**Smart Record Label App with GPS & Spotify Integration**

**1. Problem Statement**

Managing artists, concerts, and merchandise locations is a challenge for record labels. This app will provide a platform to organize concerts, locate merchandise stores, and integrate Spotify for music streaming, allowing fans to discover and follow their favorite artists easily.

**2. Scope of the Project**

* Artist and album management
* Concert scheduling with GPS tracking
* Merchandise store locator
* Spotify Embedded code
* User authentication (Admin, Artist, Fan)
* Notifications for concerts and new merch
* Payment integration for merch purchases

**3. System Requirements**

**Software / Tools**

* **Android Studio (Java)**
* **Firebase** (Authentication, Database, Storage)
* **Google Maps API** (GPS and location services)
* **Spotify SDK / Web API** (Music integration)
* **Stripe / Razorpay** (Payment integration)

**4. Features to be Incorporated**

1. **Implementation of Android Studio, JDK and Android SDK**
2. **Implementation of GUI components including fonts and colours**
3. **Usage of Event Listeners, Layout Managers and Push notifications.**
4. **Implementation of calculators (calculating merch price)**
5. **Create animations and graphical primitives.**
6. **Implementation of SQL Lite database.**
7. **Usage of firebase to Email and SMS services.**
8. **Making use of Notification Manager**
9. **Using location based services like GPS**
10. **Implementing Flutter Module into the application.**

* **User Authentication** (Sign-up, login, profile management)
* **Artist and Album Management** (Create and edit artist profiles)
* **Concert GPS Tracking** (Locate events with Google Maps)
* **Spotify Integration** (Play music via embedded player)
* **Admin Panel** (Manage artists, events, and merch)
* **Notifications** (Updates on upcoming concerts and new merch)

**5. System Architecture / Workflow**

* **Frontend (Mobile App)**: UI designed with Material Design principles
* **Backend**: Firebase for real-time data storage
* **APIs**: Google Maps API for GPS, Spotify API for music integration

**6. Module Details**

1. **User Module**: Authentication, profile management
2. **Artist Module**: Manage albums and concerts
3. **Concert Module**: Add, view, and navigate to concert locations
4. **Merchandise Module**: Locate and purchase official merch
5. **Spotify Integration Module**: Connect music via links or embedded player
6. **Payment Module**: Secure transactions for merch

**7. Snapshots of Module Output**

* Login screen
* Artist profile with Spotify integration
* Concert listing with Google Maps
* Merchandise store locator
* Notifications screen

**8. Challenges Addressed During Implementation**

* Integrating Spotify API for seamless music playback
* Implementing Google Maps for accurate concert locations
* Ensuring real-time updates for concerts and merchandise
* Handling secure payments for merchandise

**9. Future Development**

* AI-powered artist recommendations
* Social media sharing for events
* Augmented Reality (AR) for merch previews
* Offline access for saved event details

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| |  |  |  | | --- | --- | --- | | FEATURES | MODULE NAME | MARKS | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |
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| **1. Problem Statement**  Managing artists, concerts, and merchandise locations is a challenge for record labels. This app provides an **Expo (React Native) platform** to organize concerts, locate merchandise stores, and integrate **Spotify** for music streaming. Fans can discover and follow their favorite artists, while admins and artists can efficiently manage events, merch, and music.  **2. Scope of the Project**   * **Artist and album management** * **Concert scheduling with GPS tracking** * **Merchandise store locator** * **Spotify Integration via WebView** * **User authentication (Admin, Artist, Fan)** * **Notifications for concerts and new merch** * **Payment integration for merch purchases**   **3. System Requirements**  **Software / Tools**   * **Expo (React Native) in VS Code** – Cross-platform app development * **Firebase** – Authentication, database, storage * **Google Maps API** – GPS and location services * **Spotify Web API** – Embedded music player * **Stripe / Razorpay** – Payment integration   **4. Features to be Incorporated**  **Core Features:**  ✔ **User Authentication** (Sign-up, login, profile management) ✔ **Artist & Album Management** (Create & edit artist profiles) ✔ **Concert GPS Tracking** (Locate events using Google Maps) ✔ **Spotify Integration** (Embedded player for artist music) ✔ **Admin Panel** (Manage artists, events, and merch) ✔ **Notifications** (Updates on concerts & merch drops) ✔ **Merchandise Store Locator** (Find official merch locations) ✔ **Payment Processing** (Secure transactions for merch purchases)  **Additional Functionalities:**  ✔ Implementation of **React Native UI components** (custom fonts, colors) ✔ **Event Listeners & Navigation** for seamless user experience ✔ **Animations & Graphical Enhancements** ✔ **Push Notifications** for new events & releases ✔ **Real-time updates** using Firebase  **5. System Architecture / Workflow**  **Frontend (Mobile App)**   * **Expo (React Native) with Material UI** for a modern, user-friendly design   **Backend**   * **Firebase** for real-time data storage & authentication   **APIs Used:**   * **Google Maps API** – GPS tracking for concerts & merch stores * **Spotify Web API** – Embedding music players * **Stripe/Razorpay API** – Secure payment processing   **6. Module Details**   1. **User Module** – Authentication, profile management 2. **Artist Module** – Manage albums and concerts 3. **Concert Module** – Add, view, and navigate to concert locations 4. **Merchandise Module** – Locate and purchase official merch 5. **Spotify Integration Module** – Connect music via links or embedded player 6. **Payment Module** – Secure transactions for merch   **7. Snapshots of Module Output**   * **Login screen** * **Artist profile with Spotify integration** * **Concert listing with Google Maps** * **Merchandise store locator** * **Notifications screen**   **8. Challenges Addressed During Implementation**   * Integrating **Spotify API** for seamless music playback * Implementing **Google Maps** for accurate concert locations * Ensuring **real-time updates** for concerts and merchandise * Handling **secure payments** for merchandise   **9. Future Development**   * **AI-powered artist recommendations** * **Social media sharing for events** * **Augmented Reality (AR) for merch previews** * **Offline access** for saved event details |  |  |
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