

JSP and Servlets in J2EE



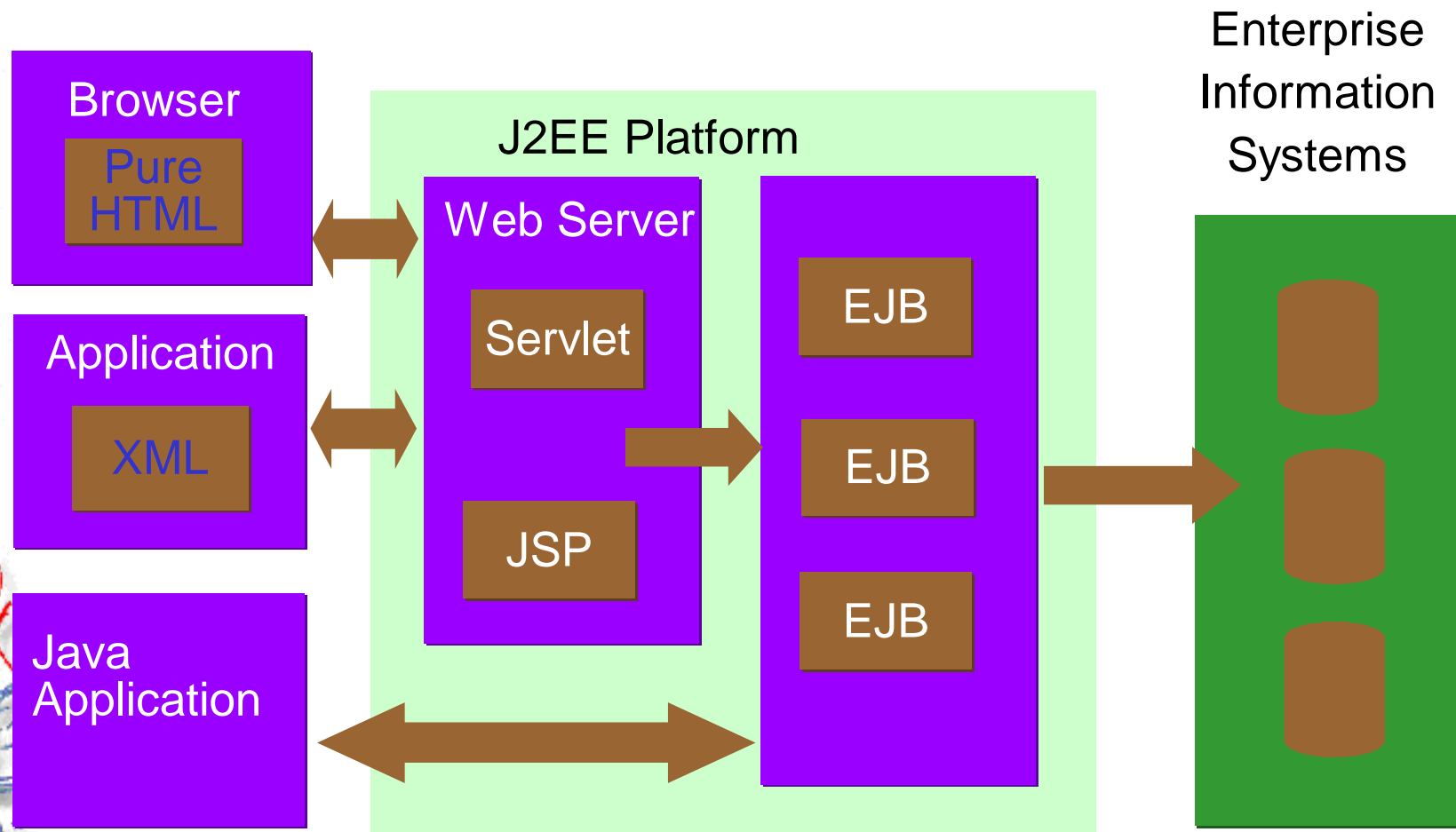
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Agenda

- " The role of JSPs and Servlets in the J2EE platform
- " Why and when to use JSPs and Servlets in J2EE platform
- " A particular example
- " Conclusion



Multi-Tiered Enterprise Apps



Web Components in J2EE

- Web Components form the window to J2EE
- Allows web layer to focus on what its good at - presentation
- Allows reuse of business logic elsewhere
- Allows scalability



J2EE Services

- " Security
- " Naming
- " Database
- " Transactions
- " Enterprise Java Beans (EJB)
- " JavaMail



Migrate or not ?

- " If you want to make your business logic re-usable to other parts of the organisation
- " If you want to take advantage of a secure, robust, transactional infrastructure
- " If you want to connect into an interoperable environment and access Information Systems



How to Migrate

- Separate semantics within a web application
- Use JSP and Servlet components as presentation layer for data
- Move business logic out of web components into separate components e.g. Tag Libraries
- Migrate business logic to EJB



Interaction with EJB: Example

- " Example: Online music store
- " Web front end, with functionality to:-
 - " Browse catalog
 - " Sign in
 - " Make purchases using 'shopping cart'



Example application contents:-

- " Web Layer:-
 - " Static content
 - " Catalog browsing JSPs
 - " Checkout form Servlet
- " EJB layer
 - " Catalog entity bean
 - " Shopping cart session bean
 - " Account entity bean



Code example: Checkout Servlet

```
import javax.naming.*;
```

```
    // create JNDI initial context
```

```
Context context = new InitialContext();
```

```
    // lookup EJB Home
```

```
Object objref = context.lookup("java:comp/env/AccountEJB");
```

```
HelloHome hello =
```

```
    PortableRemoteObject.narrow(objref, HelloHome.class);
```

```
Hello ejb = hello.create();
```

```
    servletOutput.println("<bold>You ordered " +  
        ejb.getOrderCount() + " CDs today.</bold>");
```



Resources

- " www.java.sun.com/j2ee
- " J2EE Reference Implementation
 - " Samples
- " APM
 - " Best practices document
 - " Example application



Summary

- The web layer is the window into J2EE

