**Homework 2**

1. **User Interface components**

The static user interface components will be implemented with a frontend framework like React.js and that will represent the Application components from the implementation architecture.

1. **Microservices and Backend server**

The microservices will be implemented in Java Spring Boot, they will all communicate with a single database which will have different data models. The Backend server will be a Apache tomcat server which will be containerized with Docker.

1. **Database and data storage**

We will use a single database for all of the data storage with multiple data models. The database in use will be a PostgreSQL database containerized on Docker.

1. **Publish and subscribe**

The Publish and Subscribe Architectural Style will be implemented when a user is registered, has made a transaction or order.

1. **Pipe and filter**

The Pipe and Filter will be implemented by scraping data from websites using Python and filtering it using Java. The resulting data is written to the PostgreSQL database using JDBC.