# TuneTalk: Music Rating and Sharing App

## Table of Contents

---

## Overview

**Description**

TuneTalk is a music rating and sharing application designed to allow users to review and rate songs, providing scores based on aspects like lyrics and melody. Users can also leave detailed reviews and read others' opinions. The application will integrate with external music databases, such as the iTunes API, to fetch song details.

**App Evaluation**

- **Category:** Entertainment
- **Target Platforms:** Mobile (iOS/Android)
- **Purpose:** To create a community-driven platform for discovering and reviewing music. Unlike other apps such as Spotify that rely on algorithmic recommendations, TuneTalk focuses on user feedback and ratings to help users discover better music.
- **Market Potential:** Potential integration with music purchase platforms like iTunes. With a referral model, TuneTalk can offer users the ability to purchase or download songs, generating revenue through commissions.
- **User Engagement:** The app encourages frequent user interaction by allowing users to create ratings and reviews. Users may return multiple times a week to rate songs, leave feedback, and follow other users' reviews.
- **Scope:** TuneTalk will have a moderate level of technical difficulty, focusing on core functionalities such as user authentication, song search, song rating, review submission, and social features like comments and following users.

## Product Specification

### 1. Functional Requirements

- **User Authentication:**
  - Users can sign up and log in to their accounts.
- **Search and Song Information:**
  - Users can search for songs using the integrated iTunes API or another music database.
  - Display song details including album art, artist, and other metadata.
- **Rating System:**
  - Users can rate songs based on different criteria such as lyrics and melody, using a star rating system (out of 5).
- **Review Section:**
  - Users can leave textual reviews for songs.
  - Users can view and interact with other users' reviews.
- **Comment Moderation:**
  - Optional integration with OpenAI for content moderation to filter out inappropriate or offensive language.
- **Follow Feature:**
  - Users can follow others to view their ratings and reviews.
- **Song Recommendation:**
  - Based on ratings and interactions, the app can recommend similar songs.

### 2. Non-Functional Requirements

- **Scalability:**
  - The app should be capable of handling a large number of concurrent users and real-time song searches.
- **Usability:**
  - A simple, intuitive UI that is accessible to users of all levels.
- **Performance:**
  - Efficient API integration for real-time search results, ensuring minimal latency.
- **Security:**
  - User data, including passwords and comments, should be securely stored using encryption protocols.

## Requirements

### 1. Hardware Requirements

- Mobile device with internet connectivity (iOS/Android).

### 2. Software Requirements

- **Frontend:**
    - Developed using React Native or Swift/Java for native app experience.
- **Backend:**
    - RESTful API services built on Node.js or Python (Flask/Django) to handle user authentication, ratings, and comments.
- **Database:**
    - PostgreSQL or MongoDB for storing user data, song ratings, and reviews.
- **External API:**
    - iTunes API or a similar music database for fetching song data.

---

## Architecture and Design

### 1. Architectural Pattern

- **MVC (Model-View-Controller):** The app will follow an MVC pattern to ensure separation of concerns:
    - **Model:** Song data, user profiles, and reviews.
    - **View:** User interface components for login, song search, rating, and commenting.
    - **Controller:** Handles API requests, user input processing, and interactions between the model and view layers.

### 2. System Components

- **Frontend:**
    - UI Components: Built using React Native components for mobile.
    - State Management: Redux or Context API for handling global states (e.g., user authentication, song search results).
- **Backend:**
    - REST API for user authentication, song search, ratings, and review functionality.
    - API Gateway to handle third-party API integration for music data.
    - Comment Moderation: Optional AI-based moderation layer to filter user-generated content.

### 3. External Services

- **iTunes API Integration:** For song search and metadata retrieval.
- **OpenAI API Integration (Optional):** For moderating user-generated comments.

---

## User Stories

### 1. Required Must-have Stories

- User can log in.
- User can sign up.
- User can search for songs.
- User can rate songs (based on multiple criteria like lyrics, melody).
- User can leave comments and read other users' comments on songs.

### 2. Optional Nice-to-have Stories

- Users can follow other users and see their reviews.
- A comment moderation system to prevent inappropriate comments.
- The app can recommend similar songs based on user ratings and preferences.
- Notifications for when followed users post new reviews.

---

## Screen Archetypes

1. **Login Screen**
    - Allows users to log into their account.
2. **Signup Screen**
    - Allows users to create a new account.
3. **Home/Search Screen**
    - Users can search for songs by artist, song name, or album name.
4. **Main Review Screen**
    - Displays the current song's rating and allows users to add their own rating.
    - A button to access the comment section.
5. **Comment Section**
    - Displays comments from other users and allows users to add their own.

---

## Navigation

### Tab Navigation

- **Home:** Displays song search and recommendations.
- **Profile:** Allows users to manage their account information.
- **Settings:** Allows users to adjust app preferences.

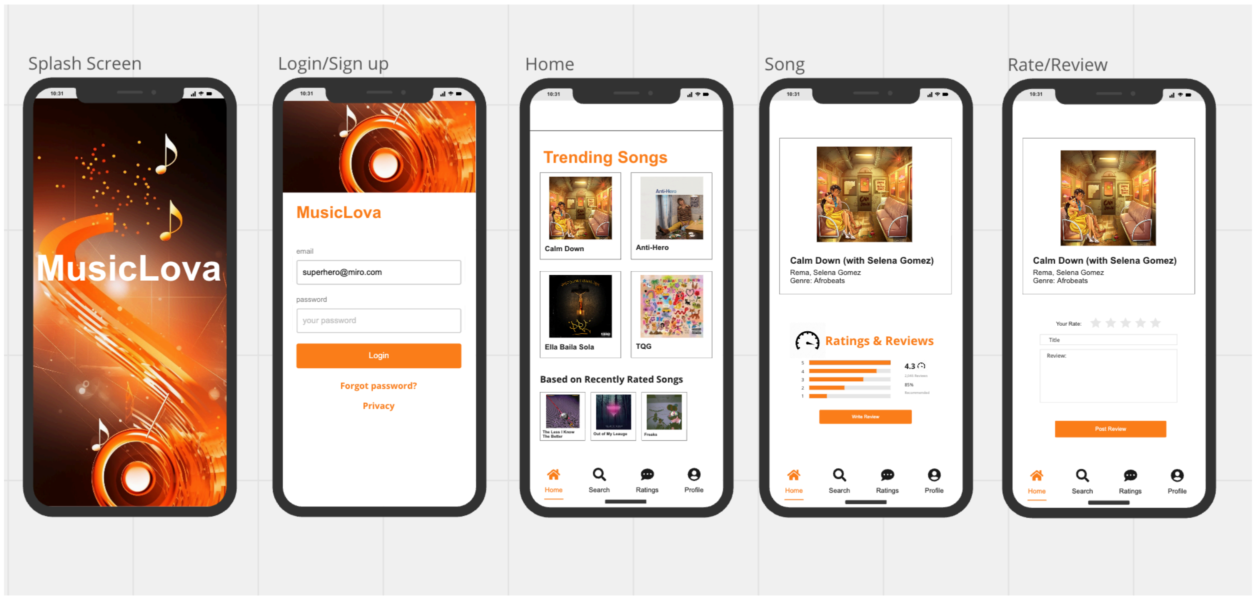
### Flow Navigation

1. **Login** -> Home
2. **Signup** -> Login
3. **Home/Search** -> Main Review Screen
4. **Main Review Screen** -> Comment Section
5. **Comment Section** -> Main Review Screen

---

## Wireframes

Here are the wireframes that illustrate the key screens and interactions for TuneTalk:


Splash Screen
MusicLova
Login/Sign up
MusicLova
email
superhero@miro.com
password
your password
Login
Forgot password?
Privacy
Home
Trending Songs
Calm Down
Anti-Hero
Ella Baila Sola
TQG
Based on Recently Rated Songs
Song
Calm Down (with Selena Gomez)
Rema, Selena Gomez
Genre: Afrobeats
Ratings & Reviews
4.3
2,046 Reviews
85%
Recommended
Write Review
Rate/Review
Your Rate:
Title
Review:
Post Review
Home
Search
Ratings
Profile