Design Document

“LEVEL UP”

**Design Document**

FONTYS UNIVERSITY OF APPLIED SCIENCES

**HBO-ICT: English Stream**

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# 1.General

# 1.1 Description

This document contains the architectural design of Level Up website developed by Aleks Petrov. This project is part of individual assignment organized by Fontys University of Applied Science.

# 1.2 Goal

The goal of the project is to help young people get more familiar with the gaming world. For this reason we are going to develop a gaming blog website that will help people for that purpose.

# 1.3 Outcome

The outcome of this project is expected to be a fully-developed gaming blog website.

# 2 Design Decisions

# 2.1 BackEnd

I will use Spring Boot for my backend due to the fact it reduces overall development time and increase efficiency by having setup for a unit and integration tests. It has a lot of really useful libraries which could help you build your app a lot easier. Also it transforms how you approach Java programming, radically streamlining your experience. The main goal of the Spring Boot framework is to reduce overall development time and increase efficiency by having a default setup for unit and integration tests. If you want to get started quickly with your Java application, you can easily accept all defaults and avoid the XML configuration completely. One of the requirements of my project are to have login and register functionality which Spring Security easily helps with that purpose to access specific links and have better security overall. For my CRUD functionality I’ll make use of the JPA Repository Interface provided by Spring which reduces the writing of queries and improve my working flow significantly.

# 2.2 FrontEnd

I will be using React since it is building reusable components which can be used in the future and it is used by famous developers over the world which makes it with more features. It is completely free and I chose it over Angular for example because of the parent-child architecture and the parent makes the state of all its child components. You can consider it as a decorative library. React components maintain their own property and state. This makes it possible to create highly reusable components that can be dropped into any application.

# 2.3 Database

I will be using MySQL because it’s the most popular one nowadays. Many big companies prefer to use it because it’s open-source, reliable and compatible with all major hosting providers, cost-effective and easy to manage. The reason why I’ll use it to store the new members and also for my gaming blogs. Moreover I can always check if the information is stored correctly into the database. Finally it offers some build-in functions which reduces a lot of time.

# 3.Multi-Tier Architecture Diagram

# 3.1 Diagram

Diagram

Description automatically generated

# 4.C4 Diagram

# 4.1 C1

Diagram

Description automatically generated

# 4.2 C2

Diagram

Description automatically generated

# 4.3 C3

Diagram

Description automatically generated

# 5. Database Design

# 5.1 Database

Teams

Description automatically generated with medium confidence

# 5. Quality Metrics

# 5.1 Explanation

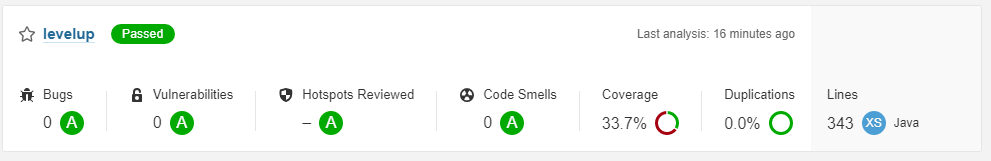
I’m using SonarQube for improving the quality of my code. After downloading and extracting the rar file from SonarQube Documentation. I simply have to run a command in my windows prompt to run start the SonarQube. After that I can log in to the website with my credentials and import my project from InteliJ. Finally in order to import the project you need to put all the necessary dependencies and then run gradlew sonarqube in the terminal.

# 5.2 Before

Graphical user interface, application

Description automatically generated

# 5.2 After



# 5. UML Diagram

# 5.1 UML

Table

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