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# Final report - Web repository for development artifacts

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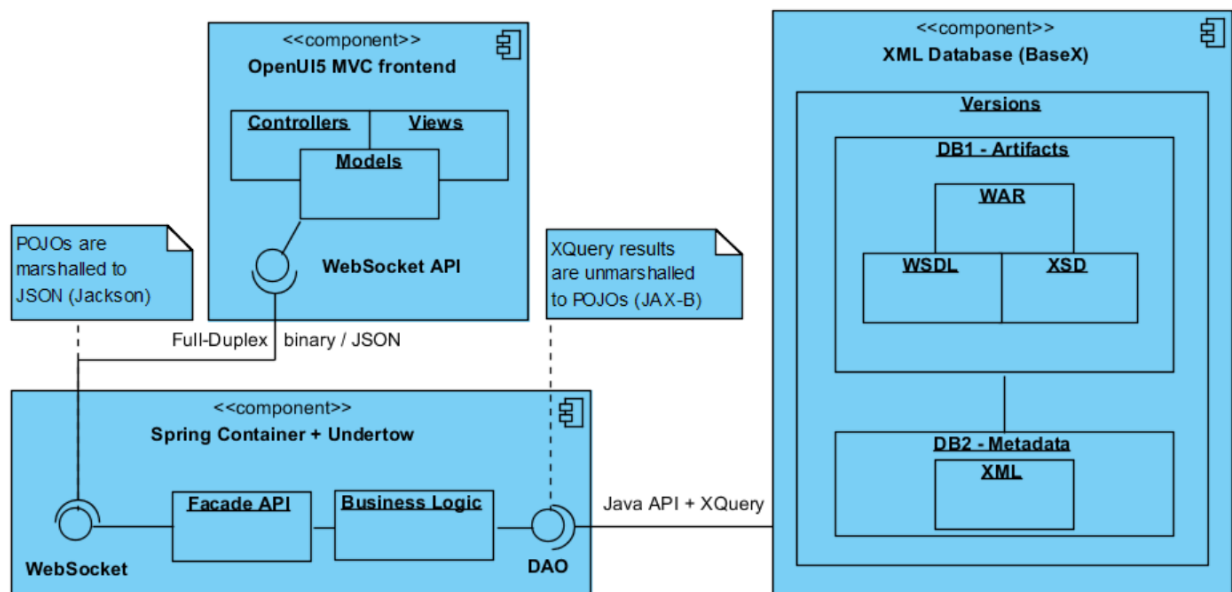
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## 1. Project & work description

As a **team leader** I was responsible for organising the project throughout the whole development life-cycle. This included creating **GitHub repository** and **multi-module Maven project** along with the foundations of the **architecture and UML**. The goal was to use modern, but standard technologies. The following figure illustrates a **component UML diagram** which I made:

**Figure 1. Architecture design**



I chose **Spring** as a java container because nobody from my team had previous experience with Java EE, but they had experience with Spring. **BaseX** looked like a faster and better scalable XML database alternative of eXistdb. I also created the **logical pair-database architecture** to differentiate between actual artifacts and their extracted metadata. **WebSocket** was chosen as a protocol instead of REST because REST does not support binary data transfers.

The main piece of work I did was frontend based on **OpenUI5** MVC framework with following settings:

- **M** - JSON data model supporting two-way binding
- **V** - XML document view supported by XSDs
- **C** - Javascript controller with reactive programming support

The final frontend is responsive and tested in Internet Explorer 11, Mozilla Firefox and Google Chrome. Some additional javascript libraries were used like **highlight.js** for highlighting XML text and **spin.js** for showing a spinner to the user while loading OpenUI5 asynchronously.

As a team leader I was also there to help my team members, sometimes doing some java work and well... a lot of refactoring and bug fixing. Unfortunately one of my team members, Tomáš Rybenský, was unable to find time for the project and raised the white flag.