

DOCUMENTATION

PROJECT ACCESA INTERNSHIP

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1. Assignment Objective

The goal of this assignment is to develop a gamification application that incorporates a ranking system, allowing users to earn badges and tokens upon completing various challenges.

2. Problem Analysis, Modeling, Scenarios, Use Cases

In order to develop an effective gamification application with a ranking system, it is important to analyze the problem that this application aims to solve. One important aspect of this application is the user profile, which includes key information such as the user's username, their current tokens, ongoing challenges, and earned badges.

The user profile serves as a central hub for each user, allowing them to keep track of their progress and achievements within the application. By having access to their current tokens, users can see how close they are to earning rewards and incentives, which can help to motivate them to continue participating in challenges.

Additionally, displaying ongoing challenges and earned badges on the user profile provides users with a sense of accomplishment and a visual representation of their progress. This can help to further motivate them to continue engaging with the application and completing challenges.

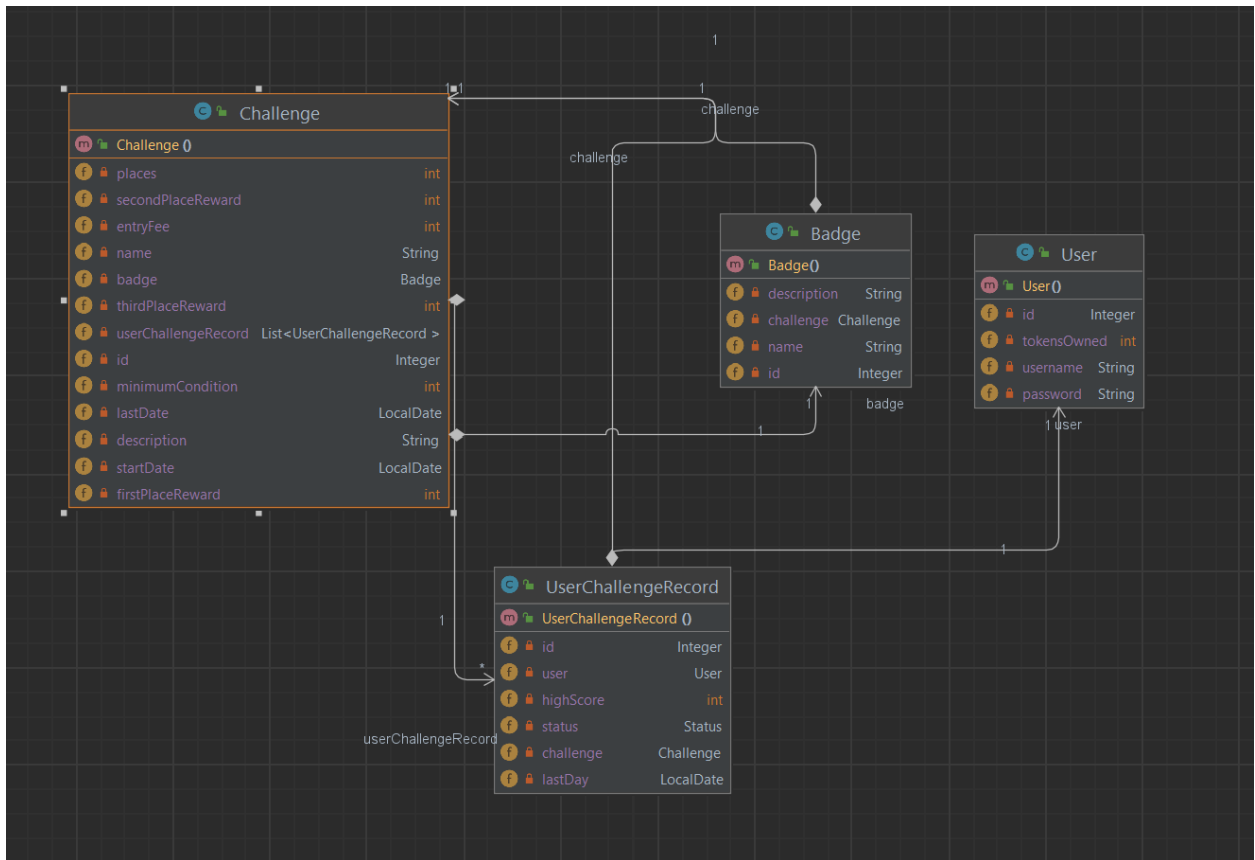
To rephrase, the user profile is a crucial component of a gamification application with a ranking system, as it allows users to view important information such as their username, tokens, ongoing challenges, and earned badges. This feature serves as a central hub for users, providing them with a visual representation of their progress and achievements within the application, which can serve as a powerful motivator to continue engaging with the application.

The fitness challenges have a daily minimum requirement that must be met and are carried out over a specific time period, starting from a designated start date and ending on a finish date.

Users can earn badges upon completing these challenges, which serve as a visual representation of their achievement. Additionally, tokens can be earned by achieving the first, second, or third place in the challenge. It is important to note that there is an entry that can be used to provide users with a more significant incentive to complete the challenge successfully.

3. Design

I have utilized the Hibernate framework to create a model for the gamification application that incorporates a ranking system. With this representation, Hibernate can provide a mapping between the application's object-oriented model and the relational database that stores the data.



4. Implementation

I have employed a layered representation model that involves dividing the application into three layers: the repository layer, business layer, and controller layer. Additionally, you have utilized the Spring Boot framework for this implementation.

The repository layer serves as the data access layer and is responsible for interacting with the database to store and retrieve data. The business layer acts as the service layer, which provides the core logic and functionality of the application. This layer is responsible for performing operations on the data obtained from the repository layer. Lastly, the controller layer is the presentation layer and is responsible for handling user requests and responses.

In addition to the layered representation model with the repository, business, and controller layers, the gamification application with a ranking system also incorporates a utility scheduled task. This task is designed to update the status of every user's challenge record every 24 hours.

By implementing this task, the application can ensure that the user's progress and status are up to date, providing them with accurate information on their ongoing challenges. This feature enhances the overall user experience, as users can stay informed about their progress without the need to manually update their records.

5. Results

The outcome of the gamification application with a ranking system is a user-friendly application that encourages users to become more physically active. This application has been implemented using Spring Boot and Hibernate, resulting in a modern and efficient system.

By utilizing Spring Boot, the application is able to take advantage of its built-in features and functionality, which help to streamline the development process and create a more responsive user interface. Additionally, the use of Hibernate enables the application to store and manage data efficiently, making it easier to access and analyze user data.

6. Bibliography

1. [Spring Boot Reference Documentation](#)
2. [Documentation - 6.2 - Hibernate ORM](#)