

Software Design Document

Buyer's Paradise

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Introduction

Buyer's Paradise is a software system intended to let users crud their offers, view other user's created offers, contact them and search trough offers. The system is an online web application that is connected to its own database.

Software methodology approach

Back-end

Java

The back-end of the application will be written in Java. Java is an object-oriented language supported on all platforms and is widely used programming languages which makes it for finding resources.

Spring Boot

Spring boot helps with Database requests and configuring Java Beans. No server deployment is necessary when developing.

Gradle

Gradle manages compilations, testing, plugins, and packages. It is easy to use and customise, also it's supported by Java.

Front-end

React.js

React is a library for JavaScript, maintained by Facebook and is used for building single-page user interface.

Database

PhpMyAdmin

It is a reliable relational database based on SQL.

Test Environment and required resources

JUnit

The unit tests will be done using the JUnit framework.

Mockito

Mockito will be used with JUnit to test the database.

Sonarqube

SonarQube will be used to have an insight of the applications vulnerabilities, maintainability, and Unit testing coverage.

JoCoCo

JoCoCo is a plugin used to connect the tests with SonarQube in order for SonarQube to determine the app's test coverage.

Requirements

Functional requirements:

As a 'guest':

- I can register a personal account
- I can view and search through existing offers made by SELLERS

As a USER:

- I can login and logout with my personal account
- I can become a Seller by giving more information about myself
- I can contact offer's SELLER

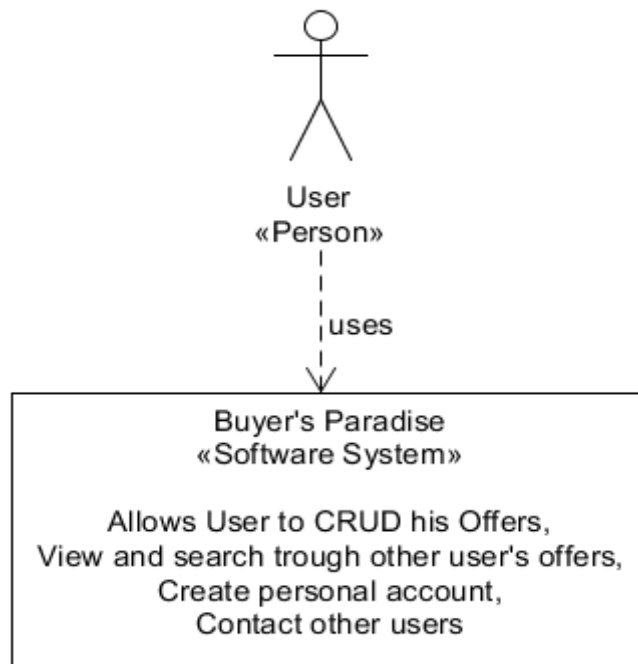
As a SELLER:

- I can create an offer
- I can manage my existing offers
- View messages

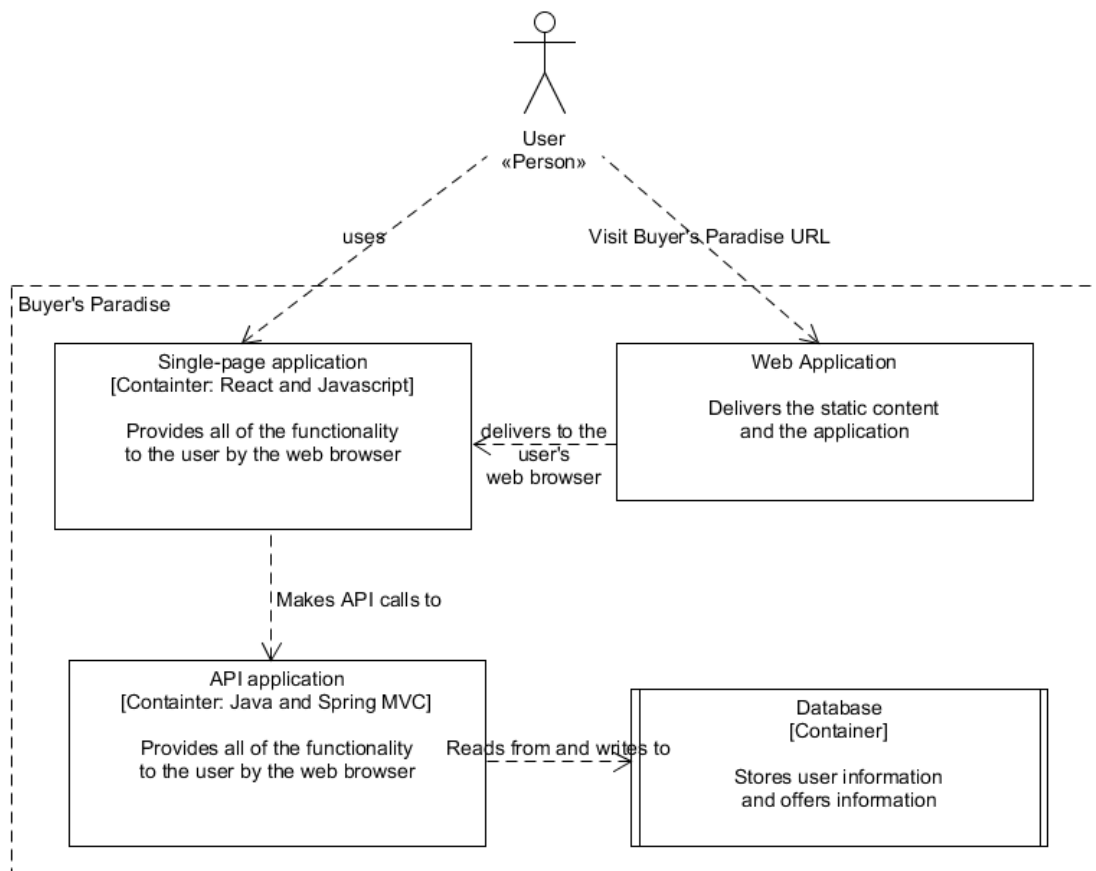
Non-functional requirements

- System must be responsive during runtime and debugging
- System must be expandable
- System must be transferable (from one host to another)
- System must be maintainable
- System should store data safely

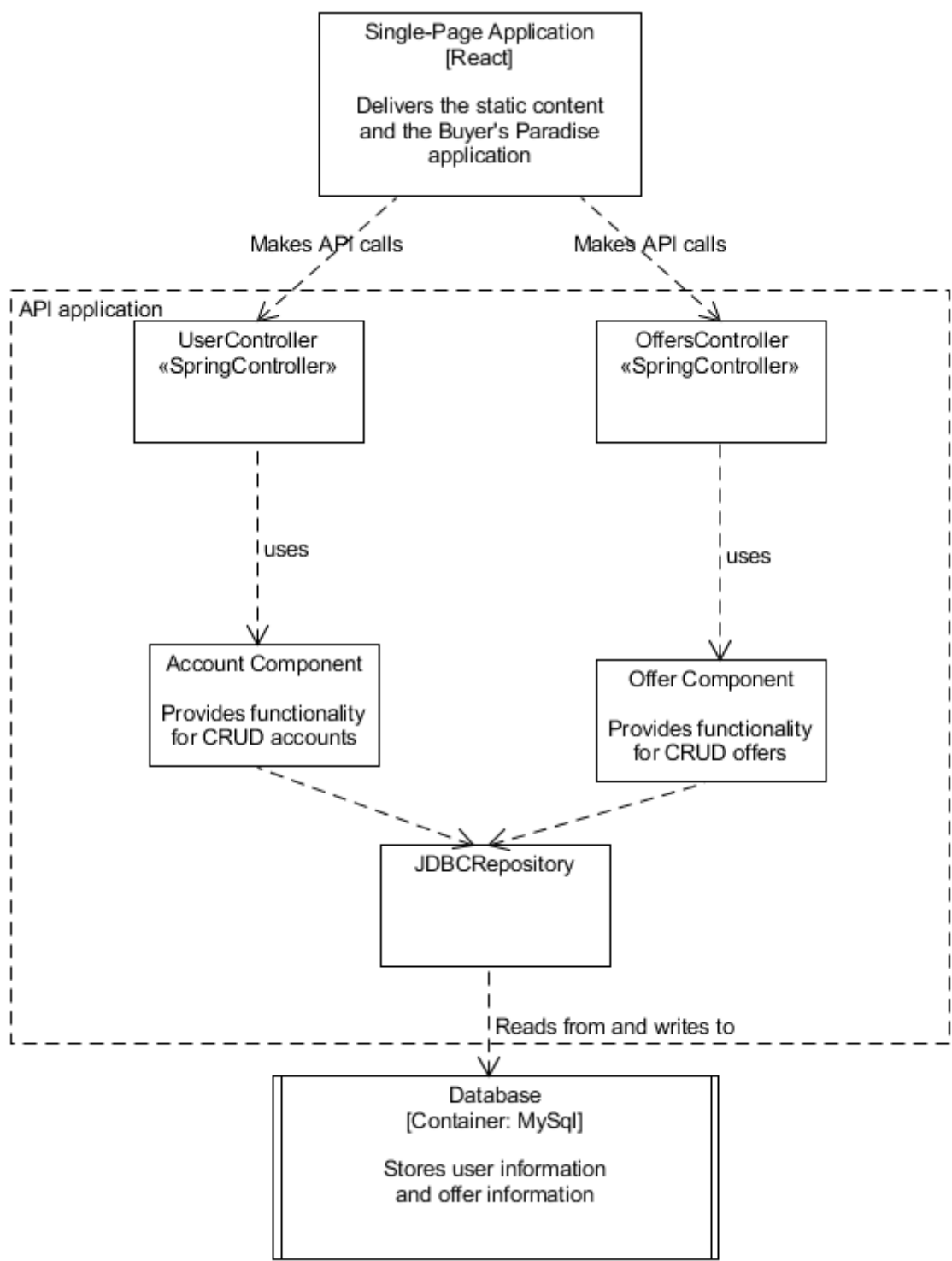
C1 System Context Diagram



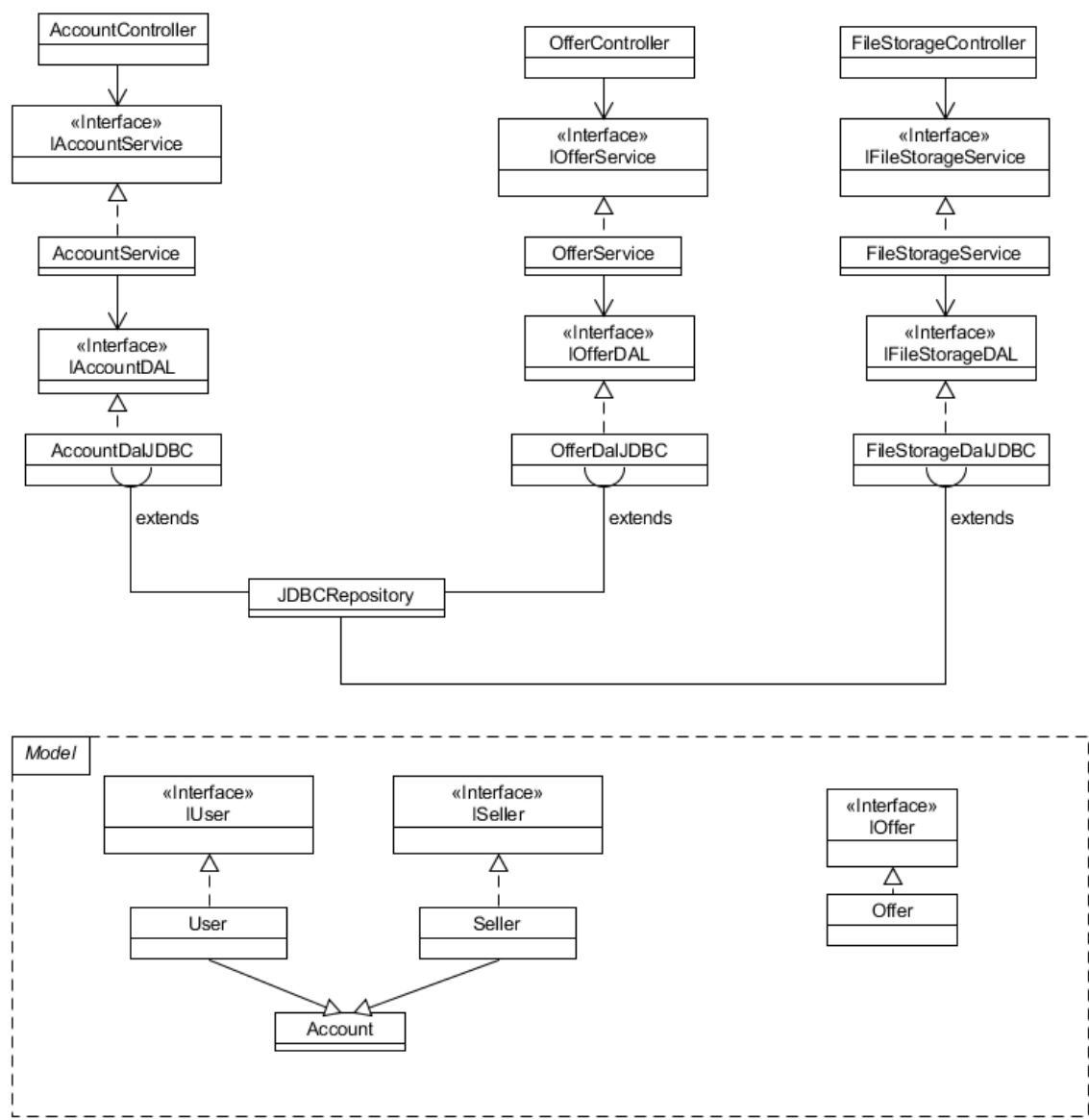
C2: Container Diagram



C3: Component Diagram



C4: Class Diagram



Development practices

Agile

Agile is an iterative approach to adaptive planning tasks in order to stay focused and not waste time and effort. For it I’m going to use Jira.

Data Design

ERD

