**Project pitch**

***HeardIT***

|  |
| --- |
| **Date : 03/03/2024** |
| **Author : Mihail Vasilev** |

**Project description**

HeardIT is a music sharing platform where you will be able to discover and listen and learn how to play to your favorite songs from a plethora of indie bands. The website focuses on small to medium music creators and people interested in learning how to play the songs on their instruments. The application provides several features that allow users to have an interactive experience combining the listening and learning aspect in one easy-to-find place.

Songwriters will have the ability to upload their tracks, the chords/tabs, lyrics and any other information that will allow their fans to be able to not only listen to the songs but also learn to play them.

Fans will be able to experience these features easily through the interactive user interface and will be able to leave comments, likes and make playlists with their favorite songs.

This way HeardIT will be a place where music creators and fans will have the opportunity to interact, share their experience, learn and get closer to the art music together.

**Features and Challenges**

**Features**

In this section I will explain the features of the application, the priority of each feature and the challenges that will arise during the implementation of each feature. The features will be created in order of priority with the highest one starting from **1.**

|  |  |
| --- | --- |
| **Feature** | **Priority score** |
| Song streaming | **1** |
| Account management   * Create * Update * Login and logout * User types – admin, creator, fan | **1** |
| Upload/Delete tracks | **1** |
| Upload extra information   * Chords/tabs * Lyrics * Extra information | **2** |
| Advanced search | **2** |
| Comments section and likes | **3** |
| Playlist creation | **3** |
| Statistics | **4** |

**Challenges**

HeardIT qualifies as an enterprise software application due to its comprehensive set of features and focus on meeting the needs of both music creators and enthusiasts. The platform will offer sophisticated, scalable and reliable user experience that supports the entire music creation and consumption lifecycle. With its ability to host tracks, chords, tabs and lyrics, HeardIT empowers music creators by providing them with a professional platform to showcase their work. The platform’s commitment to performance, security and scalability ensures a seamless integration of listening and learning capabilities and places itself as an enterprise-level application, catering to the needs of the modern music industry.

The main challenges that will be encountered during the development will be related to creating an engaging and user-friendly application that meets the modern standards for performance, scalability, security and maintainability while also adhering to the increasingly growing demands for software reliability under heavy loads. Solving these challenges will be of utmost importance and will be one of the main focuses during the development of HeardIT.

**Non-functional requirements**

1. Performance
   * Response time: the system should response to user interactions smoothly and without a significant delay
   * Scalability: the platform should be able to handle a growing number of users and content uploads
   * Load Handling: the application should be able to handle large amounts of concurrent loads without significant changes in performance
2. Reliability
   * Uptime: the platform should have a 99.9% uptime to ensure reliable access from the users
   * Fault tolerance: the system should ensure minimal disruptions to its functionalities
   * Data management: data should be stored reliably while being easy to retrieve
3. Security
   * Data encryption: data should be stored safely to prevent any data leaks and data losses
   * Authorization and authentication: secure authentication mechanisms should be implemented to verify users and prevent misuse
4. Scalability
   * Database scalability: the database should scale accordingly to the increase in stored data
   * User number growth: the application should handle an increasing number of users and their interactions
5. Usability
   * UI design: the application should have an intuitive, pleasing and user-friendly interface that promotes the use of the application
6. Maintainability
   * Code maintainability: codebase is well documented, modular and follows the best coding practices
   * Scalable architecture: system architecture should allow for easy maintainability and integration of new features
7. Testing:
   * Comprehensive testing: thorough testing on all features to ensure the quality of the application
   * Load testing: load testing should be conducted to ensure the platform performs under various user loads

**Technologies**

The technologies that will be used for the creation of the HeardIT application.

**Back-end**: Java SpringBoot

**Front-end**: ReactJs

**Deployment**: Docker and Kubernetes