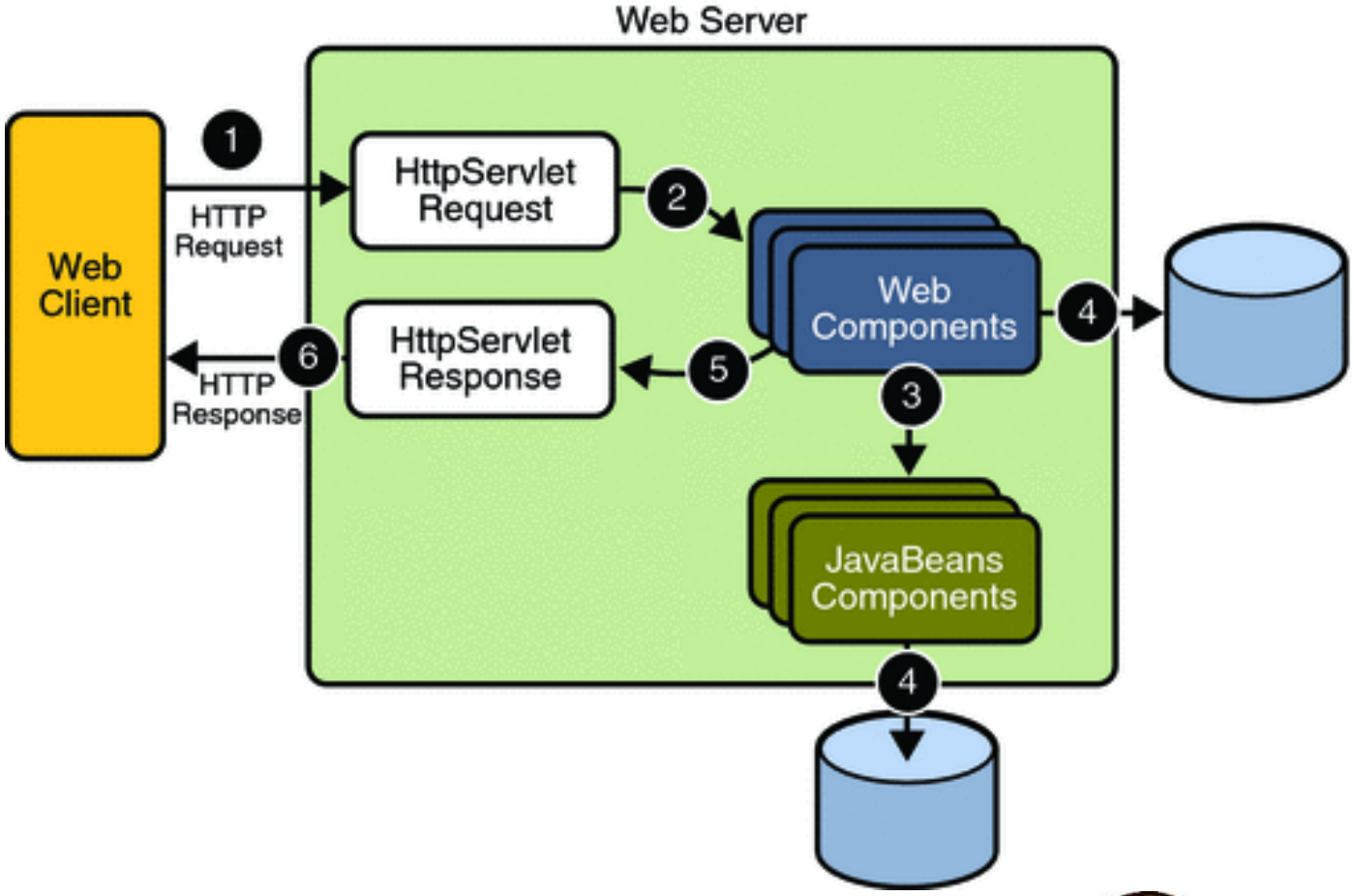
- JSP Actions are XML tags that can be used in the JSP page
- *JSP tag lib*

JSP and Java Bean





The Java EE 5 Tutorial



http://docs.oracle.com/javaee/5/tutorial/doc/geysj.html

JSP Actions

- <jsp:include/>
- <jsp:forward/>
- <jsp:plugin/>
- <jsp:usebean/>
- <jsp:setProperty/>
- <jsp:getProperty/>

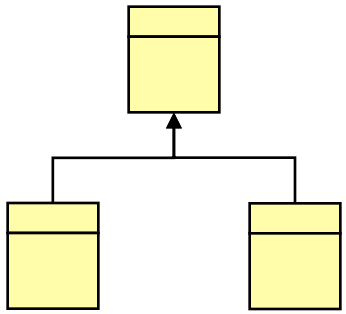
JavaBean related actions

- <jsp:useBean/>
  - find or instantiate a JavaBean
- <jsp:setProperty/>
  - sets the property of a JavaBean
- <jsp:getProperty/>
  - gets the value of a JavaBean property

<jsp:useBean> JSP Action tags

- The useBean action declares a JavaBean for use in a JSP.
- The bean becomes a scripting variable that can be accessed by both scripting elements and other custom tags used in the JSP.
- The full syntax for the useBean tag is as follows:
  - The <jsp:useBean> element locates or instantiates a JavaBeans component.
  - <jsp:useBean> first attempts to locate an instance of the Bean.
  - If the Bean does not exist, <jsp:useBean> instantiates it from a class or serialized template.

Person Bean



Person
name
setName() getName()

<jsp:useBean>

```
<jsp:useBean
        id="beanInstanceName"
        scope="page | request | session | application"
        {
            class="package.class" |
            type="package.class" |
            class="package.class" type="package.class" |
            beanName="{package.class | <%= expression %>}" type="package.class"
        }
        {
            /> |
            > other elements </jsp:useBean>
        }
```

<jsp:useBean>

```
<jsp:useBean
        id="beanInstanceName"
        scope="page | request | session | application"
        {
            class="package.class" |
            type="package.class" |
            class="package.class" type="package.class" |
            beanName="{package.class | <%= expression %>}" type="package.class"
        }
        {
            /> |
            > other elements </jsp:useBean>
        }
```

Package Mandatory

<jsp:useBean>

```
<jsp:useBean id="Person" class="bean.Person" scope="session"/>
```

Package Mandatory

<jsp:useBean>

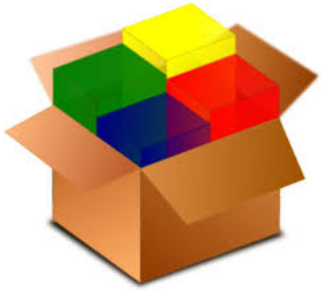
```
<jsp:useBean
        id="beanInstanceName"
        scope="page | request | session | application"
        {
            class="package.class" |
            type="package.class" |
            class="package.class" type="package.class" |
            beanName="{package.class | <%= expression %>}" type="package.class"
        }
        {
            /> |
            > other elements </jsp:useBean>
        }
```

EJB session Bean

<jsp:setProperty/> <jsp:getProperty/>

```
<jsp:setProperty name="bean" property="propertyName" value="val" />

<jsp:getProperty name="bean" property="propertyName" />
```

WAR



Root

WEB-INF

*.html

*.jpeg

*.jsp

Web.xml

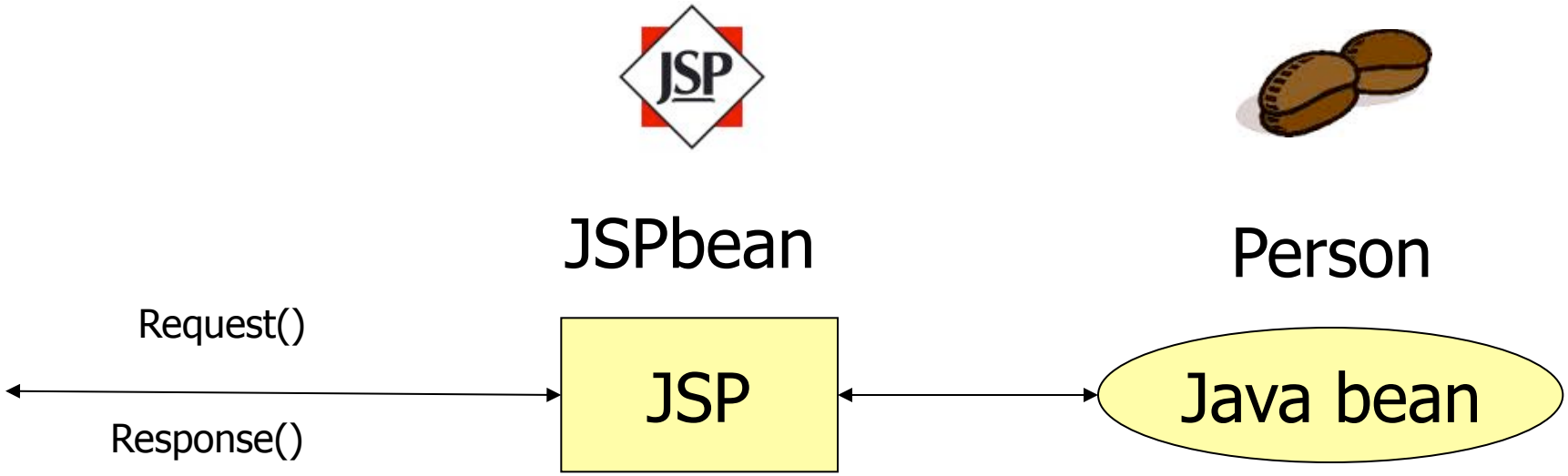
Classes

*.class

lib

*.jar

JSP and Java Bean example



Person bean

```
package bean;

public class Person implements java.io.Serializable
{
   private String firstName = null;
   private String lastName = null;

   public Person() {
   }
   public String getFirstName(){
      return firstName;
   }
   public String getLastName(){
      return lastName;
   }

   public void setFirstName(String firstName){
      this.firstName = firstName;
   }
   public void setLastName(String lastName){
      this.lastName = lastName;
   }
}
```

Person.java

Person bean

Java EE – JSPbackedBean/src/bean/Person.java – Eclipse – /Users/emmanuelfuchs/eclipseTemplate

Quick Access | Java EE | XML

Project Explorer | Type Hierarchy

JSPbackedBean
- Deployment Descriptor: JSPbackedBean
- src
  - bean
    - Person.java
      - Person
- JRE System Library [Java SE 6 (MacOS X Default)]
- Server Library [JBoss 5.1 Runtime] (unbound)
- Web App Libraries
- EAR Libraries
- JavaScript Resources
- build
- WebContent
  - META-INF
  - WEB-INF
  - JSPBeanGet.jsp
  - JSPBeanSet.jsp

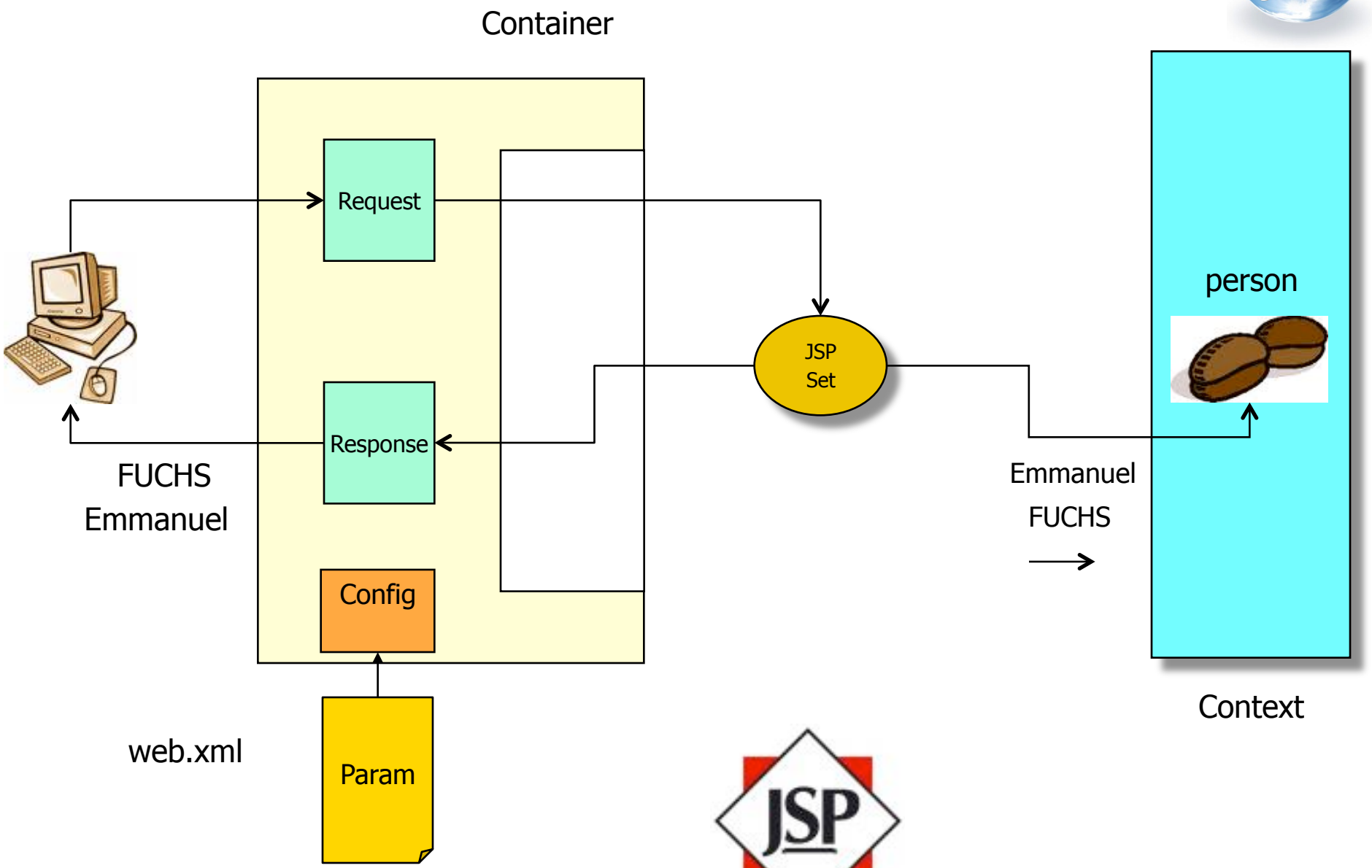
JSPBeanSet.jsp | JSPBeanGet.jsp | Person.java

```
package bean;

import java.io.Serializable;

public class Person implements Serializable

{
        private String firstName = null;
        private String lastName = null;

        public Person() {
        }
        public String getFirstName(){
           return firstName;
        }
        public String getLastName(){
           return lastName;
        }

        public void setFirstName(String firstName){
           this.firstName = firstName;
        }
        public void setLastName(String lastName){
           this.lastName = lastName;
        }
}
```

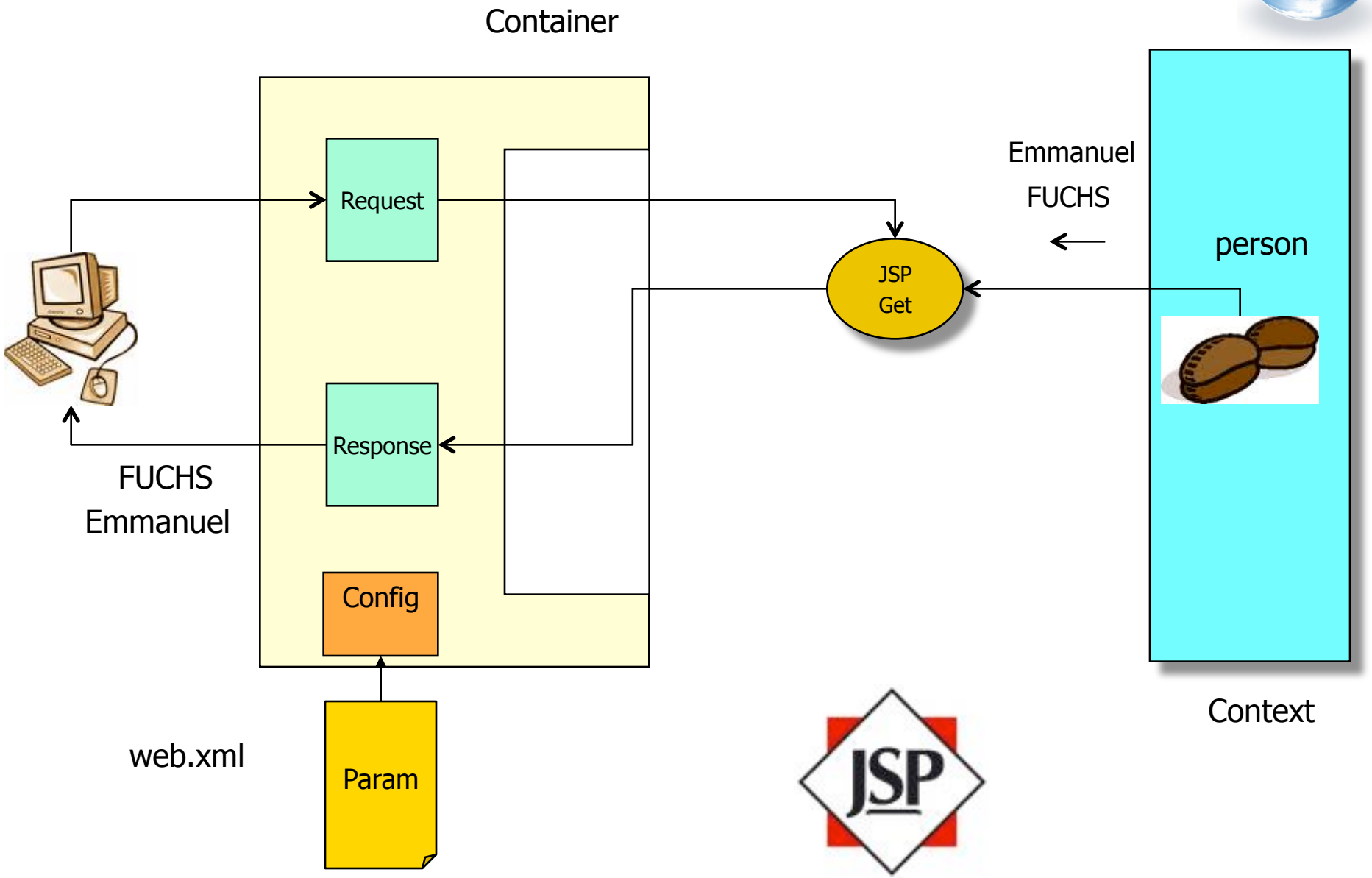
Properties | Servers | Data Sourc | Snippets | Console | Call Hierar

bean.Person.java – JSPbackedBean/src

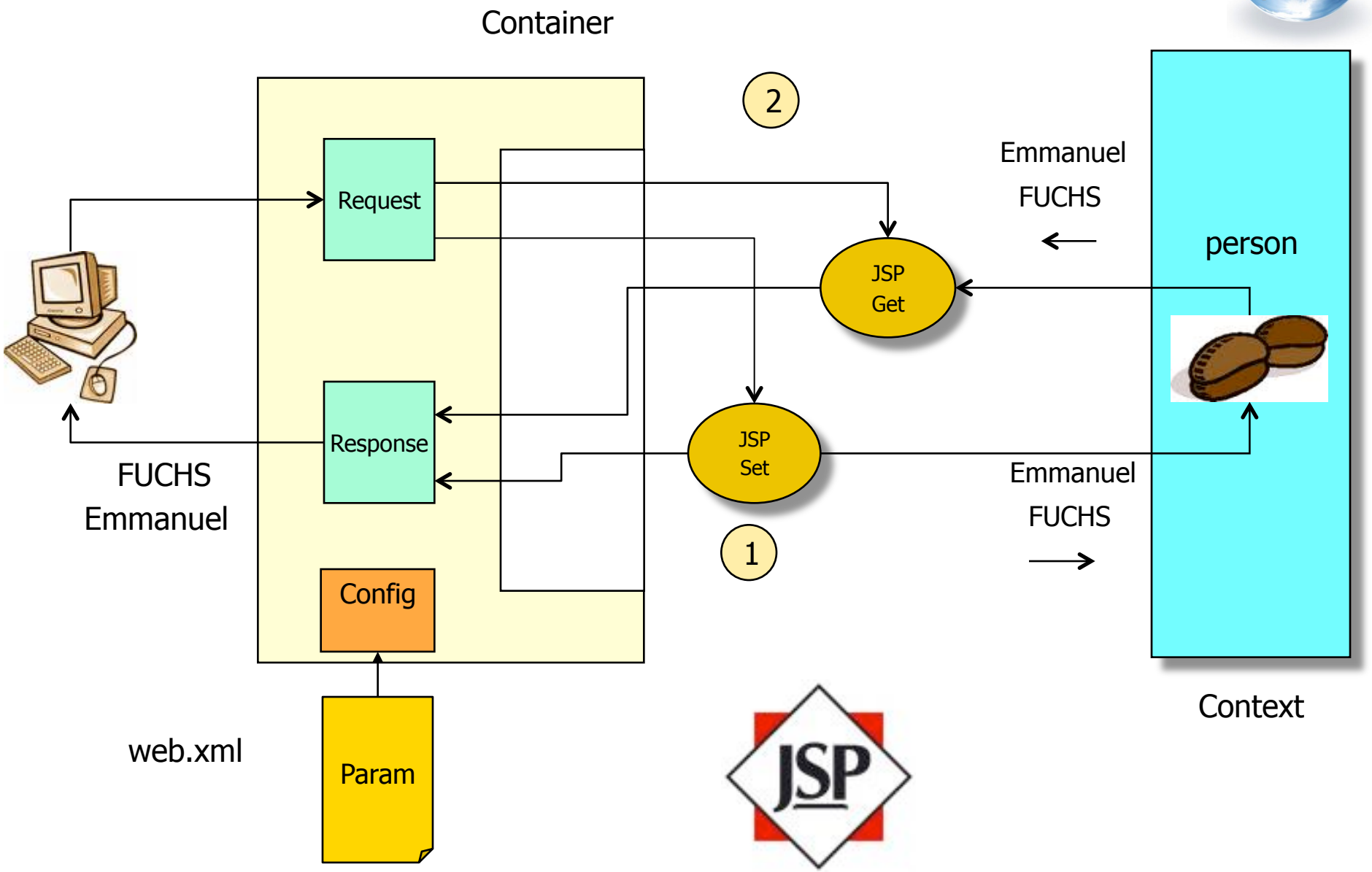
JSP SET GET


Container
Request
Response
Config
Param
web.xml
JSP
Set
FUCHS
Emmanuel
Emmanuel
FUCHS
person
Context

JSP SET GET


Container
Request
Response
Config
Param
web.xml
JSP
Get
Emmanuel
FUCHS
person
Context
FUCHS
Emmanuel
JSP

JSP SET GET

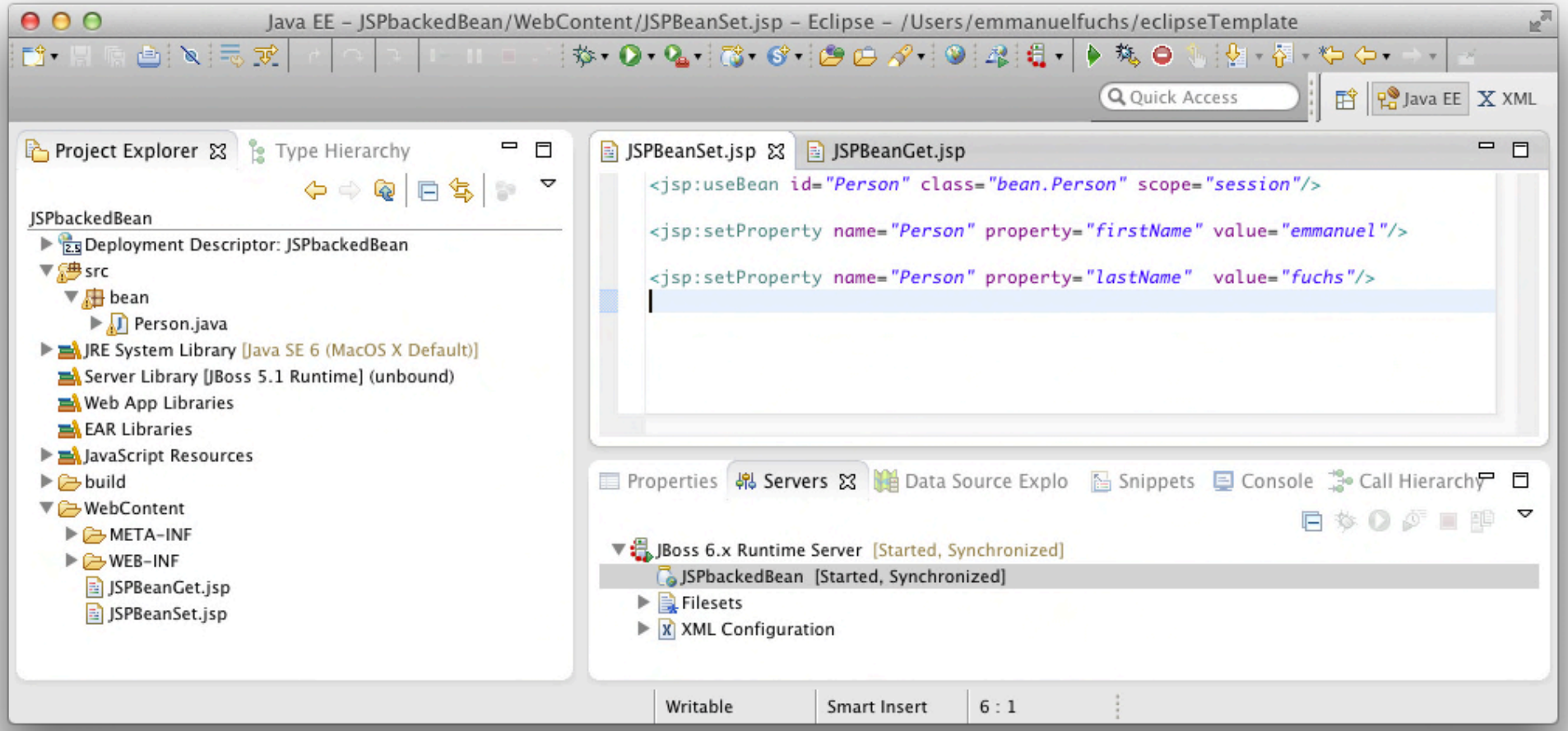

Container
2
Request
Response
Config
Param
web.xml
JSP
Get
JSP
Set
1
Emmanuel
FUCHS
person
Context
FUCHS
Emmanuel
Emmanuel
FUCHS
JSP

JSPbeanSet.jsp

```
<jsp:useBean id="Person" class="bean.Person" scope="session"/>

<jsp:setProperty name="Person" property="firstName" value="emmanuel"/>

<jsp:setProperty name="Person" property="lastName"  value="fuchs"/>
```

The genrated Servlet stores the Person bean in the Servlet Context

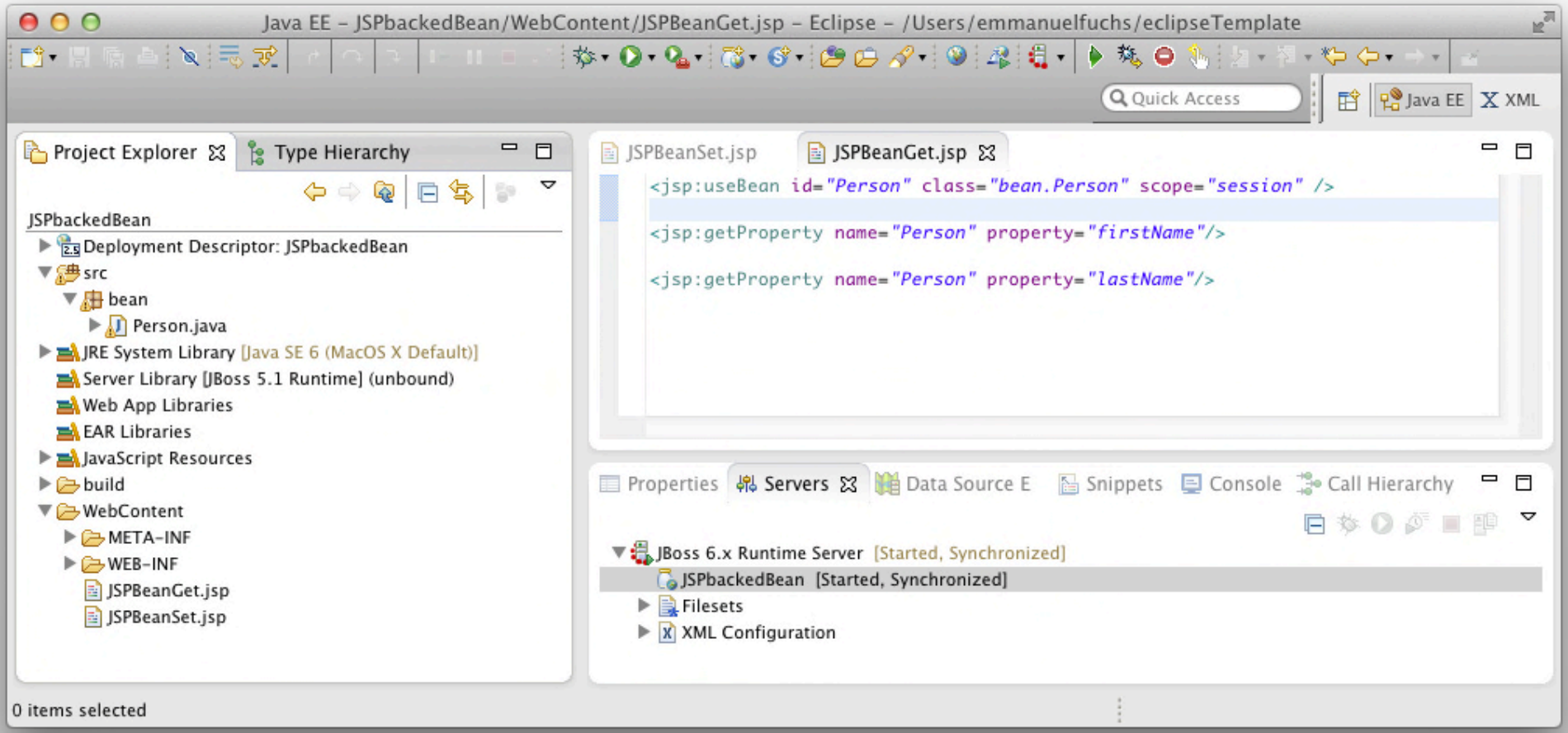
JSPbeanSet.jsp



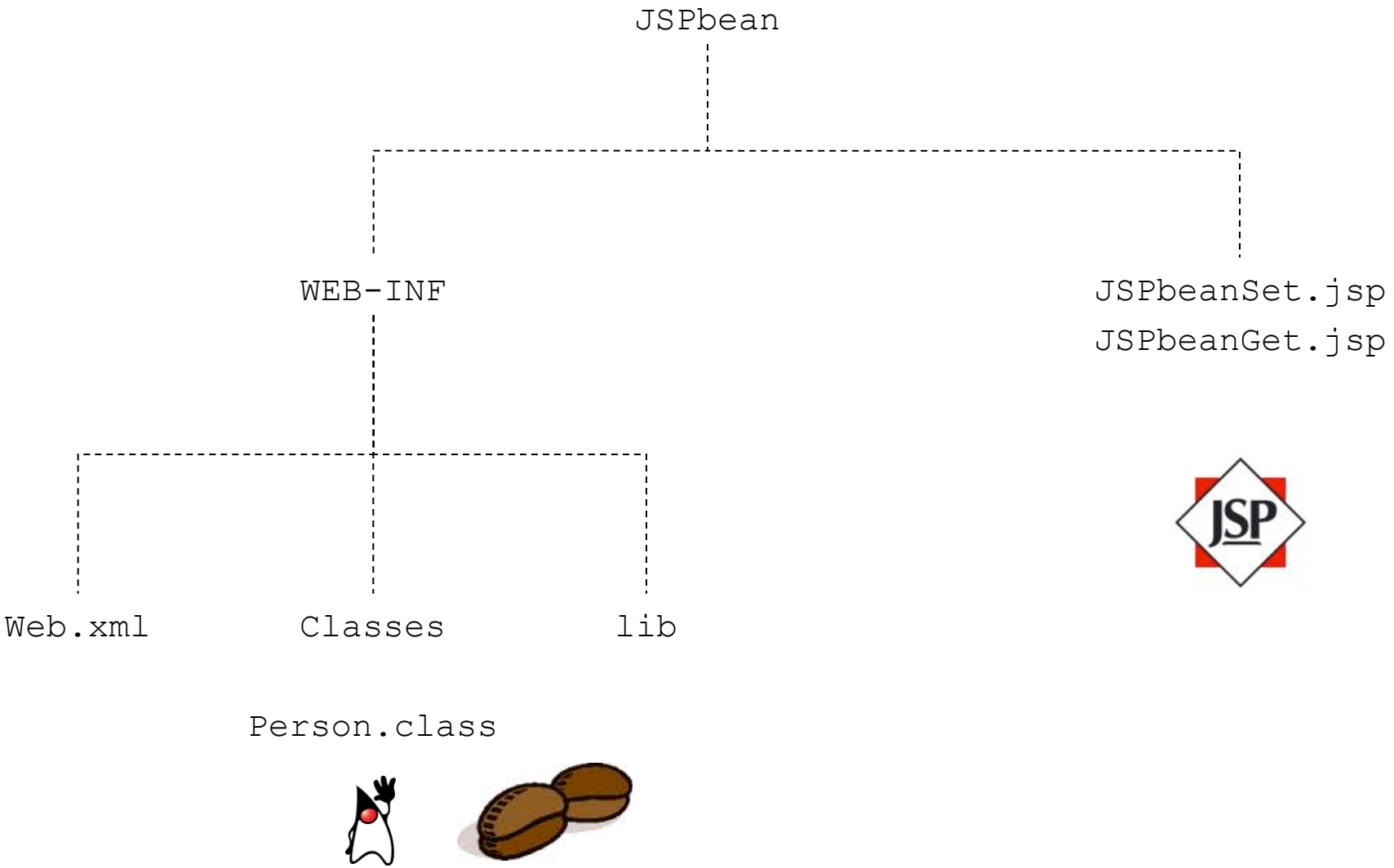
JSPbeanGet.jsp

```
<jsp:useBean id="Person" class="bean.Person" scope="session"/>

<jsp:getProperty name="Person" property="firstName"/>

<jsp:getProperty name="Person" property="lastName"/>
```

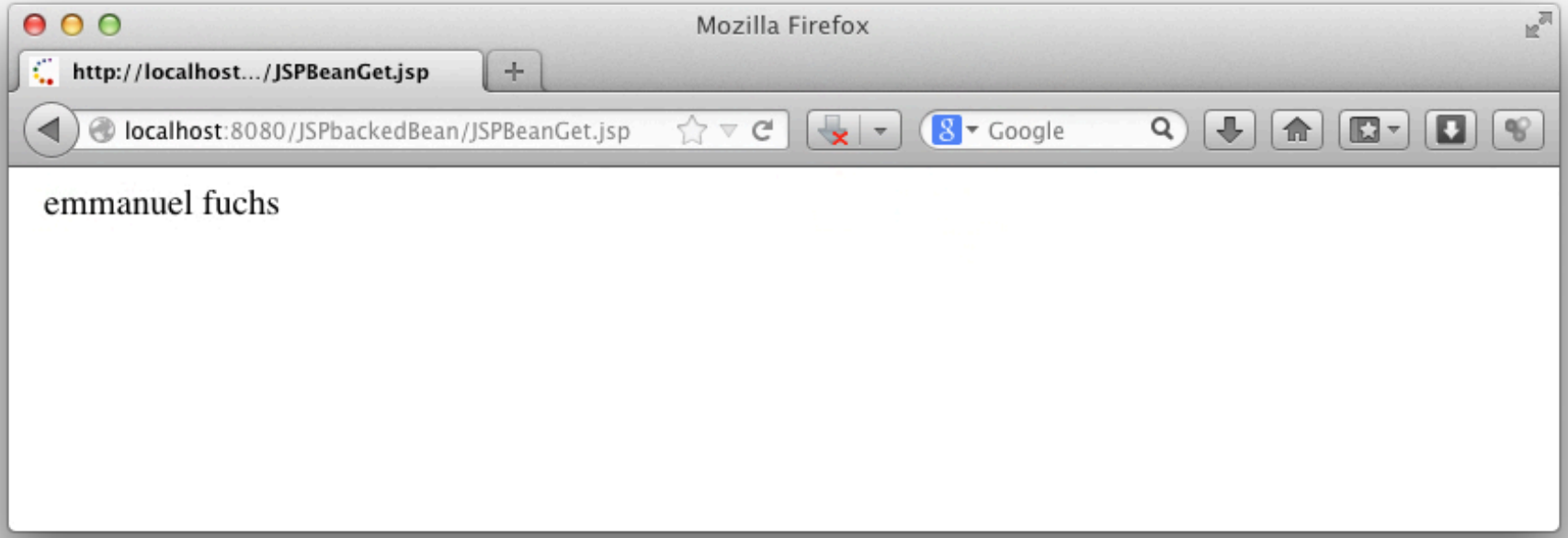
JSPbeanGet.jsp



WAR


JSPbean
WEB-INF
JSPbeanSet.jsp
JSPbeanGet.jsp
Web.xml
Classes
lib
Person.class

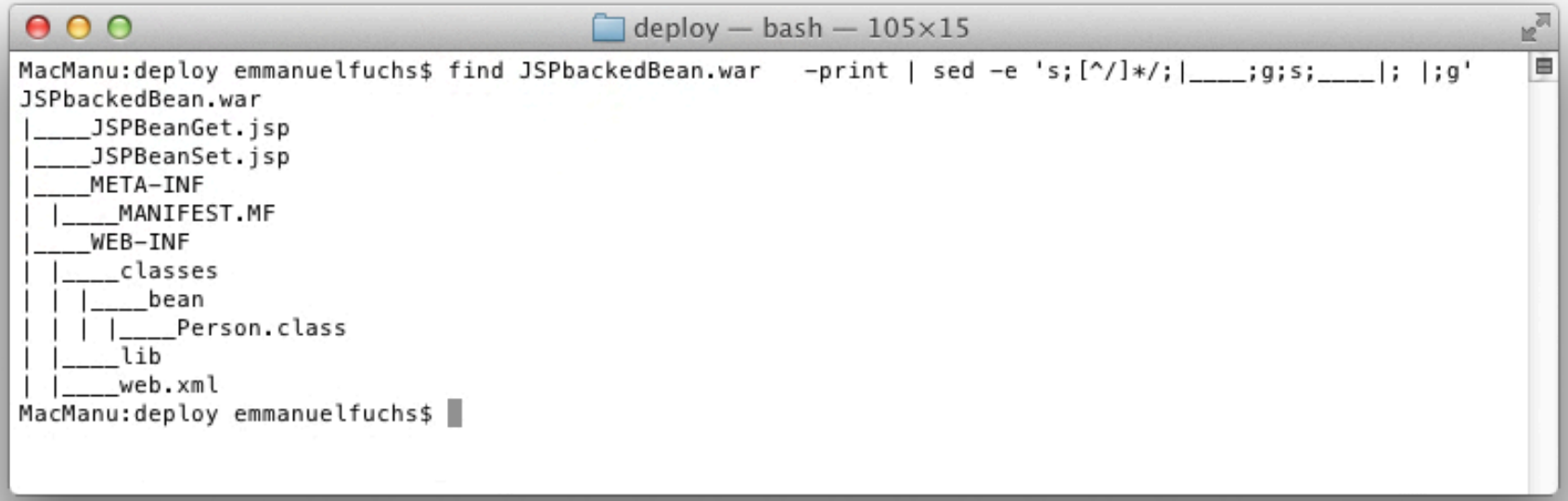
http://localhost:8080/JSPbean/JSPbeanGet.jsp



Le tree du pauvre

```
$ find . -print | sed -e 's;[^/]*/;|____;g;s;____|; |;g‘
```

WAR


deploy — bash — 105×15
MacManu:deploy emmanuelfuchs$ find JSPbackedBean.war -print | sed -e 's;[^/]*/;|____;g;s;____|; |;g'
JSPbackedBean.war
|____JSPBeanGet.jsp
|____JSPBeanSet.jsp
|____META-INF
| |____MANIFEST.MF
|____WEB-INF
| |____classes
| | |____bean
| | | |____Person.class
| |____lib
| |____web.xml
MacManu:deploy emmanuelfuchs$

Java Bean to Enterprise Java Bean (EJB)

JSPbean

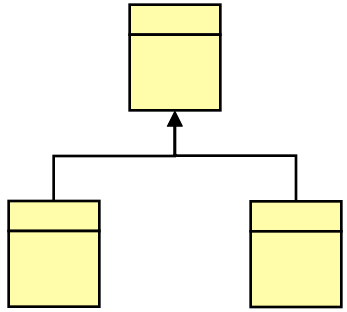
Person

Request()

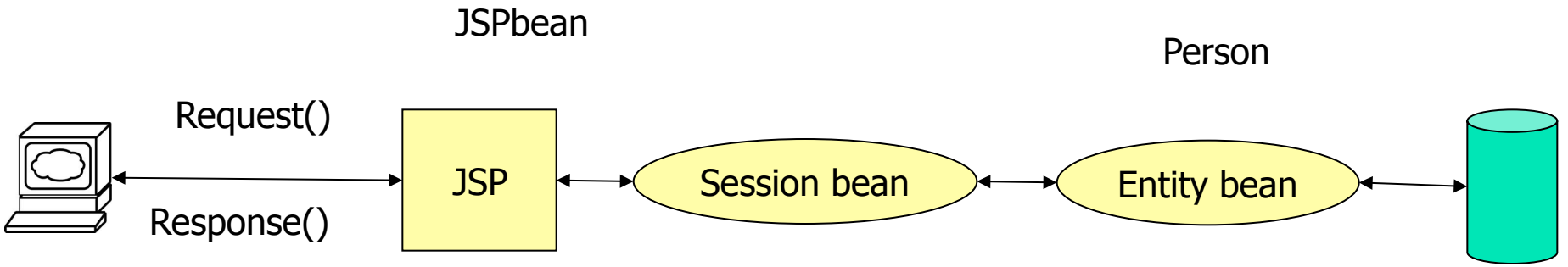
Response()

JSP

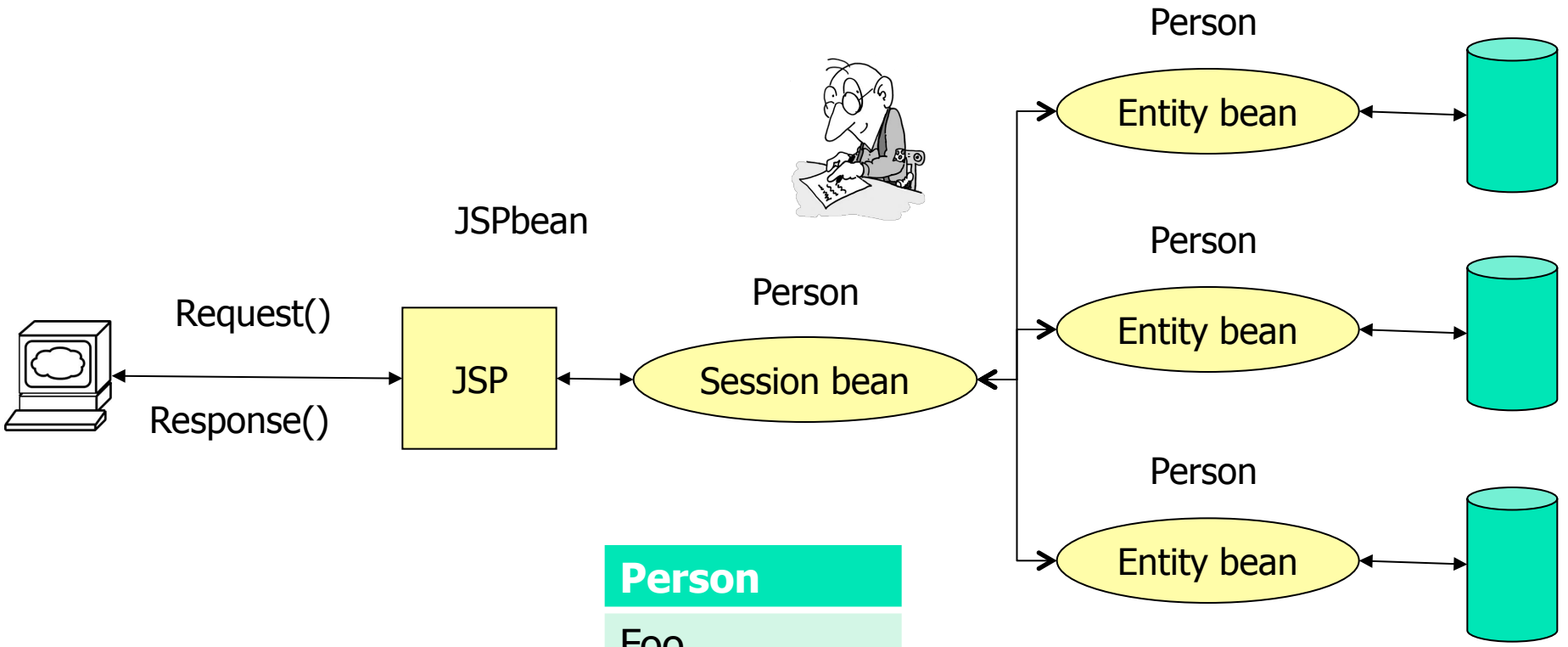
Java bean



Java Bean to EJB Session Bean



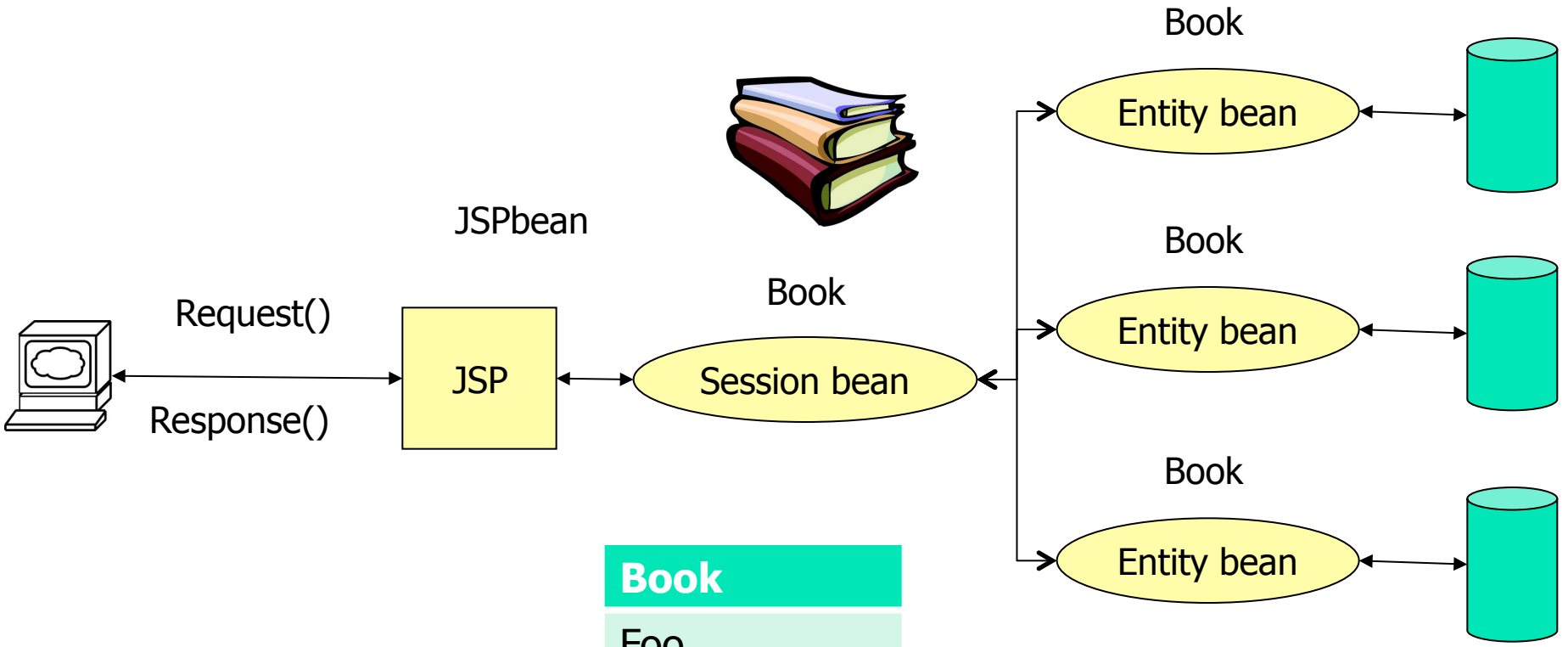
Java Bean to EJB Session Bean Entity Bean



Person
Foo
Bar
Boz

metasyntactic variables

Java Bean to EJB Session Bean Entity Bean



Java Bean to EJB Session Bean Entity Bean

Books
Foo
Bar
Boz

Authors
Foo
Bar
Boz

Book

Entity bean

Request()

Response()

JSP

Book

Session bean

Author

Entity bean

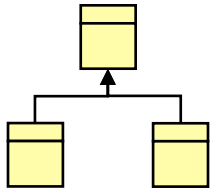
Author
Id Name Books

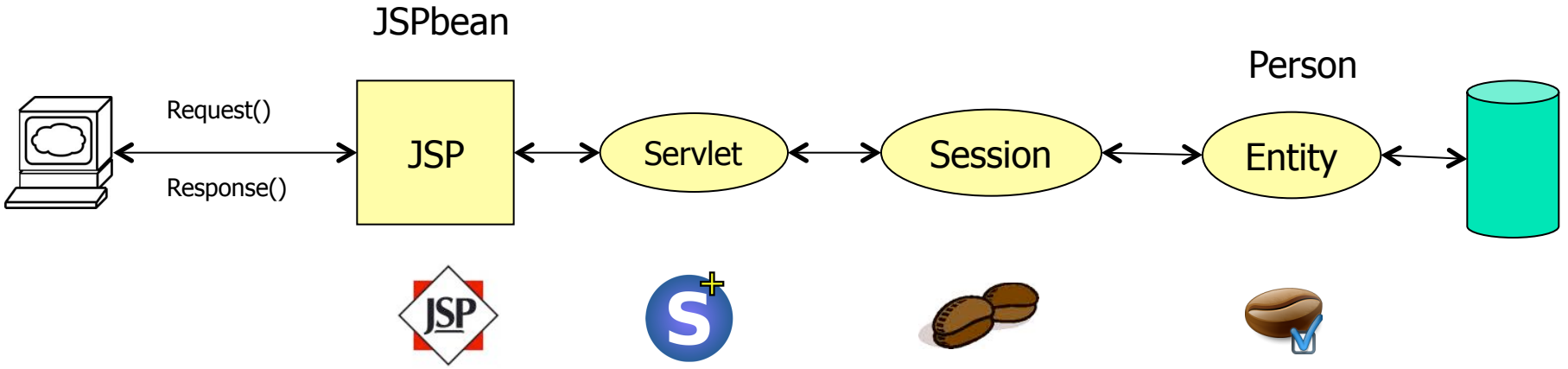
1

n

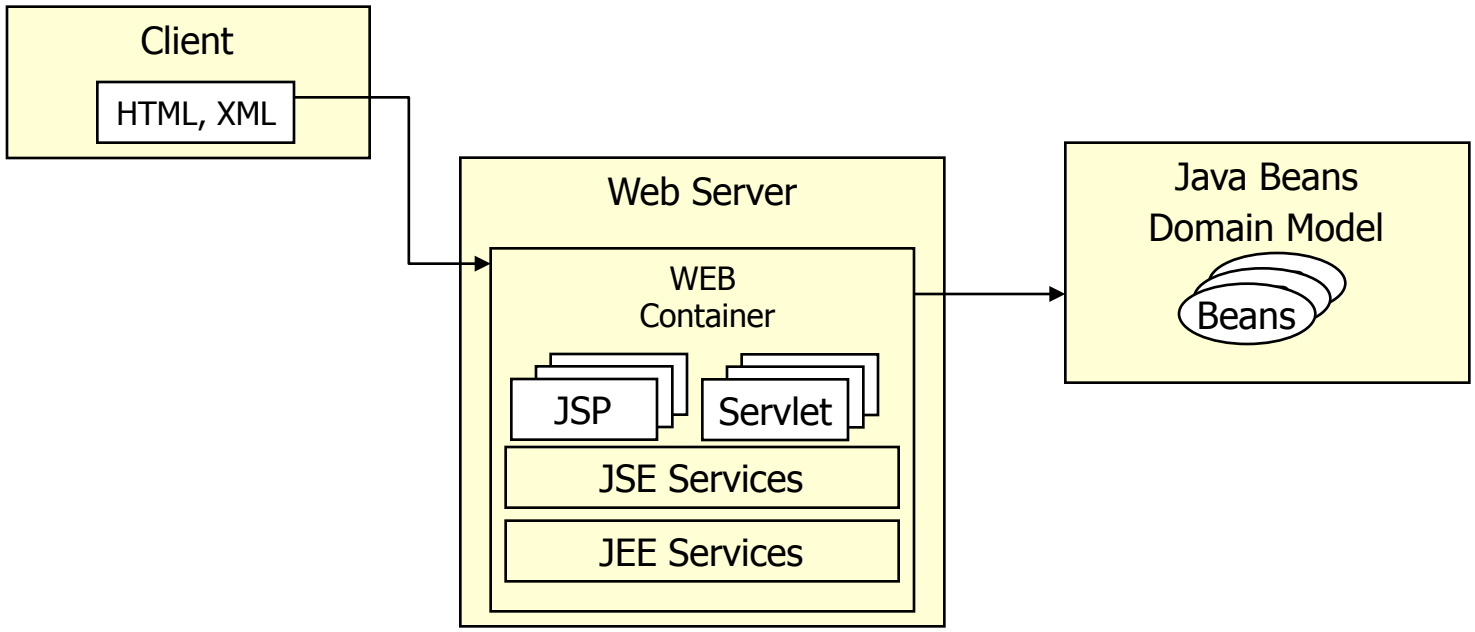
Book
Id Title Author

Java Bean to EJB Session Bean

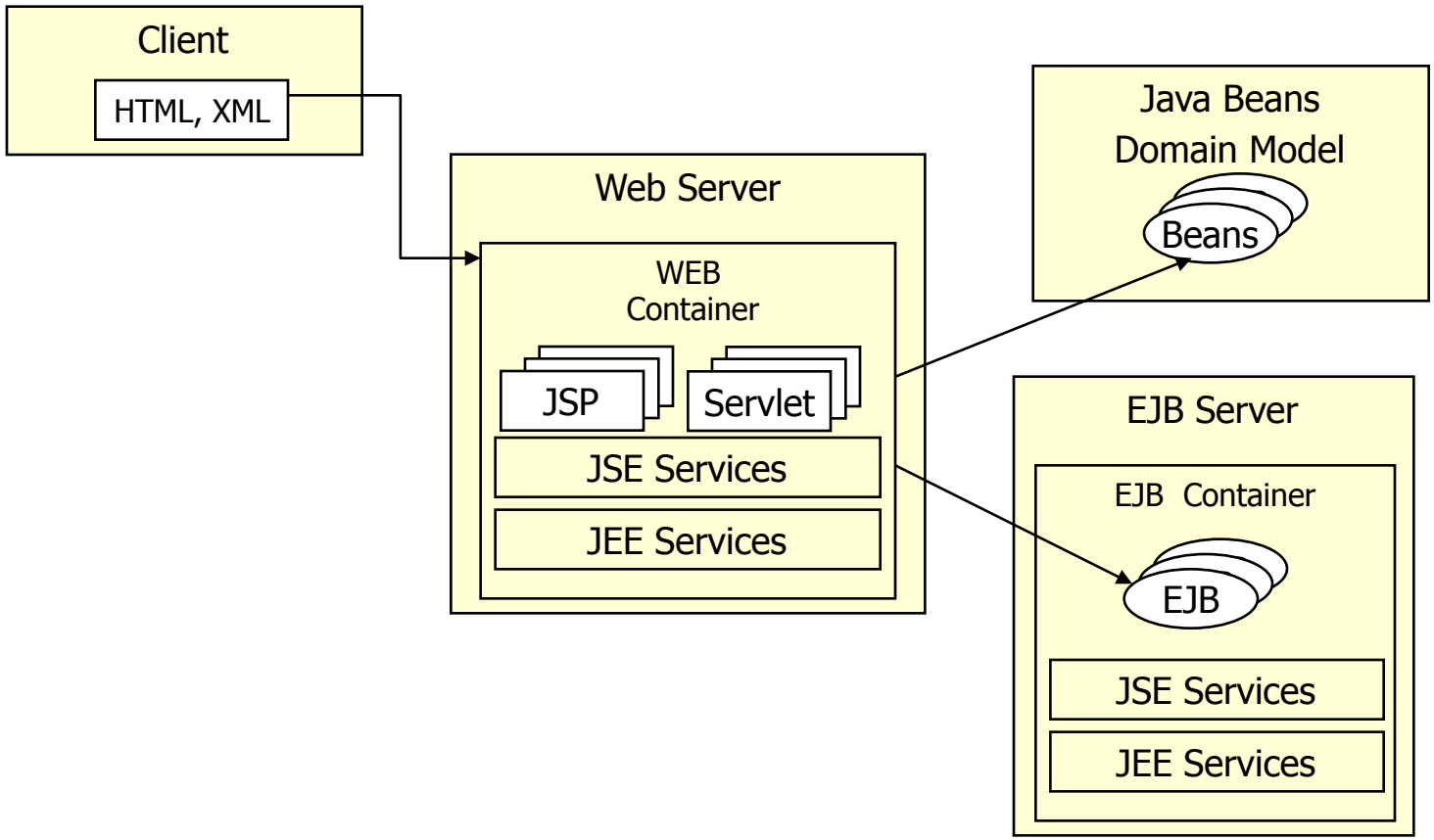




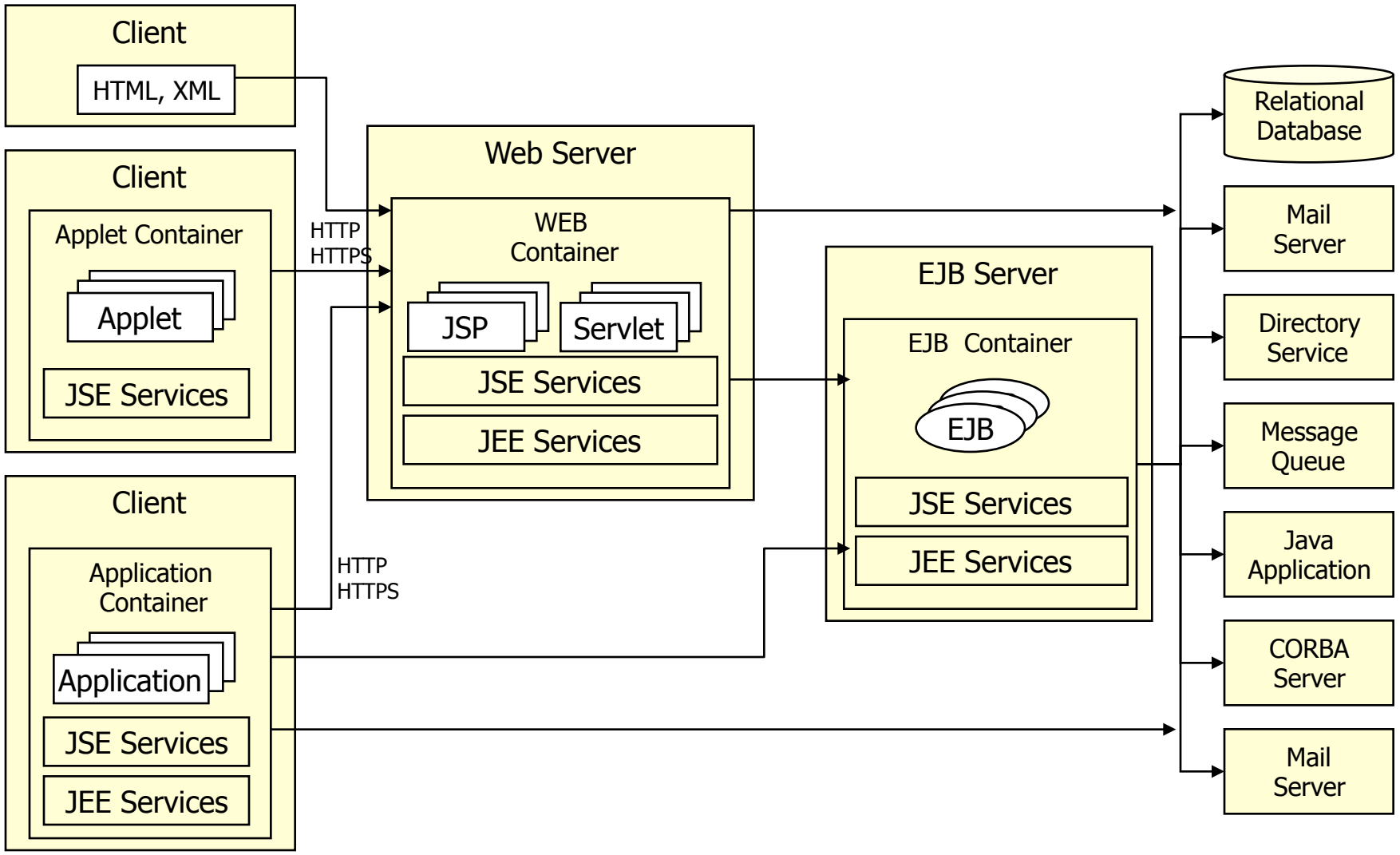
Web Server Enterprise Components



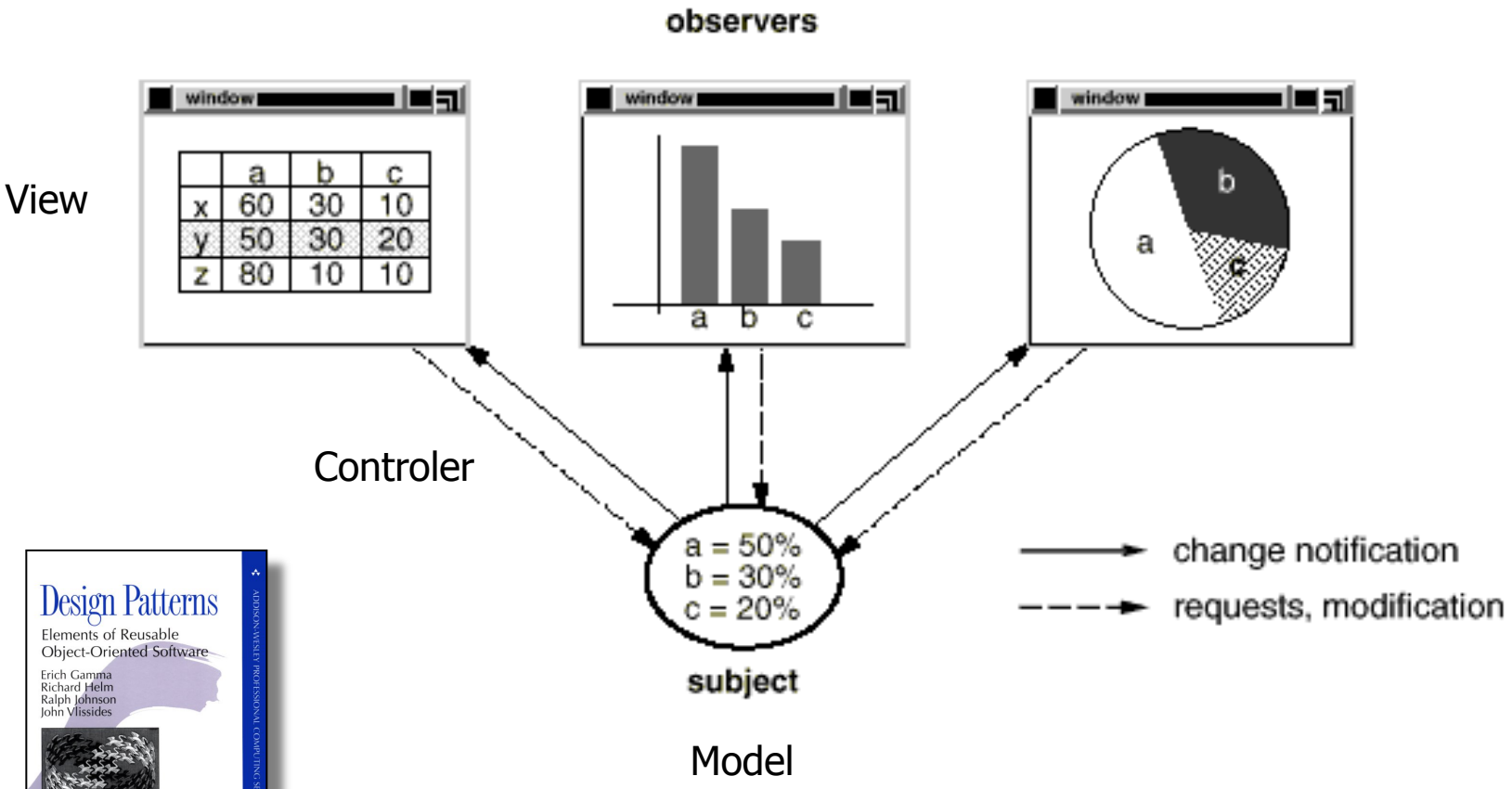
Web Server Enterprise Components

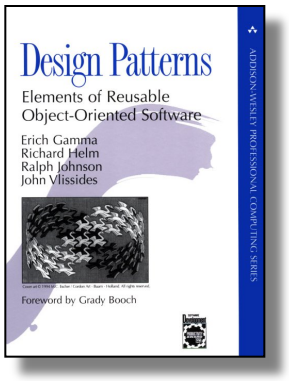


Web Server Enterprise Components

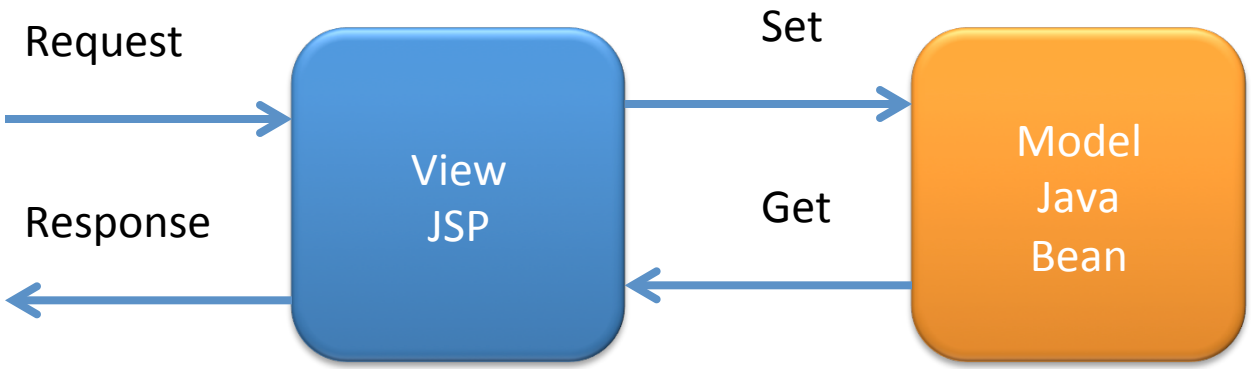


The GOF example

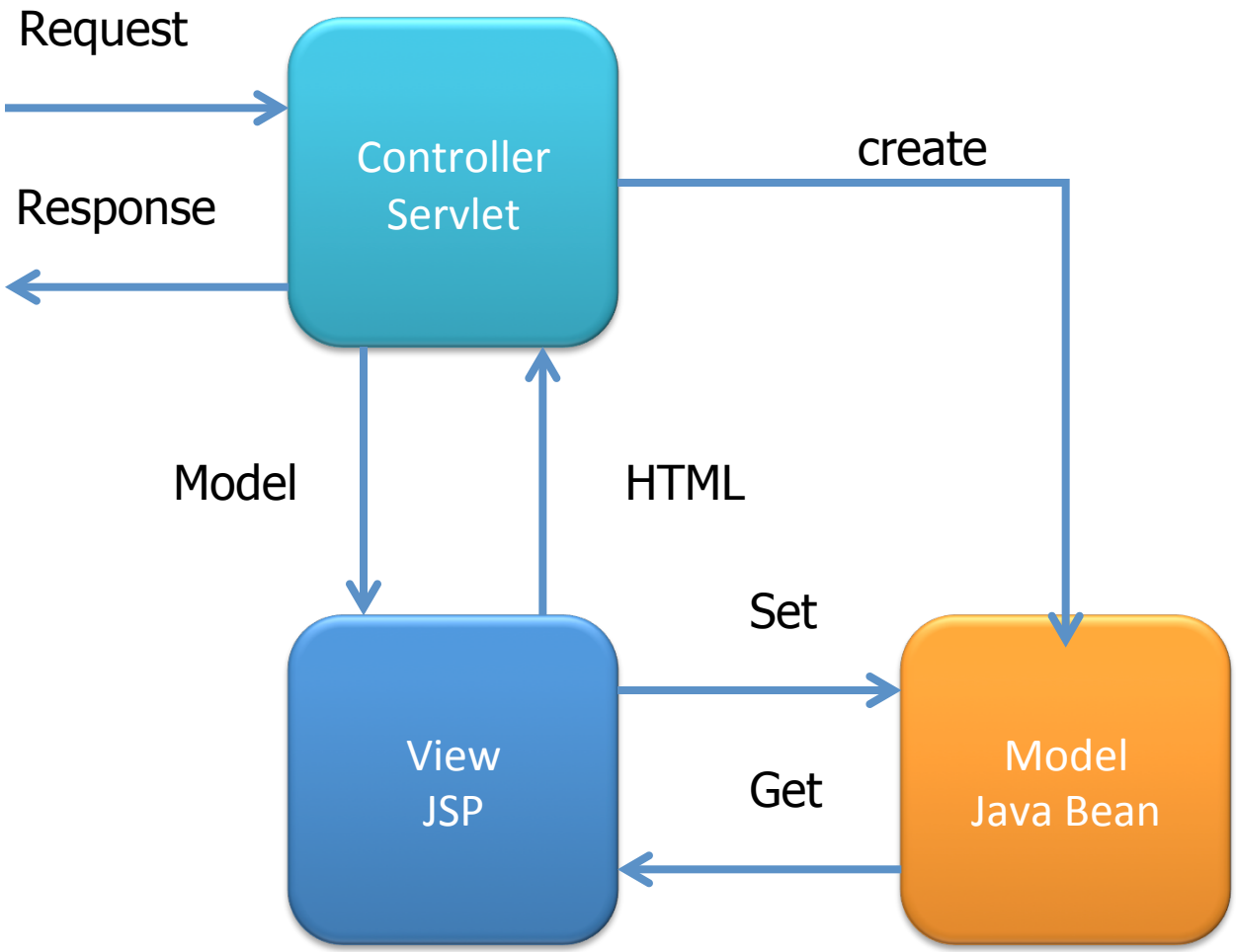
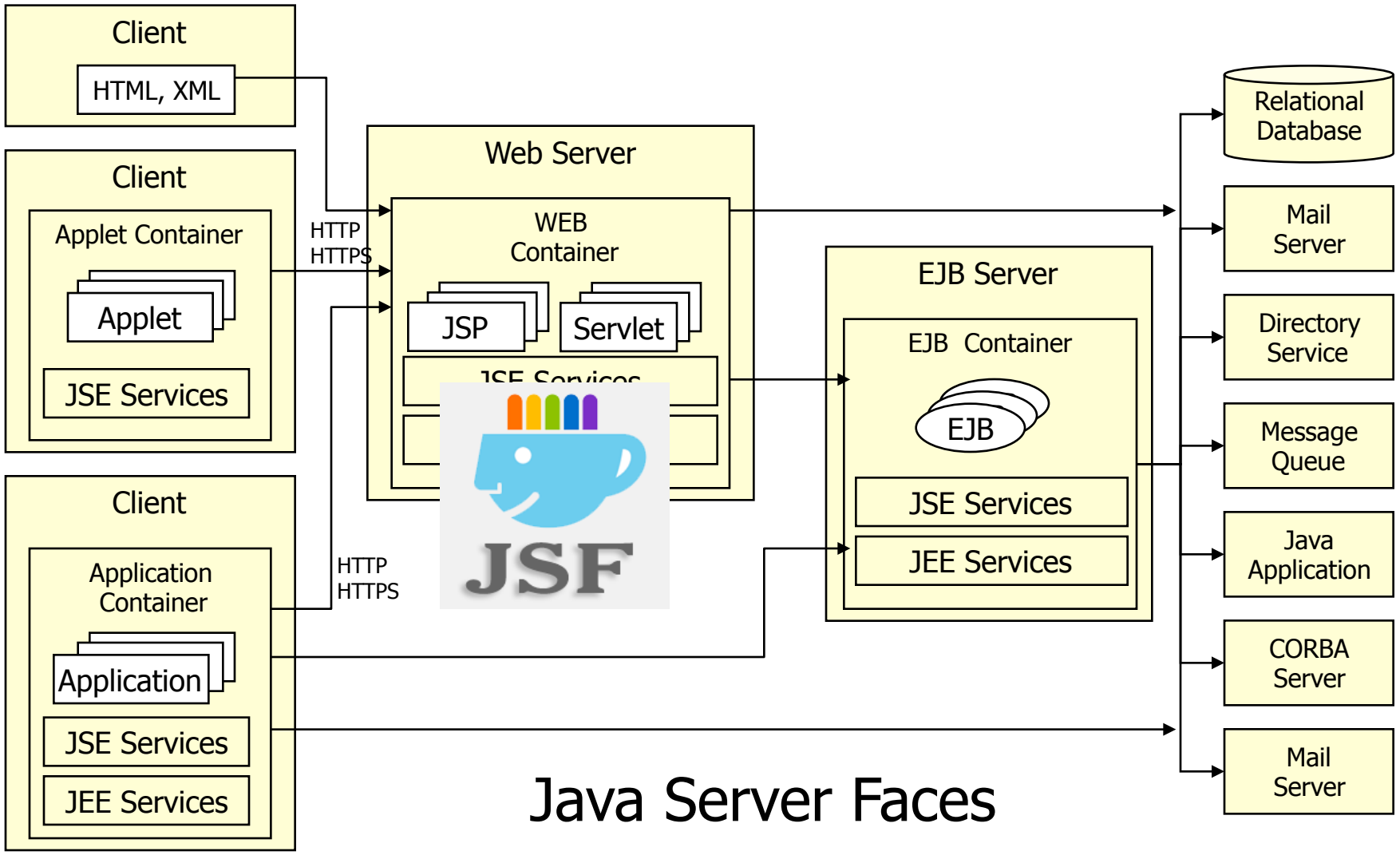




A la MVC



A la MVC


Request
Response
Controller
Servlet
create
Model
HTML
Set
Get
View
JSP
Model
Java Bean

Web Server Enterprise Components