School of Computing & Information Sciences

Spring 2023 Capstone 2 Project

SkillCourt Interactive Soccer Technology

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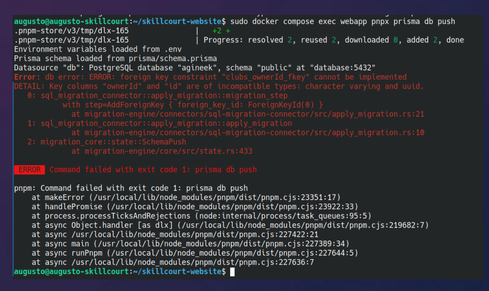
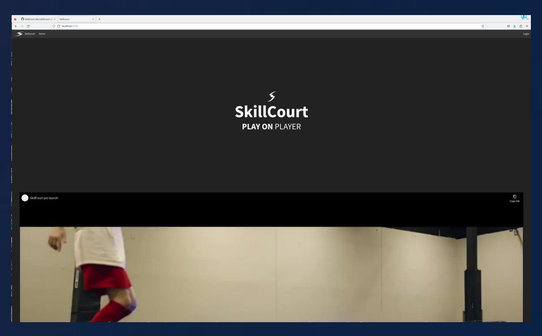
PROBLEM

The SkillCourt Interactive Soccer Technology application and website were in need of a complete update and upgrade. On the application side, it was necessary to upgrade all packages and SDKs that were being used. On the website side, it was necessary to update the readme file for installing the S.I.C.T. database, database IDs, Docker Compose files, NestJS dependencies, Prisma and Node.JS packages, and database references. Also the database schema needed to be updated and fixed



CURRENT SYSTEM

It appears that the SkillCourt Interactive App and website are working properly on our local systems. However, we are unable to fully test the application due to the lack of the appropriate pad. Despite this, the members of the frontend were able to test some features locally and achieved some goals the product owner asked for.



REQUIREMENTS

Application

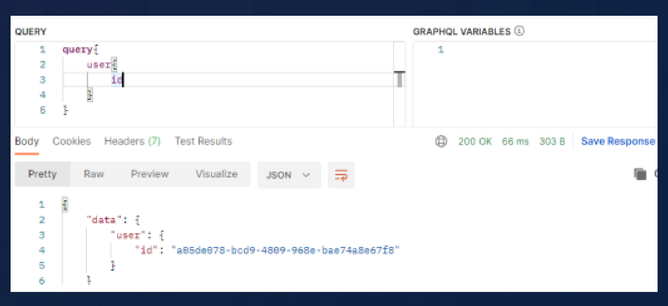
- Java JRE > 1.8
- A GitHub Account
- Git
- Git-flow-avh
- Flutter SDK
- A phone emulator like Android Studio
- Android Tool Chain
- Python3

Website

- A GitHub Account
- Node >= v19.0.0
- Npm >= 9.3.1
- PNPM >=v6.21.0 or a V.M. with Linux installed
- Docker Desktop with PostgreSQL
- Vim (optional)
- VSCode (optional)

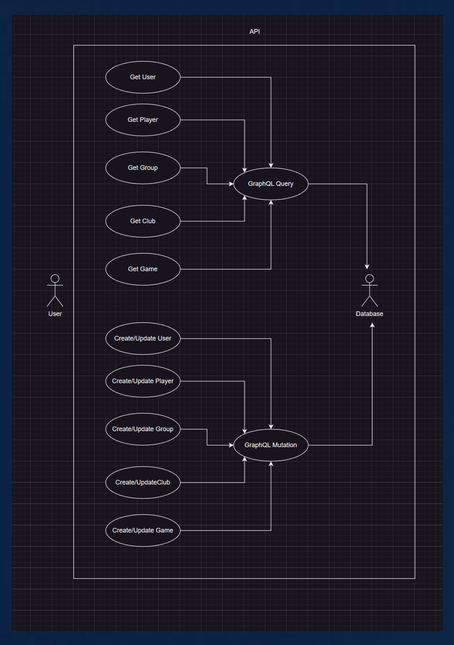
SYSTEM DESIGN

The system for the website is being developed using Typescript, NodeJS, PostgresDB, GraphQL, Prisma and being run inside Docker containers in order for the website to be developed and run consistently and in a scalable format. MariaDB is used as the database backend for the site as it works well with the site container. Prisma and GraphQL are being used to develop the API and to make it consistent with the schema in PostgresDB



OBJECT DESIGN

Use Case Diagram



IMPLEMENTATION

This software needs to be installed on operating systems like Android, MacOS, and Linux, including Ubuntu. The application is developed using Flutter, which ensures scalability, maintainability, and data transferability. For the website component of the project, Docker Desktop is responsible for managing the database, while phone emulator software like Android Studio is used for testing and running the SkillCourt Interactive Soccer Technology application.

ACCESS TO WEB AND DATABASE

After updating the packages the team needed, and resolving some inconsistencies in the webapp dependencies as well as debugging the webapp container log, access to web server locally was achieved.

```
agineek=# \dt
            List of relations
 Schema |       Name        | Type  |  Owner
--------+-------------------+-------+---------
 public | clubs             | table | agineek
 public | games             | table | agineek
 public | groups            | table | agineek
 public | password_resets   | table | agineek
 public | players           | table | agineek
 public | stations          | table | agineek
 public | users             | table | agineek
(7 rows)

agineek=#
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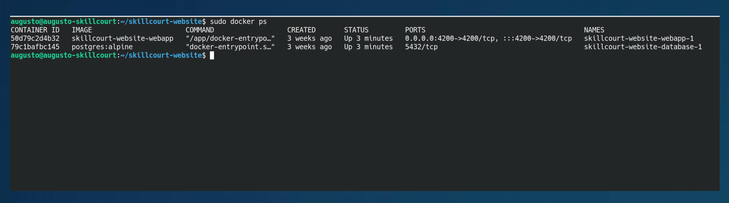
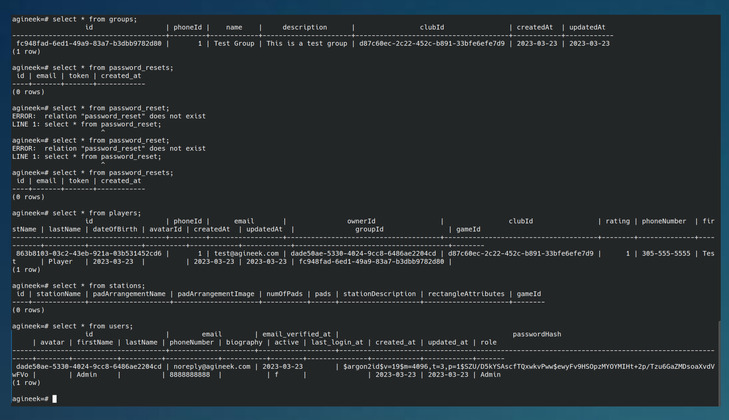
SUMMARY

Updating the SkillCourt Interactive Soccer Technology application and website was a time-consuming process that involved extensive research. The software was outdated and the installation instructions and documentation were inaccurate, which led us astray. Additionally, we didn't have access to the previous Capstone project documentation until the final three weeks of the project. As part of the project, I worked on the website application, I contributed to the team by researching, debugging, and updating packages, creating documentation and finally be able to connect to the webapp and database locally.

SCREENSHOTS





ACKNOWLEDGEMENT

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