

Java Web Application

COMPRO 4



• What is Java Web Application?

- It generates **interactive web pages** containing various types of markup language (HTML, XML, and so on) and **dynamic content**.
- It is typically comprised of web components such as **JavaServer Pages (JSP)**, **servlets** and **JavaBeans** to modify and temporarily store data, interact with databases and web services, and render content in response to client requests.

- **What is Java Web Application? (cont'd)**
- On **Web Frameworks...**
 - because many of the tasks involved in web application development can be repetitive or require a surplus of boilerplate code, **web frameworks can be applied to alleviate the overhead associated with common activities.**
 - EXAMPLE:
 - **JavaServer Faces** provide libraries for templating pages and session management, and often promote code reuse.

- **What is Java EE?**

- **Java EE (Enterprise Edition)** is a widely used platform containing a set of coordinated technologies that significantly **reduce the cost and complexity** of developing, deploying, and managing multi-tier, server-centric applications.

• What is Java EE? (cont'd)

- Some of the **fundamental components** of Java EE include:

- **Enterprise JavaBeans (EJB)**: a managed, server-side component architecture used to encapsulate the business logic of an application. EJB technology enables rapid and simplified development of distributed, transactional, secure and portable applications based on Java technology.
- **Java Persistence API (JPA)**: a framework that allows developers to manage data using object-relational mapping (ORM) in applications built on the Java Platform.

• JavaScript and Ajax Development

- **JavaScript** is an object-oriented scripting language primarily used in client-side interfaces for web applications.
- **Ajax** (Asynchronous JavaScript and XML) is a Web 2.0 technique that allows changes to occur in a web page without the need to perform a page refresh.

- **JavaScript and Ajax Development (cont'd)**
- JavaScript toolkits can be leveraged to implement Ajax-enabled components and functionality in web pages.

Developing Web Applications

DEMONSTRATION