

Project Requirements Document

Client Name: DedSec

Project Name: HarmonyStream (Website and Mobile App)

Date: [Insert Date]

Project Overview

The project aims to develop a comprehensive music streaming platform that seamlessly integrates a website and mobile app. HarmonyStream will provide users with the ability to discover, stream, and manage music effortlessly. With a focus on intuitive design, scalable technology, and user engagement, the platform is positioned to compete with major players like Spotify and Apple Music. This document outlines every detail needed for the development process, ensuring clarity and alignment with client expectations.

The website and mobile app will be designed to cater to both casual listeners and music enthusiasts, offering curated playlists, personalized recommendations, and an extensive music library. Independent artists will also benefit from features enabling them to upload and promote their music.

Core Objectives

Seamless Music Experience: Deliver high-quality audio streaming with adaptive bitrate technology to ensure smooth playback across different network conditions. User-Friendly Interface: Design a clean, intuitive interface for effortless navigation. Comprehensive Music Library: Provide an extensive library of tracks, albums, and genres to cater to diverse user preferences. Personalization: Utilize machine learning algorithms to offer personalized recommendations and curated playlists based on user behavior. Social Integration: Foster community engagement by enabling users to share playlists and follow artists. Monetization Strategies: Implement subscription plans, advertisement modules, and artist promotions to generate revenue.

Target Audience

Primary Audience: Music enthusiasts aged 16-45 who actively stream music and enjoy discovering new artists. Independent Artists: Musicians and content creators seeking platforms to showcase their work. Casual Listeners: General users looking for easy access to curated playlists and trending music. Global Reach: While initially launching in English, the platform will later expand to support multiple languages, broadening its global appeal.

Features and Functionalities

User Features

Sign-Up/Sign-In:

- Multiple authentication methods, including email, social media, and Google login.
- Secure login with two-factor authentication.

User Profiles:

- Customizable profiles with the ability to upload profile pictures and set preferences.
- Manage public and private playlists.

Music Library:

- Categorized by genres, moods, artists, and albums for intuitive browsing.
- High-quality streaming with options for 128 kbps, 320 kbps, and FLAC formats.

Playlists:

- Create and organize playlists with drag-and-drop functionality.
- Enable collaborative playlist editing with friends and followers.

Search and Discovery:

- Advanced search capabilities, including filters for genre, artist, release year, and popularity.
- AI-driven recommendation engine for personalized music suggestions.

Streaming:

- Adaptive bitrate technology for uninterrupted playback.
- Offline downloads for premium users, enabling playback without internet.

Social Features:

- Follow favorite artists and friends to stay updated on new releases and shared playlists.
- Like and comment on tracks and playlists to enhance community interaction.

Subscription Plans:

- Free tier with ad-supported streaming.
- Premium plans offering ad-free experiences, offline downloads, and exclusive content.

Admin Features

User Management:

- Tools to monitor, approve, or block user accounts.
- Detailed activity logs and analytics for user behavior.

Content Management:

- Upload and categorize tracks with detailed metadata.
- Manage artist profiles and provide promotional tools.

Analytics Dashboard:

- Real-time insights into user engagement, popular content, and revenue streams.
- Automated reporting for data-driven decision-making.

Advertisement Management:

- Configure ad placements, frequencies, and durations for free-tier users.
- Manage third-party ad integrations and campaigns.

User Interface (UI) Design Specifications

Desktop Website Screens

Home Page:

- A dynamic carousel showcasing trending tracks, albums, and playlists.
- Section with "Recommended for You" based on user activity.
- Widgets for "Top Charts," "New Releases," and "Recently Played."

Search Page:

- A search bar with autocomplete suggestions.
- Advanced filters for genres, artists, albums, moods, and release years.
- A grid display for quick browsing of search results.

Playlist Page:

- Full playlist details, including cover image, description, and customizable track order.
- Controls for shuffle, repeat, play all, and download (for premium users).
- A "Similar Playlists" section to encourage exploration.

Profile Page:

- User details with profile picture, bio, follower count, and playlists.
- Tabs for "Created Playlists," "Liked Songs," and "Followed Artists."
- Activity feed showing recently liked songs and comments.

Player Controls:

- Persistent footer player with advanced controls (e.g., equalizer, speed adjustment).
- Options for lyrics display, queue management, and audio quality settings.

Mobile App Screens

Splash Screen:

- Animated logo transitioning into the login page.
- Brief tagline emphasizing the brand.

Login/Sign-Up:

- Minimal interface with clearly labeled social and email login options.
- Password recovery and two-step verification setup.

Home Screen:

- Infinite vertical scroll of personalized recommendations, trending tracks, and playlists.
- Quick access to "Daily Mixes" and "Mood Playlists."

Now Playing Screen:

- Full-screen album art with interactive player controls.
- Swipe up for queue and lyrics, swipe down to return to the previous screen.

Library:

- Organized tabs for "Playlists," "Albums," "Artists," and "Downloads."
- Quick sort and search options for easy navigation.

Search:

- A prominent search bar with categories like "Tracks," "Podcasts," and "Genres."
- Recent searches and trending searches displayed prominently.

Settings:

- Comprehensive menu with account details, theme selection (light/dark), and app preferences.
- Options for enabling/disabling explicit content, setting data usage limits, and managing downloads.

Responsive Design

Desktop:

- Sidebar navigation for seamless access to main features.
- Flexible grid layouts for displaying music content, ensuring usability on large screens.

Mobile:

- Bottom navigation bar with prominent icons for Home, Search, Library, and Profile.
- Smooth gesture-based navigation for ease of use.

Color Scheme and Typography

Primary Colors:

- Deep Purple (#673AB-) and Electric Blue (#03A9F4).

Secondary Colors:

- White (#FFFFFF), Dark Gray (#212121), and Light Gray (#E0E0E0).

Typography:

- Headings: Bold sans-serif font (e.g., Poppins).
- Body Text: Regular sans-serif font (e.g., Roboto).

Interaction Details

- Hover Effects: Highlight buttons and links with subtle animations.
- Transitions: Smooth page transitions and animations for interactive elements.
- Feedback: Instant feedback for actions like button clicks or form submissions.
- Gestures: Support for swipe, pinch, and tap gestures for mobile users.

Design Requirements

Modern Aesthetics: A visually appealing design with smooth transitions and animations.

Responsive Layout: Ensure compatibility across various screen sizes and resolutions.

Accessibility: Adherence to WCAG guidelines for users with disabilities. Dark and Light Mode: Provide options for users to switch themes based on preferences.

Performance Requirements

Low Latency: Optimize streaming to minimize buffering times, even under poor network conditions. Scalability: Handle up to 1 million concurrent users with auto-scaling server capabilities. Quick Load Times: Ensure all features and pages load within 2 seconds. Server Uptime: Guarantee 99.9% availability with robust server monitoring.

Security Requirements

Data Encryption: Use AES-256 to secure user data and streaming content. Access Control: Implement rate limiting, IP blocking, and other measures to prevent unauthorized access. Regular Testing: Conduct security audits and penetration testing to identify vulnerabilities.

Deliverables

Fully functional and user-tested website. Mobile applications for both iOS and Android platforms. User and admin manuals detailing platform functionalities. API documentation for third-party integrations. Marketing materials for launch campaigns.

Milestones and Timelines

Requirement Gathering: 2 weeks Design and Prototyping: 6 weeks Backend Development: 8 weeks Frontend Development: 8 weeks Testing and QA: 6 weeks Deployment and Launch: 2 weeks

Budget Estimate

Development Costs: \$500,000 Infrastructure and Hosting: \$50,000/year Marketing and Promotions: \$100,000 Maintenance: \$50,000/year

Maintenance and Support

Dedicated support team for addressing issues 24/7. Monthly updates to improve functionality and fix bugs. Quarterly performance reviews to optimize user experience.

Assumptions and Constraints

High-speed internet availability is assumed for optimal streaming. Music licensing will be handled and funded by the client. Initial launch will target English-speaking audiences only.

Acceptance Criteria

Platform achieves all outlined objectives and functionalities. Passes rigorous testing for performance and security. Positive user feedback during beta testing phase.

Contact Information

Client Name: DedSec Email: contact@dedsec.com Phone: [Insert Phone]

Prepared by: [Your Name/Company]

Approved by: DedSec