

# Java Web Applications

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# Outline

- A Java Web Application
- Lifecycle
- Technology



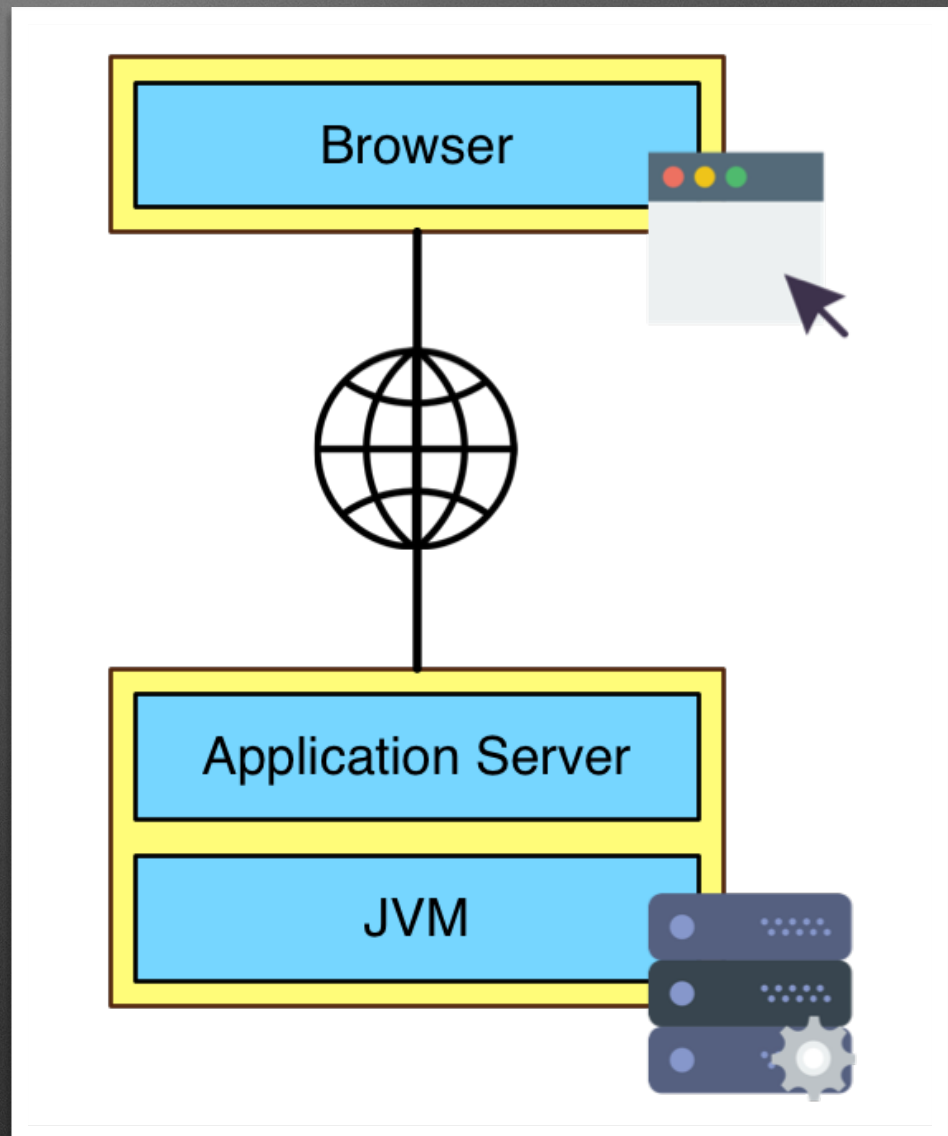
# A Java Web Application

- In this context is a *server-side* application, developed in Java and other Java standards.
- The Java code runs in the server, and render HTML for the client.
- The code needs a special runtime to be executed, in order to handle HTTP requests and responses.



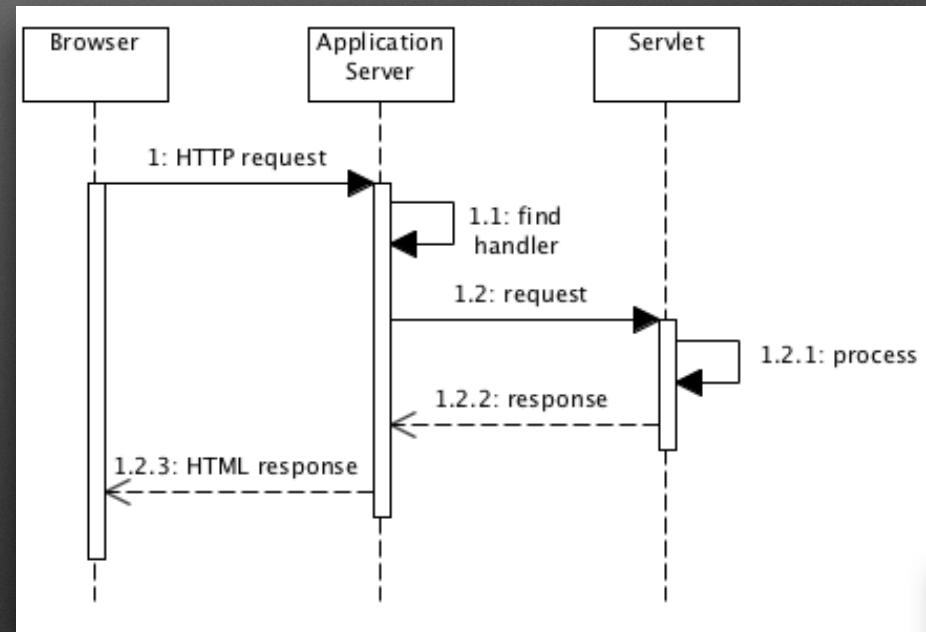
# Java Application Server

- A Java application server is a runtime which is designed to create web applications.
- Several frameworks are available, providing the essential features to develop applications.
- Specific languages and APIs are used to develop web applications.



# Lifecycle

- A request is made by the browser
- The application server receives the request and looks for a component to handle it.
- The corresponding component handles the request.
- The component also renders the page.
- The application server sends the response to the browser.





# Technologies

- The base language to develop the applications backend will be Java.
- Some new classes and APIs are required (javax package)
  - HttpSession
  - HttpServletRequest
  - ...
- Frontend is developed in JavaServer Pages (JSP).



# JavaServer Pages

- JSP combine HTML syntax with Java.
- Pages are processed on server side and resulting HTML is sent to the client.
- Example:

```
<h1>Home</h1>

<%
    LocalDateTime t = LocalDateTime.now();
%>

<p>
    Hello ${username}, today is
    <%= t.toString() %>
</p>
```



# Tutorial

- Build a web application based in the code developed in the last session.
- Persistence and business are already implemented.
- This session is about the implementation of the presentation layer and controller layer.