



MelodyHub

A music streaming platform

Team:

Abhiyan Sainju

Bhavana Thakare

Rakshitha Mamilla

Udaykiran Kalyanapu

Course:

Object Oriented Design

CSCI 6234_10



Project Vision

- MelodyHub offers seamless music streaming, playlist management, and artist-listener interaction.
- Built with Node.js and MongoDB using OOP principles.
- Key Features: Real-time chat, playlist sharing, artist uploads.
- Benefits of OOP: Code reusability, scalability, and maintainability.

Project Objectives

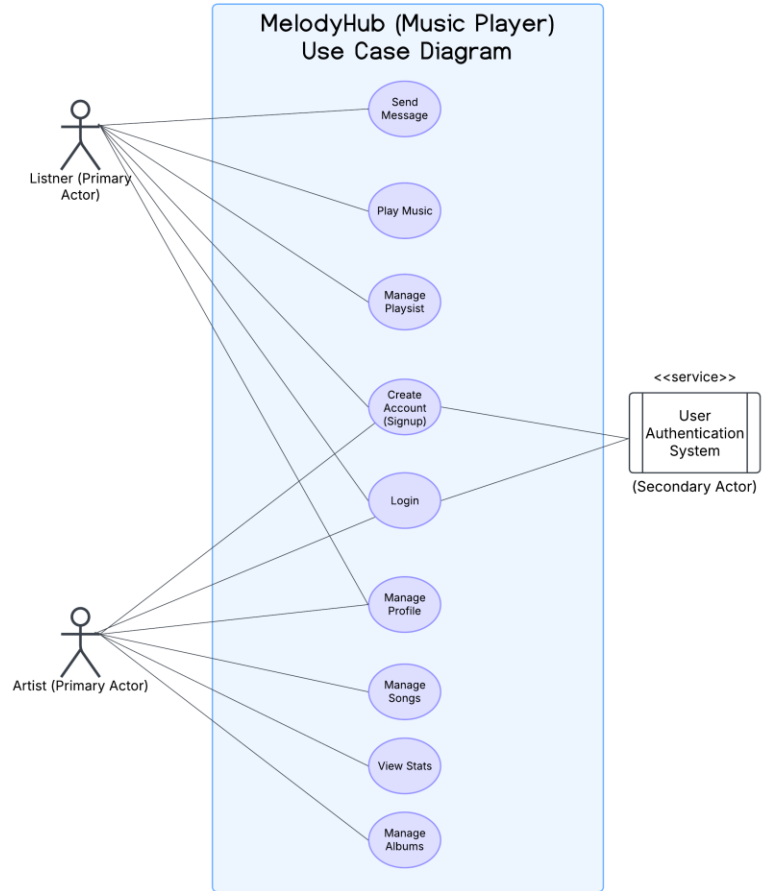
- Design and implement a music streaming platform with OOP best practices.
- Provide a seamless experience for users to stream music, manage playlists, and interact.
- Ensure code modularity and scalability through proper OOP design.
- Integrate real-time chat for enhanced user interaction.
- Develop a functional prototype with a well-defined architecture.



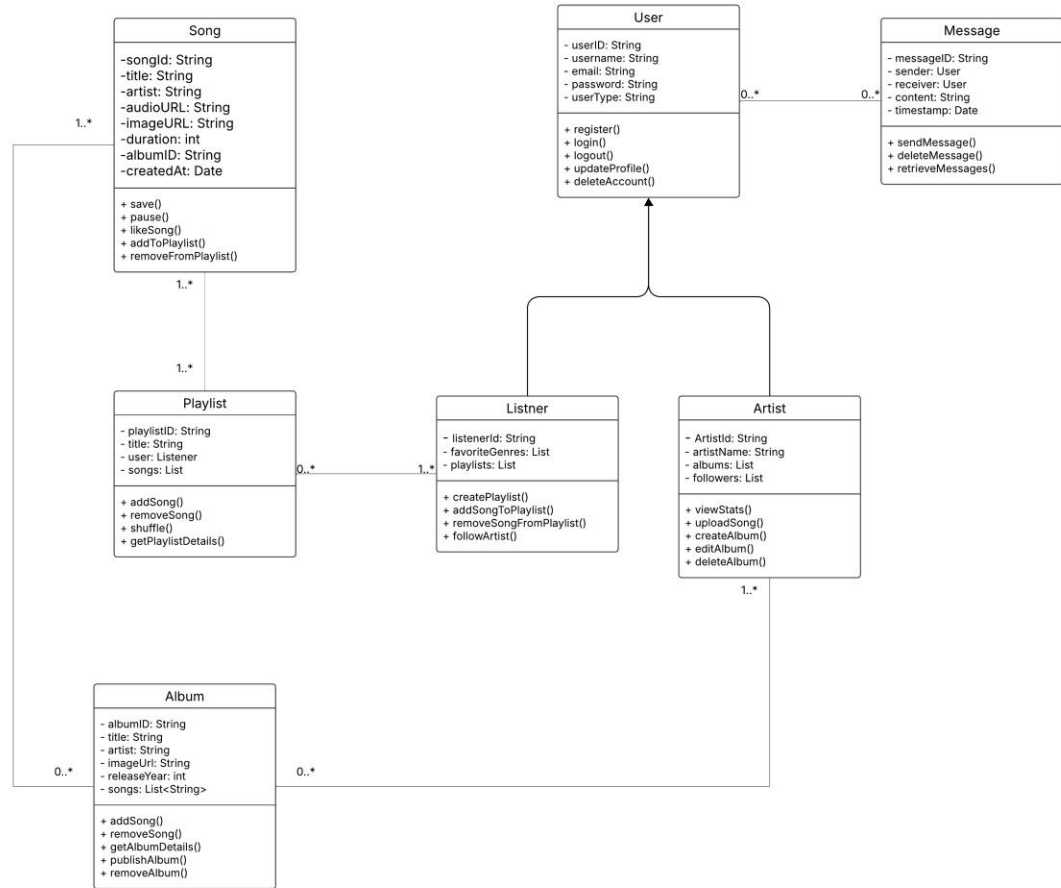


Project Requirements

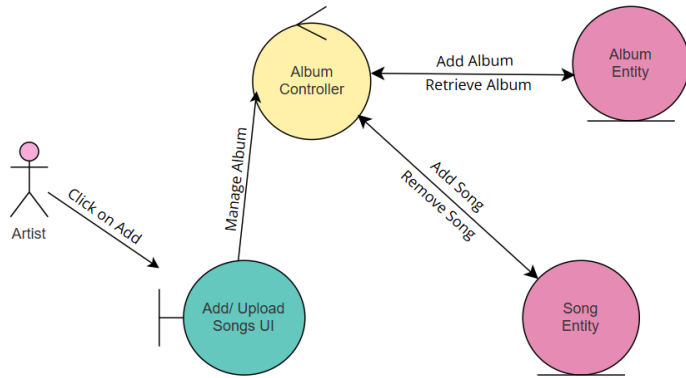
Use Case Diagram



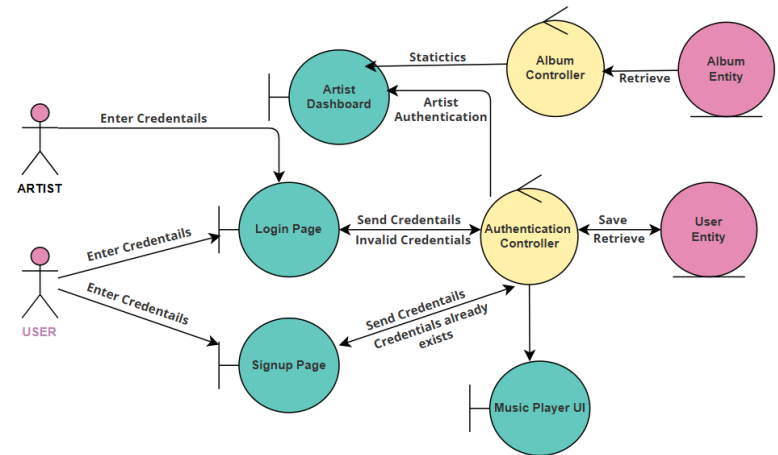
Class Diagram



Robustness Diagrams

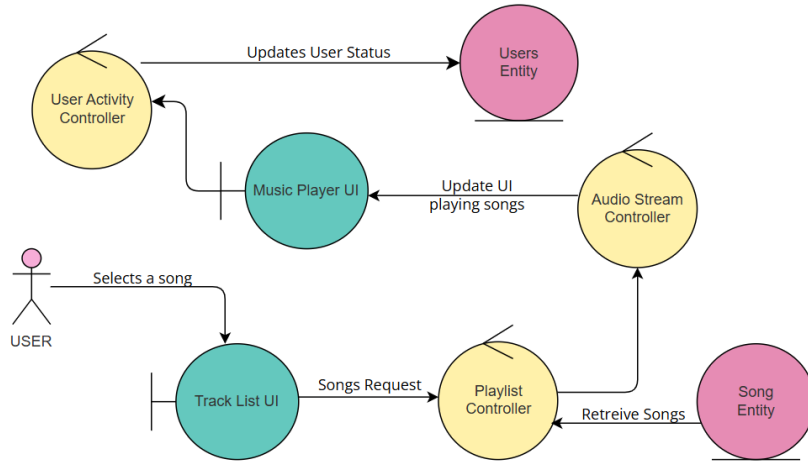


Add Song

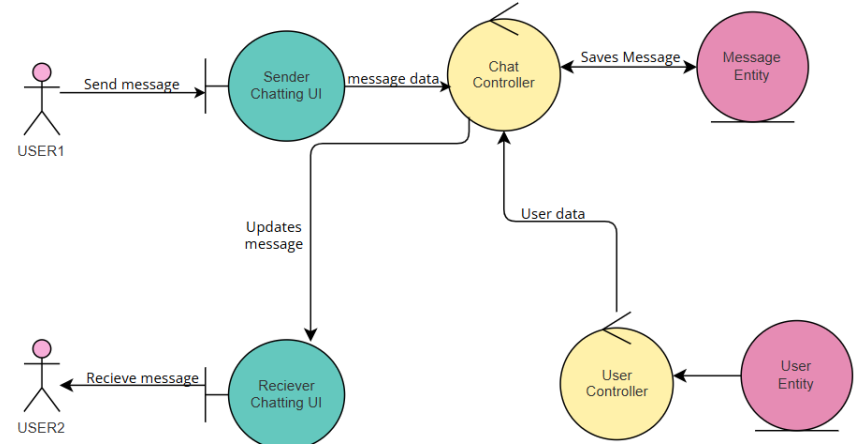


Login

Robustness Diagrams

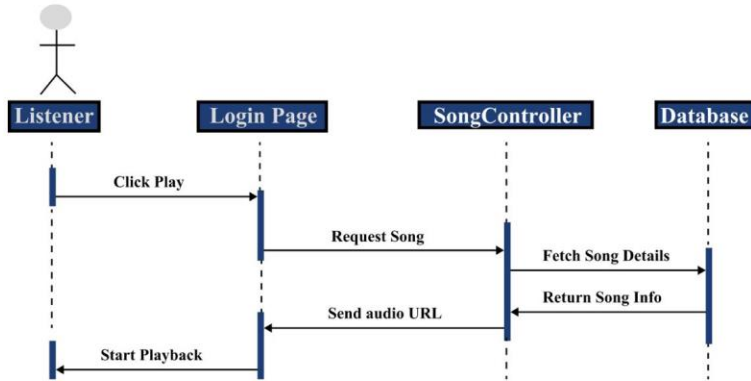


Play Music

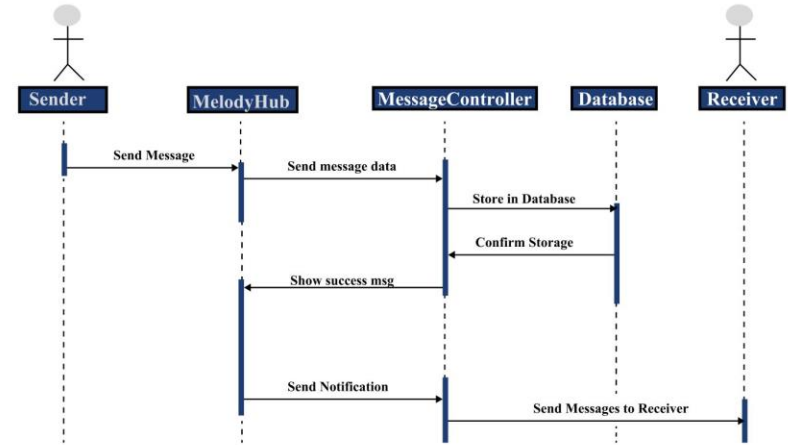


Send Message

Sequence Diagrams

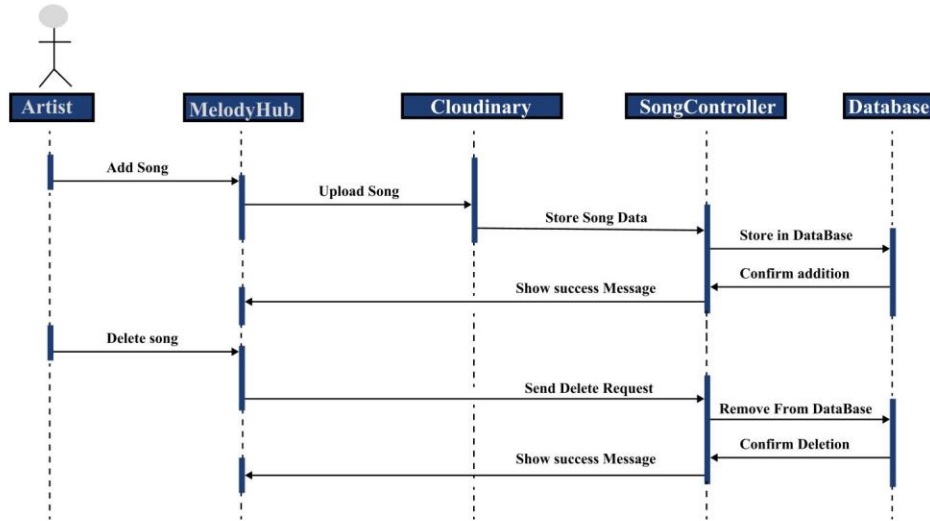


Play Music

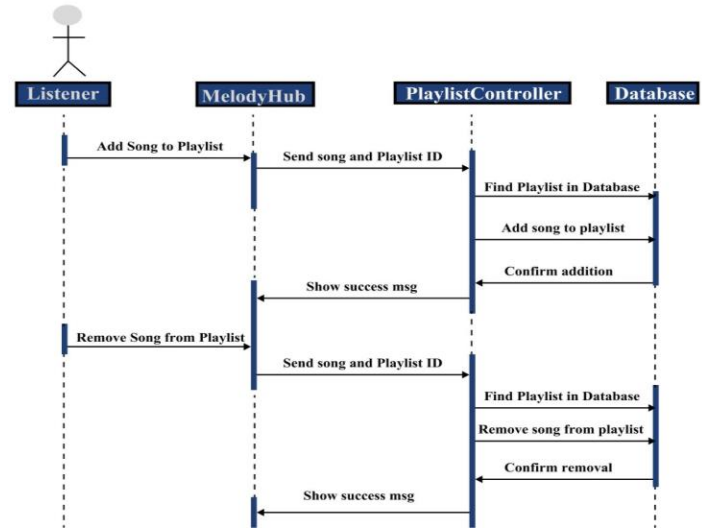


Send Message

Sequence Diagrams

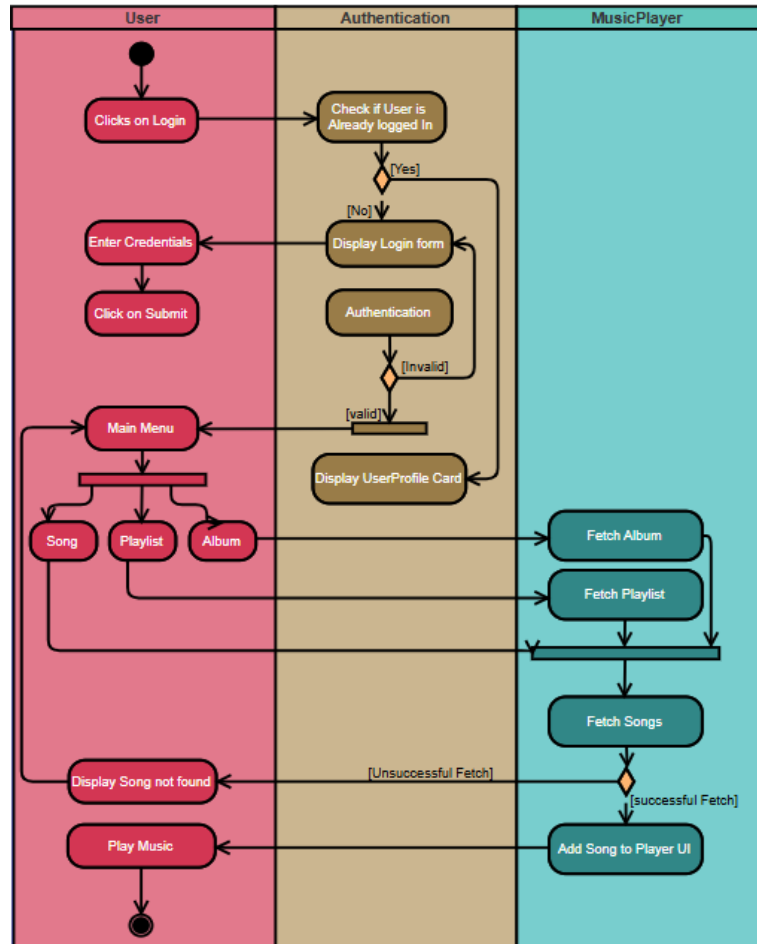


Manage Songs

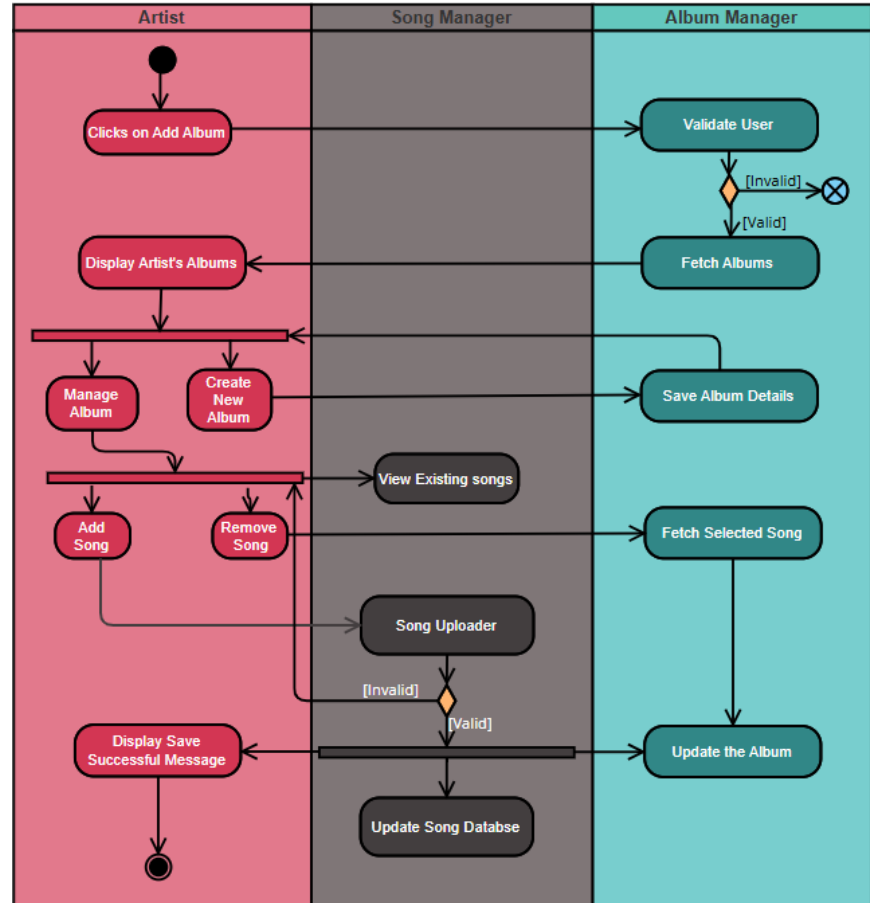


Send Message

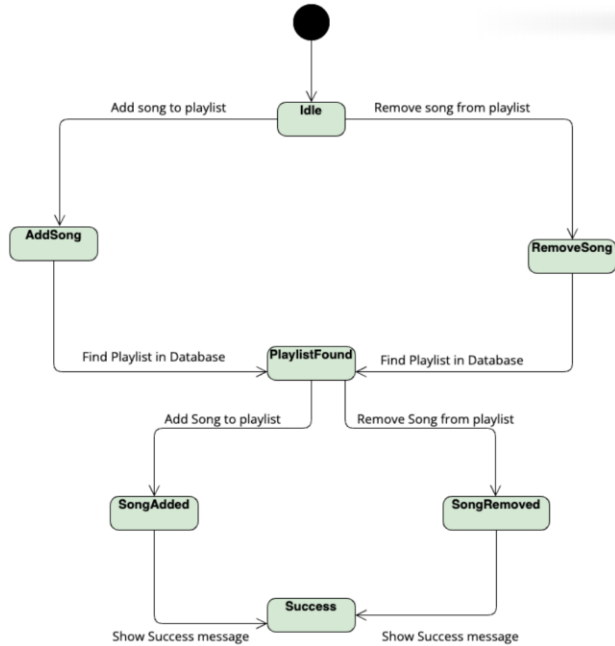
Activity Diagram (Play Music)



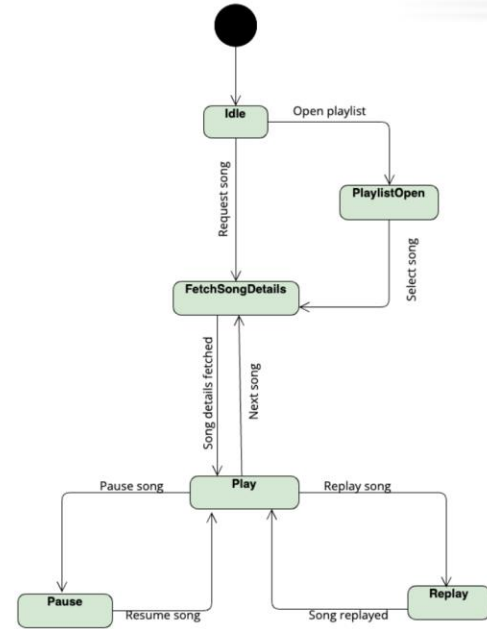
Activity Diagram (Add Song)



State Diagrams

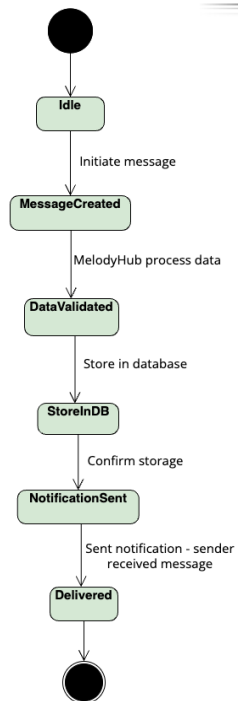


Manage Playlist



Play Music

State Diagrams

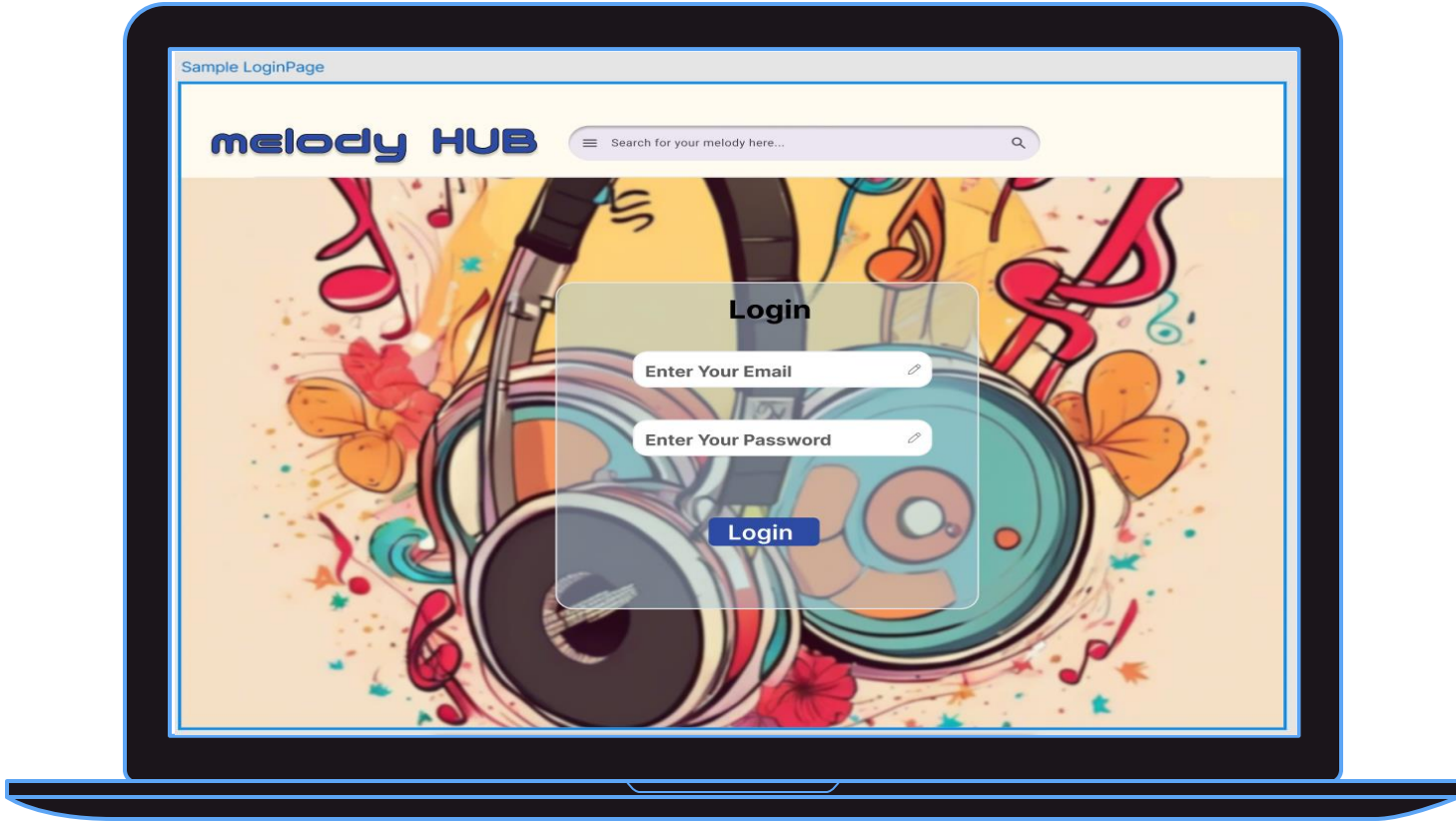


Send Message

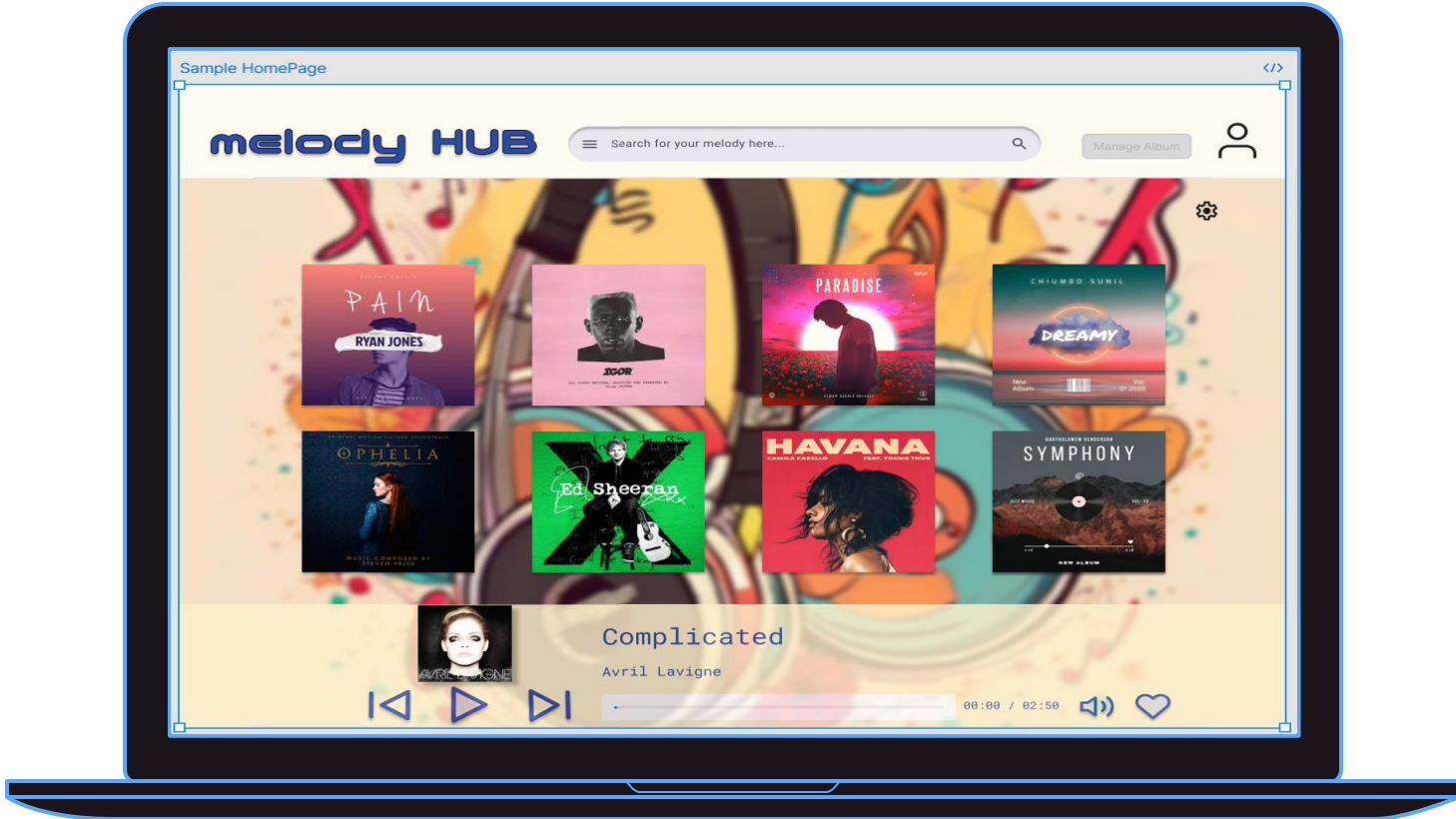


Prototype Design

Login Page



Homepage



Artist's Album Manage Section

The screenshot shows a web application titled "Sample Manage Song" in the browser's address bar. The page features the "melody HUB" logo and a search bar with the placeholder text "Search for your melody here...". A "Manage Album" button and a user profile icon are located in the top right corner. The main content area is divided into three sections: "Add Song", "Create Album", and "Statistics".

Add Song

Enter the Song Name

Enter the Artist Name

Album

Select the existing Albums

Select the Album

Save

Create Album

Enter the Album Name

Enter the Artist Name

Save

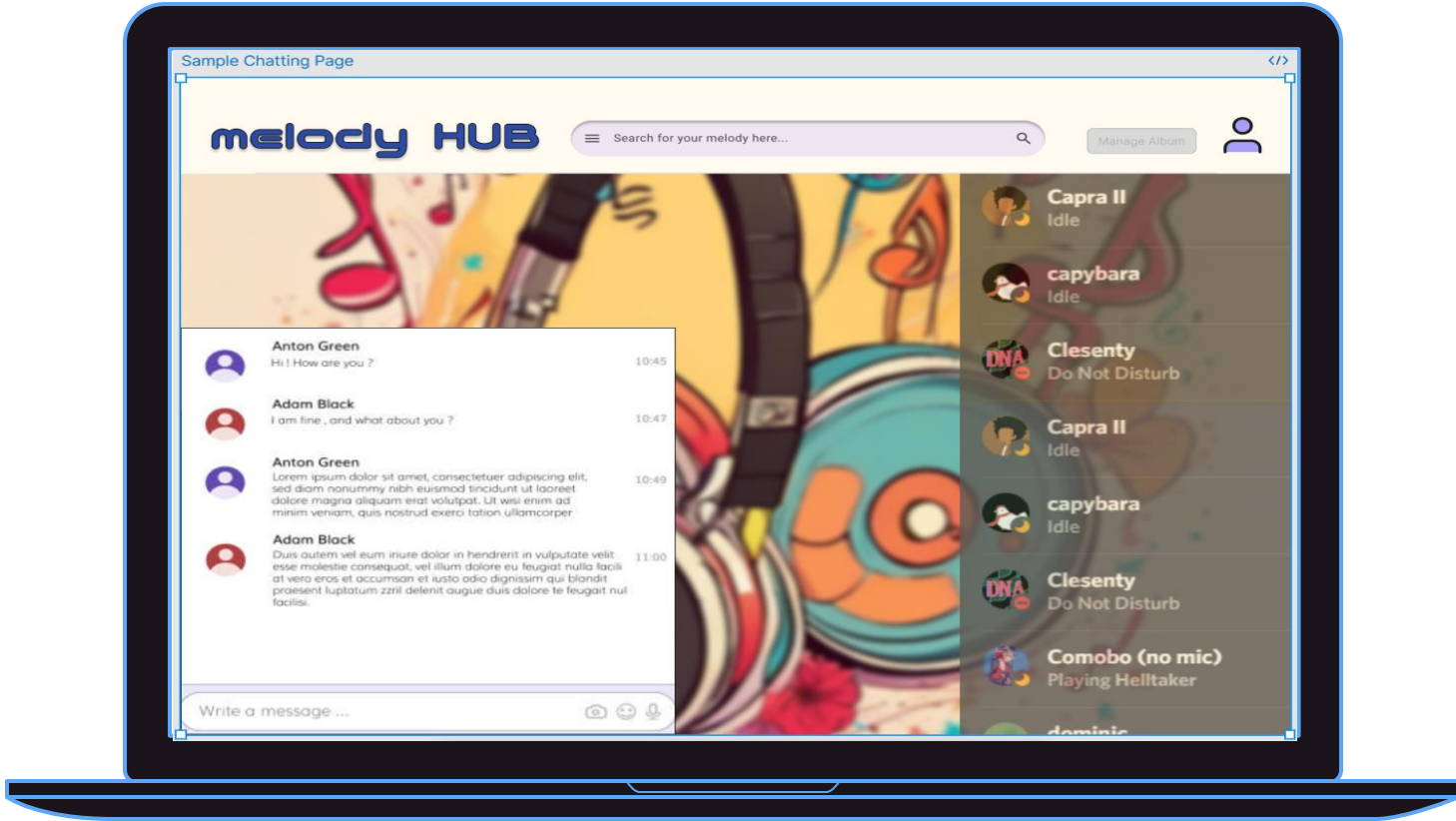
Statistics

Total number of albums = 0

Total number of songs = 0

Download

Chat Section



Tools and Platforms Used



HTML



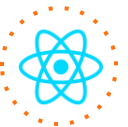
JS



CSS



Tailwind CSS



React



Node



VS Code



Git

Conclusion

- Project Goals: To build a scalable and interactive music platform.
- Objective: Implement core music streaming functions, real-time chat, and OOP-based architecture.
- Future Work: Adding social networking features, mobile application development, enhancing search capabilities.





Thank You

Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by [SlidesCarnival](#)
- Photographs by [Unsplash](#)
- Illustrations by [Undraw.co](#)