INDY-7 Spotify Music Suggestions

SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

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# Introduction

## 1.1 Overview

## A mobile app implemented with JavaScript using React Native that can receive data from a user and view their playlist contents. The app will then be able to parse Spotify’s database of music and suggest music tracks based off the content in a playlist.

## 1.2 Project Goals

* Develop a mobile application utilizing React-Native for both iOS and Android.
* Access the user’s Spotify account through integration of the Spotify API into the implemented mobile app.
* Implement a search algorithm which recommends songs for individual playlists of the user

## 1.3 Definitions and Acronyms

API: application programming interface.

MD: metadata

DB: database

RN: React Native

## 1.4 Assumptions

The user must own a mobile device capable of an internet connection. The user must own a Spotify account.

# 2.0 Design Constraints

Hardware Constraints

User must have:

* Smartphone
* internet connection on smartphone device
* Spotify account

Software Constraints

Apple users must have iOS 14 or above

Android users must have Android OS 5.0 or above.

UI Design

* Spotify Design requirements:
  + Only artwork provided by Spotify can used in association with songs displayed from the Spotify DB
  + Artwork must be kept in its original form.
  + Character count accommodations required by Spotify:
    - Playlist: 25
    - Artist name: 18
    - Track name: 23
  + Use of Spotify logo has specific requirements. Can be seen [here](https://developer.spotify.com/documentation/general/design-and-branding/#browsing-spotify-content).

The user will be unable to add songs to their Spotify playlist if the Spotify Server is down.

## 2.1 Environment

iOS emulation requires MacOS.

## 2.2 User Characteristics

## 2.3 System

Usage of the app relies on availability of Spotify service.

# 3.0 Functional Requirements

\*Need internet access\*

(List the design, graphic, and operating system requirements and list any constraints here and assign them numbers like 2.1, 2.2, etc.)

* Gain access to user’s Spotify Account
* Load and display a list of the user’s playlists
* Access each of the user’s playlist
* Display a list of songs within the user’s playlist
  + IMPORTANT
    - All MD displayed from Spotify MUST link back to the Spotify app
    - If the user does not have the Spotify app installed, links must divert them to the app store to download the app.
* Output a list of song recommendations for each unique playlist
* Add songs from recommendation list to the user’s playlist
* Recommendation Algorithm:
  + Access MD from each song within given playlist
  + Access Spotify song DB
  + Compare MD of user’s playlist songs to MD of Spotify database
  + Generate list of songs matching MD criteria
* Songs added to playlist are returned to Spotify app.
* All songs/playlist must link to Spotify app

# 4.0 Non-Functional Requirements

## 4.1 Security

The application will access the user’s Spotify account. As such, security will be handled through the authentication process.

## 4.2 Capacity

## 4.3 Usability

Certain actions are restricted for Spotify free users. In these cases, Spotify *recommends* displaying the message depending on usage of either Android or iOS as follows:

Android premium message:

“Spotify Premium lets you play any track, ad-free and with better audio quality. Go to spotify.com/premium to try it for free.”

iOS premium message:

“Spotify Premium lets you play any track, ad-free and with better audio quality.”

[Link to block quote](https://developer.spotify.com/documentation/general/design-and-branding/#using-our-content)

## 4.4 Other

# APPENDICES

USER GUIDE

Download the application from the Google play store or Apple App Store