Introduction to Web applications with Java technology

1- Introduction

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What is a web application

A web application that uses the Java technology is a **client-server** application such that:

- The client sends **HTTP requests** (probably through a web browser)
- The server processes those requests by means of either:
  - A program called **servlet**
  - A sort of HTML page with some dynamic aspects called **JSP page**
    In fact, a JSP page is translated automatically into a servlet
- This servlet/JSP page performs the logic required by the client. This may involve accessing a database, a web service, etc.
- The server returns the output generated by that servlet to the client (usually as an html/xml page)

Servlets and JSP pages are called **web components**
Introduction to Web applications with Java technology. Architecture of a web application

**Architecture of a web application**

We may consider two slightly different architectures for web applications:

- **Primitive web applications**

![Diagram of primitive web application architecture]

**CLIENT LAYER**

**WEB LAYER**

**ENTERPRISE INFORMATION SYSTEM LAYER**

Client (e.g., web browser) -> Web server (servlet container) -> Database server
- The web layer has been splitted into two:
  * web layer or view layer (it deals with presentation issues)
  * business layer (it deals with application logic issues)

  The business layer may use java beans or tag libraries to encapsulate these issues
- There exist some design patterns to perform effectively model-view separation and to apply software engineering techniques to web applications
Where is everything presented

- Primitive web applications:
  - This module (*Introduction to web applications with Java technology*)
  - Module: Web applications. Sessions
  - Module: Web applications. Data access

- Web applications with model-view separation:
  - Module: Web applications. View-logic separation tools: Java beans/tag libraries
  - Module: Web applications. Design patterns
  - Module: Web applications. Java Server Faces