Analysis Document

*S6 Software Engineering*

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Introduction

YouSound is an enterprise-grade university project, developed individually in the sixth semester. It is a fully featured music platform that aims to provide users with a unique music listening experience. The project incorporates all the essential features of a standard music platform, including a user-friendly interface, playlist creation, music sharing, and discovery tools.

Functional Requirements

1. The system will allow users to stream music.
2. The system will allow users to search music-related content.
3. The system will allow users to interact with other users.
4. The system will allow users to post messages and read messages in artist’s communities.
5. The system will allow administrator users to moderate music-related content.
6. The system will allow administrator users to moderate the platform by managing users.
7. The system will allow artist users to post music.
8. The system will allow artist users to create and build their communities.
9. The system will allow artist users to update their music.
10. The system will allow artist users to interact with their audience.

User Stories

# *Format*

* *[User Story]*
  + *[Acceptance Criteria 1]*
  + *[Acceptance Criteria 2]*
  + *[Acceptance Criteria 3]*
* *[Content] = Any content that can be uploaded to the platform. Music, Albums, Podcasts, Posts.*
* As a user, I want to create a new account on the platform.
  + User can log in to the platform.
  + User is stored in the database safely.
  + Data provided by user is validated.
* As a user, I want to search for music-related content.
  + User can see all the content with a similar title as the search input.
  + User can interact with the displayed content.
  + Search results are modified anytime the input changes.
* As a user, I want to join an artist’s community.
  + User can see information about the community (members, posts, songs).
  + User successfully is added to the community user list.
  + User can successfully post or interact with content in the community.
* As a user, I want to create a playlist.
  + User can see his playlist in the sidebar.
  + User can interact and configure his playlist.
  + Playlist is successfully stored in the database.
* As an admin user, I want to manage a user.
  + Admin can successfully ban or update a user.
  + Admin can send a message to a user.
  + Admin can see relevant information about the user.
* As an admin user, I want to manage content.
  + Admin can successfully remove, update, flag content.
* As an artist user, I want to stream my music.
  + Artist can successfully upload music.
  + Artist can successfully interact with own music.
  + Music is safely stored in the database.
* As an artist user, I want to create a community.
  + Artist can successfully manage their communities.
  + Artist receives notifications from the community.
  + Community is safely stored in the database.
* As an artist user, I want to send a private message to a listener.
  + Artist can successfully send a message.
  + Listener can see the message.
  + Message is safely stored in the database.

Non-Functional Requirements

Non-Functional requirements are very important to a software engineering project. They specify how a system should perform and interact with users while ensuring its quality, reliability, and suitability for its scope. To develop an enterprise-grade application, YouSound should include the following non-functional requirements:

1. **Performance**: The application should be fast to respond, load and interact with.
2. **Scalability**: The application should be able to handle a large number of users.
3. **Reliability**: The application should be always available, and the downtime reduced as much as possible to ensure an enterprise grade service.
4. **Security**: The application should be secure and not vulnerable to attacks, protecting user data from unauthorized entities.
5. **Architecture**: The application’s architecture should be designed keeping in mind all the other non-functional requirements that ensure an enterprise-grade application.
6. **Maintainability**: The application should be easy to update and configure, ensuring maintainability.
7. **Compatibility**: The application should be compatible with different devices and browsers.
8. **Usability**: The application should provide a good user experience, with an easy-to-use interface and inviting design.