

# Software Requirements Specification (SRS) for Music Streaming App

## 1. Introduction

### 1.1 Purpose

The purpose of this document is to outline the software requirements for the development of a Music Streaming App, aimed at providing users with a seamless and feature-rich platform for streaming and enjoying music.

### 1.2 Scope

The Music Streaming App will allow users to access an extensive library of music, create playlists, discover new tracks, and enjoy a personalized music listening experience. The app will be available on multiple platforms, including iOS and Android.

### 1.3 Definitions, Acronyms, and Abbreviations

- MSA:** Music Streaming App
- User:** Any individual using the Music Streaming App
- Admin:** Administrator or staff managing the music library and platform

## 2. System Overview

### 2.1 System Description

The Music Streaming App is a digital platform that enables users to listen to music on-demand, create playlists, explore genres, and discover new artists. The app will offer a user-friendly interface and provide features such as offline listening, social sharing, and personalized recommendations.

### 2.2 System Features

- User Registration and Authentication:**
  - Users can create accounts and log in securely.

	<ul style="list-style-type: none"> <li>• User authentication for secure access.</li> </ul>
2.	<b>Music Library:</b> <ul style="list-style-type: none"> <li>• A vast collection of songs categorized by genres, artists, and albums.</li> <li>• Search functionality with filters for easy navigation.</li> </ul>
3.	<b>Playlist Management:</b> <ul style="list-style-type: none"> <li>• Users can create, edit, and delete playlists.</li> <li>• Collaborative playlists for sharing with friends.</li> </ul>
4.	<b>Offline Mode:</b> <ul style="list-style-type: none"> <li>• Users can download songs for offline listening.</li> <li>• Downloaded content shall be accessible without an internet connection.</li> </ul>
5.	<b>Personalization:</b> <ul style="list-style-type: none"> <li>• AI-driven recommendations based on user preferences.</li> <li>• History tracking for better personalized suggestions.</li> </ul>
6.	<b>Social Integration:</b> <ul style="list-style-type: none"> <li>• Users can share their playlists and favorite tracks on social media.</li> <li>• Integration with social platforms for friend discovery.</li> </ul>
7.	<b>User Feedback:</b> <ul style="list-style-type: none"> <li>• Users can rate songs and provide feedback.</li> <li>• Reporting of issues and inappropriate content.</li> </ul>
8.	<b>Admin Panel:</b> <ul style="list-style-type: none"> <li>• Admin can manage the music library, add or remove songs.</li> <li>• Monitor user activity, reported content, and statistics.</li> </ul>

## 3. Functional Requirements

### 3.1 User Management

#### 3.1.1 User Registration

- The system shall allow users to create accounts with valid information.
- Users shall be required to verify their email address during registration.

#### 3.1.2 User Authentication

- The system shall authenticate users based on their login credentials.
- Password recovery and account security features shall be implemented.

### 3.2 Music Library

#### 3.2.1 Song Categorization

- Songs shall be categorized by genres, artists, and albums.
- The system shall support an advanced search feature with filters.

### 3.2.2 Song Streaming

- Users shall be able to stream songs in real-time.
- High-quality audio streaming with adaptive bitrate.

## 3.3 Playlist Management

### 3.3.1 Playlist Creation

- Users shall create, edit, and delete playlists.
- Collaborative playlists shall support multiple contributors.

### 3.3.2 Playlist Sharing

- Users shall share playlists with friends through the app.
- Social media integration for sharing on external platforms.

## 3.4 Offline Mode

### 3.4.1 Downloading Songs

- Users shall be able to download songs for offline listening.
- Downloaded content shall have a time limit for offline access.

## 3.5 Personalization

### 3.5.1 Recommendation Engine

- The system shall provide personalized song and playlist recommendations.
- User preferences shall be learned and adjusted over time.

## 3.6 Social Integration

### 3.6.1 Social Sharing

- Users shall share their playlists and favorite tracks on social media.
- Integration with popular social platforms for friend discovery.

## 3.7 User Feedback

### 3.7.1 Rating System

- Users shall be able to rate songs on a scale.
- Feedback shall contribute to the recommendation algorithm.

### 3.7.2 Reporting System

- Users shall report issues, inappropriate content, or violations.
- Admin shall review reported content and take appropriate action.

## 3.8 Admin Panel

### 3.8.1 Content Management

- Admin shall add, edit, or remove songs from the music library.
- Admin shall have the ability to moderate user-uploaded content.

### 3.8.2 User Activity Monitoring

- Admin shall monitor user activity, playlists, and feedback.
- Generate reports on app usage, popular songs, and user demographics.

## 4. Non-Functional Requirements

### 4.1 Performance

- The app shall support a minimum of 100,000 concurrent users.
- Song streaming shall have a latency of less than 2 seconds.

### 4.2 Security

- User data shall be encrypted during transmission and storage.
- Measures shall be in place to prevent unauthorized access and protect user privacy.

### 4.3 Reliability

- The app shall have a backup and recovery mechanism for user data.
- The uptime of the system shall be 99.9%.

## 5. User Interface Design

- The user interface shall be intuitive, aesthetically pleasing, and responsive.
- Support for both dark and light mode.

## 6. Constraints

- The app shall be compatible with the latest versions of major mobile operating systems (iOS and Android).
- Internet connectivity is required for streaming and social features.

## 7. Future Enhancements

- Integration with external music platforms.
- Podcast support and additional audio content.

## 8. Appendix

- Any additional information, wireframes, or design mockups that support the SRS.

# Conclusion

This SRS document provides a detailed overview of the requirements for the Music Streaming App. It serves as a guide for the development team to design and implement a robust and user-friendly application that meets the expectations of both users and administrators. Any changes to the requirements should be documented and communicated through the appropriate change management processes.