Software Requirements Specification

Version 1.0

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MeloFi – Music Streaming Application

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1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of MeloFi a cross platform music streaming application for web and mobile.
This SRS defines the goals, features, and technical aspects of the system, ensuring a shared understanding among developers, designers, and stakeholders.

1.2 Scope

MeloFi aims to deliver a seamless audio experience to users by providing essential streaming features such as:
• Discovering tracks
• Managing playlists
• Maintaining user profiles
• Following other users
• Cross-platform availability (mobile and web)

2. Project Overview

MeloFi is a modern music streaming platform that allows users to explore, play, and manage songs from an interface.
Users can create playlists, follow other listeners, and discover new tracks based on recommendations or search results.
The application draws inspiration from Spotify and SoundCloud but focuses on simplicity, social connectivity, and personalization.

3. Goals

• Create a user-friendly interface for both web and mobile platforms.
• Ensure high performance and smooth playback.
• Allow users to create, modify, and manage playlists easily.
• Provide secure authentication and account management.
• Build a backend that supports future AI-driven recommendations.

4.1 Listeners

Users who want to discover, stream, and manage their favorite music in one place.

4.2 Creators

Independent artists who wish to upload, share, or promote their own tracks within the community.

5. Core Features

5.1 Login and Registration

Allows users to register new accounts or log in using existing credentials.
Process: The user enters login details, which the system checks in the database.
Output: Successful login grants access to the home page; failed attempts redirect them to register.

5.2 Search Functionality

Enables users to search songs, albums, or artists.
Process: Queries the backend API for matches.
Output: Displays relevant results or “No results found.”

5.3 Song Description

Displays song details including title, artist, album, duration, and lyrics .
Output: Album art, playback controls, and metadata appear in the player interface.

5.4 Playlist Management

Users can create, edit, and delete playlists.
Process: Add or remove tracks; changes are reflected immediately.
Output: Updated playlists visible in the user’s dashboard.

5.5 Playback Controls

Standard media options including play, pause, next, and previous.
The player supports continuous playback and queue management.

5.6 Dark and Light Mode

Users can switch between dark and light themes.
Preference is saved in the user’s profile for consistent appearance across sessions.

6. Tech Stack

Frontend (Web): React.js
Frontend (Mobile): Kotlin, Jetpack Compose
Backend: Flask API (Python)
Database: PostgreSQL or MySQL
Storage: AWS S3 or Cloudinary
Authentication: JWT or Firebase Authentication

7. Conclusion

MeloFi aims to redefine how users interact with music by combining functionality, simplicity, and design. It delivers a personalized experience that makes discovering, organizing, and enjoying music effortless across all devices.
The system will serve as a foundation for future expansion into advanced recommendation algorithms and community engagement features.