Design document for IAS

BluDevil digital marketplace



Members: Alexandru, Emilian E.M.

Tutors: Geurts, Jaap J. ; Guayrin, Brice B.P.B.J.P.

Version: 1.1

# Table of Contents:

[1.0 Entity relation diagram 3](#_Toc67664920)

[2.0 UML diagram 4](#_Toc67664921)

[3.0 Design decisions 5](#_Toc67664922)

[3.1 Back-end: 5](#_Toc67664923)

[3.1.1 Spring boot: 5](#_Toc67664924)

[3.2 Front-end: 6](#_Toc67664925)

[3.2.1 Angular: 6](#_Toc67664926)

[3.2.2 Bootstrap 7](#_Toc67664927)

[3.2.3 Font Awesome 7](#_Toc67664928)

[4.0 Wireframes 8](#_Toc67664929)

[4.1 Navigation & Product catalog 8](#_Toc67664930)

[4.2 Product details 9](#_Toc67664931)

# 

# Diagram, Word Description automatically generatedEntity relation diagram

Version: 1.1

# 2.0 UML diagram

Diagram, schematic

Description automatically generatedVersion: 1.1

# 3.0 Design decisions

## Spring Boot: The Most Notable Features You Should Know ...3.1 Back-end:

### 3.1.1 Spring boot:

One of the frameworks that I choose for this project is Spring boot, a back-end framework based on Java.

**Some of spring boots disadvantages:**

* From a learning perspective, Spring boot doesn’t cover most of the details of Spring, so if you never worked with Spring before details like proxies, dependency injection and AOP you’ll have a harder time during troubleshooting or modifications
* Due to its automation you can very easily miss many concepts of springs ecosystems like Spring Security, Spring Integration etc..

**I prefer it because:**

* It is flexible as it allows configuring beans in multiple ways like XML, Annotations and JavaConfig. I mostly tends towards annotations as they offer the fastest and easiest solutions but as a second option or by necessity I would rely on JavaConfig.
* It makes developing spring-powered applications better by making Spring or Spring MVC easier to use with its auto configuration
* It provides starters, like the spring boot starter web with all the needed dependencies prepackaged for developing an application to expose RESTful services
* It is open-source and quite popular with developers offering good documentation
* It simplifies integration with JPA/Hibernate ORM
* It very compatible with most technologies as it supports NoSQL databases, Oracle, PostgreSQL, MongoDB and several other processes
* It utilizes dependency injection as Spring at its core it’s a dependency injection container

## 3.2 Front-end:

Criteria table of three of the most popular frameworks

|  |  |  |  |
| --- | --- | --- | --- |
|  | Angular | React | Vue |
| Ease of learning | 6 | 7 | 9 |
| Ease of use | 6 | 7 | 9 |
| Support community | 9 | 9 | 7 |
| Download size | 4 | 7 | 10 |
| Performance | 7 | 8 | 9 |
| Popularity | 8 | 8 | 7 |

### Angular (web framework) - Wikipedia3.2.1 Angular:

A popular yet challenging framework that I decided to use for developing my front-end application.

**Some of the disadvantages:**

* Angular is not as flexible and universal as some other frameworks like React or Vue
* It comes with a steep learning curve
* Angular framework is quite bloated, the zipped file size is 143k, compared to 23K for Vue and 43k for React
* Becouse of its use of TypeScript you cannot simply add the library to the source code like in React or Vue

**The reasons I decided to go with Angular:**

* It is a mature framework
* It provides a good start to build an application with the complete setup, focusing on large-scale and feature-rich apps
* It involves dependency injection for its services
* It provides two-way data binding
* It has a very detailed documentation and a very good support community
* It enforces the MVC pattern which will help me grasp the pattern better as it’s been a personal wish since I first started with web development to successfully apply it
* It comes with the Angular CLI which drastically improves the development time

### Bootstrap 4 is released - SD Times3.2.2 Bootstrap

An increasingly popular and feature rich front-end design framework. Bootstrap focuses on the design aspect of the application UI enchanting the already existing elements that come with HTML5 but also providing lots of custom additions.

**Some disadvantages:**

* The styles are verbose and can lead to lots of output in HTML
* It increases loading time for the pages

**The main reasons for choosing bootstrap are:**

* It’s extremely easy to set up either by CDN or npm
* The speed of development is drastically increased, as bootstrap provides ready-made components which I can easily customize and build on top using CSS or jQuery scripts
* I am familiar with the framework as I have used it a bit in the past
* It uses jQuery for handling scripts which I am familiar with
* It has very good community support and documentation

### Font Awesome Icons | Drupal.org3.2.3 Font Awesome

Font Awesome is another design framework that I decided to use because of the big options of icons that it provides:

**Some advantages:**

* A very light design framework
* It’s extremely easy to set up and use either by CDN or npm
* It provides a lot of icons to choose from
* It is open source

**Some disadvantages:**

* Not all icons and variations of the icons are available in the free version

# 4.0 Wireframes

## 4.1 Navigation & Product catalog

## Graphical user interface Description automatically generated with low confidence4.2 Product details