Project Documentation

**RhythmicTunes: Your Melodic Companion**

# Introduction

* + **Project Title**: RhythmicTunes: Your Melodic Companion
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# Project Overview

## Purpose:

RhythmicTunes is a music streaming application designed to provide users with a seamless, personalized, and immersive musical experience. Built with React.js, it allows music enthusiasts to explore, play, and organize tracks while managing playlists and favorites efficiently.

## Features:

* + Music discovery and search functionality
  + Playlist creation and management
  + Favorites (Wishlist) management
  + Audio playback with one-track-at-a-time control
  + Responsive UI with Bootstrap/Tailwind CSS

# Architecture

* + **Frontend**: React.js with Bootstrap / Tailwind CSS and React Icons
  + **Backend**: JSON Server (mock API for songs, playlists, and favorites)
  + **Database**: JSON file (db.json) storing songs, playlists, and favorites

# Setup Instructions

## Prerequisites:

* + Node.js and npm
  + React.js
  + Git
  + Visual Studio Code
  + JSON Server

## Installation Steps:

# Clone the repository git clone <repo-link>

# Install client dependencies cd tunes

npm install

# Start React development server npm start

# Start JSON server

json-server --watch ./db/db.json

# Folder Structure

RhythmicTunes/

|  |  |  |  |
| --- | --- | --- | --- |
| |-- | node\_modules/ | # | Dependencies |
| |-- | public/ | # | Static files (index.html, favicon, images) |
| |-- | src/ | # | Source code |
| | | |-- assets/ | # | Images, icons, fonts |
| | | |-- components/ | # | Reusable components |
| | | |-- pages/ | # | Page-level components |
| | | |-- services/ | # | API and helper functions |
| | | |-- App.js | # | Root component with routes |
| | | |-- App.css | # | Global styles |
| | | |-- index.js | # | Entry point |
| |-- | db/ | # | JSON server data (db.json) |
| |-- | package.json | # | Project metadata and dependencies |
| |-- | README.md | # | Documentation |

# Running the Application

## Frontend:

cd tunes npm start

## Backend (JSON Server):

cd db

json-server --watch db.json

**Access**: Visit :http://localhost:5173

# API Documentation

## Songs:

* + GET /items

## Favorites:

* + GET /favorities
  + POST /favorities
  + DELETE /favorities/:id

## Playlists:

* + GET /playlist
  + POST /playlist
  + DELETE /playlist/:id

# Authentication

* + Not applicable for this version (future enhancement planned for user accounts and secure login).

# User Interface

* + Landing Page with Hero Section
  + Songs List Page with Search
  + Playlist Page (create, add/remove songs)
  + Favorites Page (manage favorite songs)

# Testing

* + Manual testing using Chrome Dev Tools
  + API testing using JSON Server logs and browser console

# Screenshots or Demo

* + **Demo Video :**
  + **Project Reference:**

# Known Issues

* + JSON Server is limited to local testing only (no cloud database).

# Future Enhancements

* + Integration with real music APIs (e.g., Spotify API)
  + User authentication and profile management
  + Social features (playlist sharing, likes)
  + Offline music support