

Building Java EE Web Applications

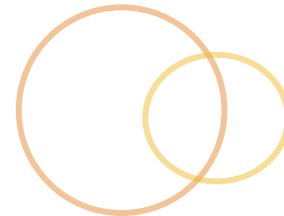
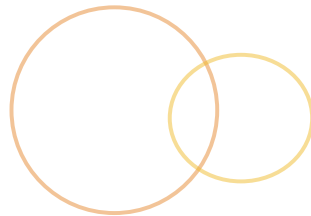
An Overview of Web-based technologies



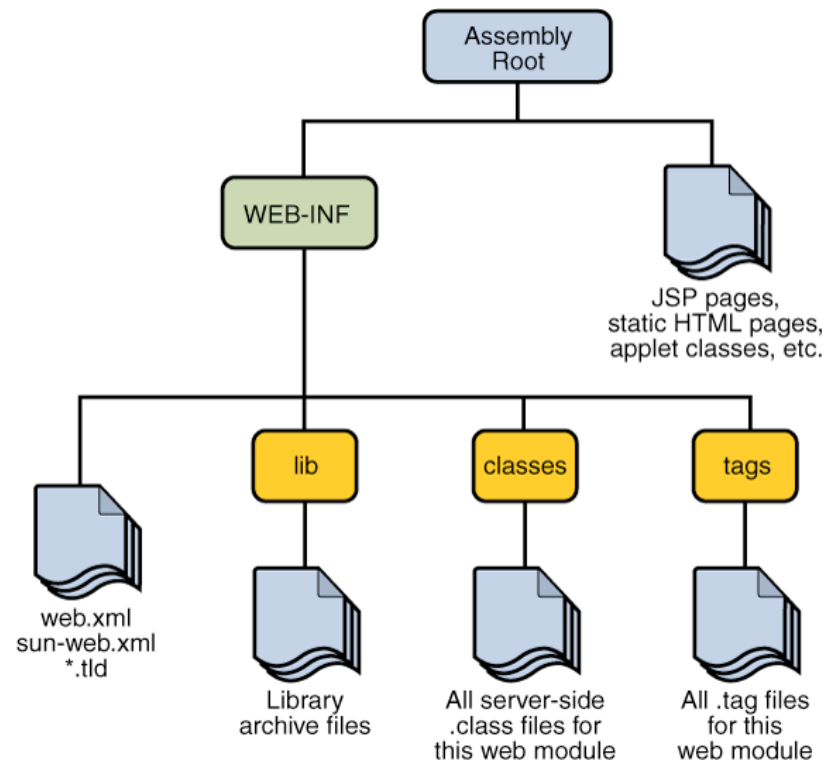
Java EE Web Applications



- ◎ Primary focus is dynamic web-based applications
 - ◎ Hyper Text Transfer Protocol (HTTP) centric
 - ◎ Typically provide *state* in a *stateless* environment
 - ◎ Synchronous in nature
- ◎ Execute in a Java EE web container
 - ◎ Packaged and deployed as a WAR
 - ◎ Typically a self-contained application
 - ◎ May interact with other Java EE applications



- Deployment unit for web applications
- Built using JAR utility
- Java EE Specification defined structure
- Execute in own context



Web Application Development



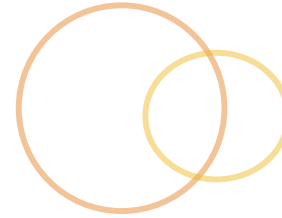
- ◎ Relies on some key technologies
 - ◎ Hyper Text Transfer Protocol
 - ◎ Hyper Text Markup Language
 - ◎ Servlets
 - ◎ Java Server Pages (JSP)
 - ◎ JSP Standard Tag Libraries (JSTL)
 - ◎ Java Server Faces (JSF)
- ◎ All can work together, but not required
- ◎ Can interact with enterprise application extensions

Hyper Text Markup Language



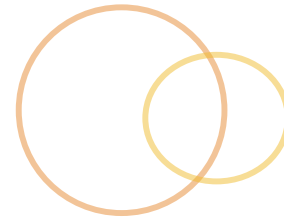
- Overview of HTML
 - Specification managed by W3C (World Wide Web Consortium)
 - Originally very limited
 - Vendors have introduced non-complaint tags
- HTML Documents
 - UTF-8 text documents
 - Tree like
 - Text, images, links (content) surrounded by markup tags
 - Markup tags provide description about presentation of content
 - Typically have `.html` or `.htm` extension

HTML Limitations



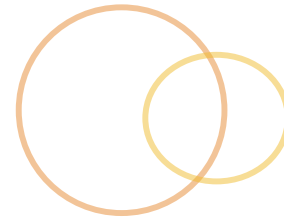
- ⦿ Strictly a markup language
 - ⦿ Describes how data should be presented
 - ⦿ Does not support logic processing
 - ⦿ Parsed by application; not executed
 - ⦿ Limited presentation semantics; can be tedious to achieve nice layout
 - ⦿ Non-standard tags create browser dependencies
- ⦿ Alternative solutions
 - ⦿ Rich-clients
 - ⦿ Middle-weight clients
 - ⦿ Flash
 - ⦿ Applets
 - ⦿ AJAX
 - ⦿ XHTML is evolved HTML based on XML

HTML Documents



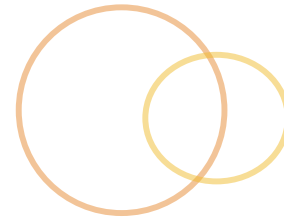
- ⦿ Use HTML tagging or markup syntax
- ⦿ Typically have start `<TAG> . . .` and end `</TAG>`
- ⦿ Contents defined in `<HTML> ... </HTML>`
- ⦿ Have two main sections
 - ⦿ `<HEAD>` - Description about content
 - ⦿ `<BODY>` - Content

HTML Head Section



- ⦿ Head section provides information about HTML document
- ⦿ Usually used to define page title and meta information
- ⦿ Meta information describes information about the page to web crawlers, browsers, and possibly users

HTML Body Section



- ◎ Body section represents the content
- ◎ Contains tags for:
 - ◎ Formatting and layout
 - ◎ Anchors for linking
 - ◎ Data collection through forms
 - ◎ Rich content like images
- ◎ Modern HTML is more precise
 - ◎ Layout division
 - ◎ Styles and style sheets

HTML Document Structure



```
<HTML>  
  <HEAD>  
    <TITLE>Hi!</TITLE>  
  </HEAD>  
  <BODY>  
    My first web page!  
  </BODY>  
</HTML>
```

Hyper Text Transfer Protocol



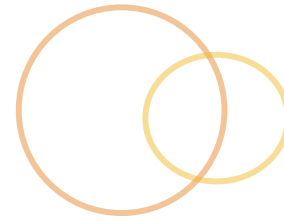
- ⦿ Purpose
 - ⦿ Access resources; typically using Universal Resource Indicator (*URI*)
 - ⦿ Delivery resource contents
- ⦿ Characteristics
 - ⦿ Request / response oriented
 - ⦿ Stateless
 - ⦿ Synchronous
 - ⦿ Text-based
- ⦿ Types
 - ⦿ HTTP 1.0 (RFC 1945)
 - ⦿ HTTP 1.1 (RFC 2616)
 - ⦿ HTTPS - Secure

About DevelopIntelligence



- ◎ Founded in 2003
- ◎ Provides outsourced services to learning organizations in area of software development
- ◎ Represents over 35 years of combined experience, enabling software development community through educational and performance services
- ◎ Represents over 50 years of combined software development experience
- ◎ Delivered training to over 40,000 developers worldwide

Areas of Expertise



◎ Instruction

- ◎ Java
- ◎ J2EE
- ◎ WebServices / SOA
- ◎ Web Application Development
- ◎ Database Development
- ◎ Open Source Frameworks
- ◎ Application Servers

◎ Courseware

- ◎ Java Application Development
- ◎ Java Web App Development
- ◎ Enterprise Java Development
- ◎ OOAD / UML
- ◎ IT Managerial
- ◎ Emerging Technologies and Frameworks

Contact Us

A decorative graphic at the top of the slide. It features the text "Contact Us" in a bold, orange font. To the right of the text are three pairs of overlapping circles in shades of orange and yellow. Further right is a logo consisting of a large orange 'D' shape with a smaller orange circle inside it, which has a yellow center.

- ◎ For more information about our services, please contact us:
 - ◎ Kelby Zorgdrager
 - ◎ Kelby@DevelopIntelligence.com
 - ◎ 303-395-5340