# RYTHMIC TUNES

# (YOUR MELODIC COMPANION)

**Frontend Development with React.js Project Documentation format.**

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**In partial fulfilment for the award of the degree**

**Of**

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# RhythmicTunes: Your Melodic Companion

## 1. Introduction

RhythmicTunes: Your Melodic Companion is a web application developed using HTML, CSS, JavaScript, React, and JSX. The project is designed to provide users with an interactive and user-friendly platform for exploring and enjoying music. Its responsive interface ensures accessibility across different devices, while React and JSX enhance the dynamic rendering of components for a smooth user experience. By combining structured design with functional features, RhythmicTunes serves as a reliable and engaging melodic companion for music enthusiasts.

## 2. Project Overview

Purpose:

RhythmicTunes is a modern music streaming application designed to offer users an immersive listening experience. It provides a vast collection of songs, playlists, and personalized recommendations. The app ensures a seamless interface for browsing, discovering, and enjoying music.

Features:

- Browse Songs by Genre, Artist, or Album
- Personalized Playlist Creation
- Search Functionality with Real-Time Suggestions
- Media Player with Play/Pause, Next/Previous, and Volume Control
- Bookmark Feature for Saving Favorite Tracks
- Light/Dark Mode for Improved User Experience
- Responsive Design for Desktop and Mobile Devices

## 3. Architecture

**Component Structure:**

**App.js -** Root component managing layout and routing

**Header.js** - Navigation bar with search functionality

**SongList.js** - Displays a list of available songs

**SongCard.js** - Individual card showing song details and controls

**Playlist.js** - Manages user-created playlists

**MediaPlayer.js** - Provides audio playback controls

**Footer.js** - Displays copyright and app links

### State Management

Context API – Used for managing global states such as theme preferences, playlist data, and bookmarked songs

### Routing:

**React Router** - Implemented for seamless navigation between music categories, playlist

Views, and song details

## 4. Setup Instructions

**Prerequisites:**

- Node.js (v18 or higher)

- npm or yarn

**Installation:**

1. Clone the Repository:

***Bash

Git clone https://github.com/124csbkanniyappan-rgb/Rythmic-Tunes.git cd rhythmic-tunes

2. Install Dependencies:

***Bash

npm install

**3. Run the Application:**

***bash

Npm run dev

**Instatating json-server:**

1. **Install dependencies:**

   Npm install json-server

2. **Running json-server globally:**

   Json-server db/db.json 3000

## 5. Folder Structure

/src

|--/components

----Favorites.js

----PlayList.js

----Search.js

----Sidebar.js

----Sidebar.css

----Song.js

----uhome.css

----uhome.js

----Uitem.js

----Unavbar.js

----Wishlist.js

|--/assets

----react.svg

|--App.js

|--App.css

|--Index.html

## 6. Running the Application

**Frontend Server Command:**

***Bash

Npm run dev

## 7. Component Documentation

**Key Components:**

**Header:** Provides navigation, search functionality, and theme toggling

**SongList**: Displays categorized or searched songs in a structured format

**SongCard:** Displays individual song details with play/pause control

**MediaPlayer**: Controls audio playback, volume, and track navigation

**Reusable Components**:

**Button Component**: Used for actions like “Play,” “Pause,” or “Add to Playlist”

**Modal Component**: Displays song details or playlist creation forms.

## 8. State Management

**Global State:** Managed via Context API for bookmarks, playlists, and theme control

**Local State**: Managed using React's 'useState() for track progress, user interactions, and dynamic updates.

## 9. User Interface

- Clean, minimalistic UI designed for seamless navigation
- Fully responsive layout with smooth transitions
- Light/Dark mode toggle for personalized visual comfort

## 10. Styling

**CSS Frameworks/Libraries:**

**Tailwind CSS** - Used for fast and modern UI design

**Theming:**

- Integrated theme switcher for enhanced user experience

## 11. Testing

**Testing Strategy:**

- Jest for unit testing

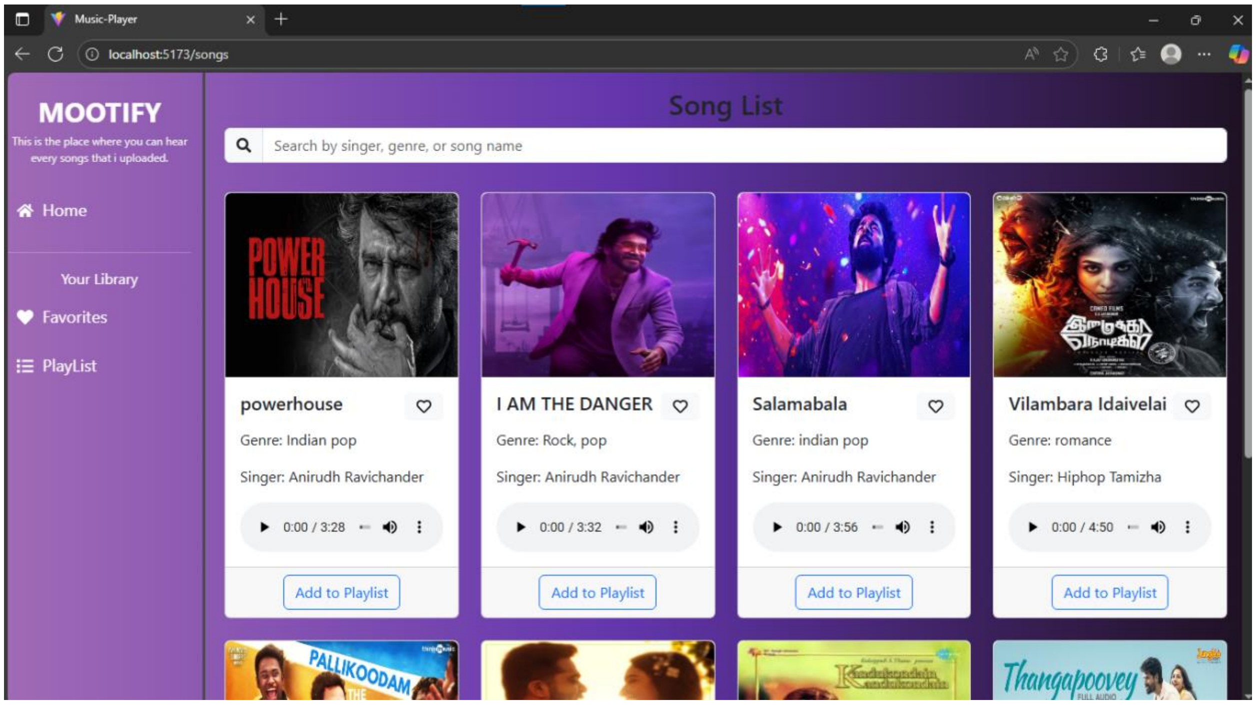
-React Testing Library for comprehensive component testing

**Code Coverage:**

- Ensured high code coverage with Jest reports

## 12. Screenshots or Demo

Screenshots:


Music-Player
localhost:5173/songs
MOOTIFY
This is the place where you can hear every songs that i uploaded.
Home
Your Library
Favorites
PlayList
Song List
Search by singer, genre, or song name

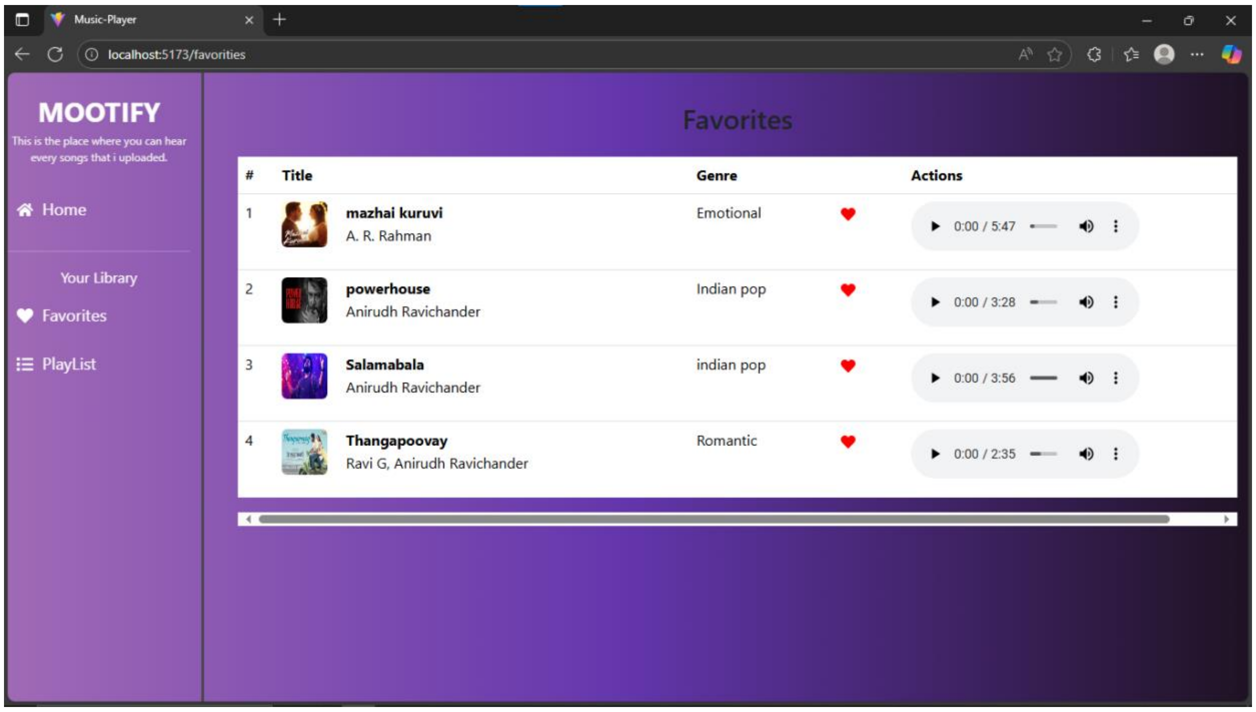
powerhouse
Genre: Indian pop
Singer: Anirudh Ravichander
0:00 / 3:28
Add to Playlist

I AM THE DANGER
Genre: Rock, pop
Singer: Anirudh Ravichander
0:00 / 3:32
Add to Playlist

Salamabala
Genre: indian pop
Singer: Anirudh Ravichander
0:00 / 3:56
Add to Playlist

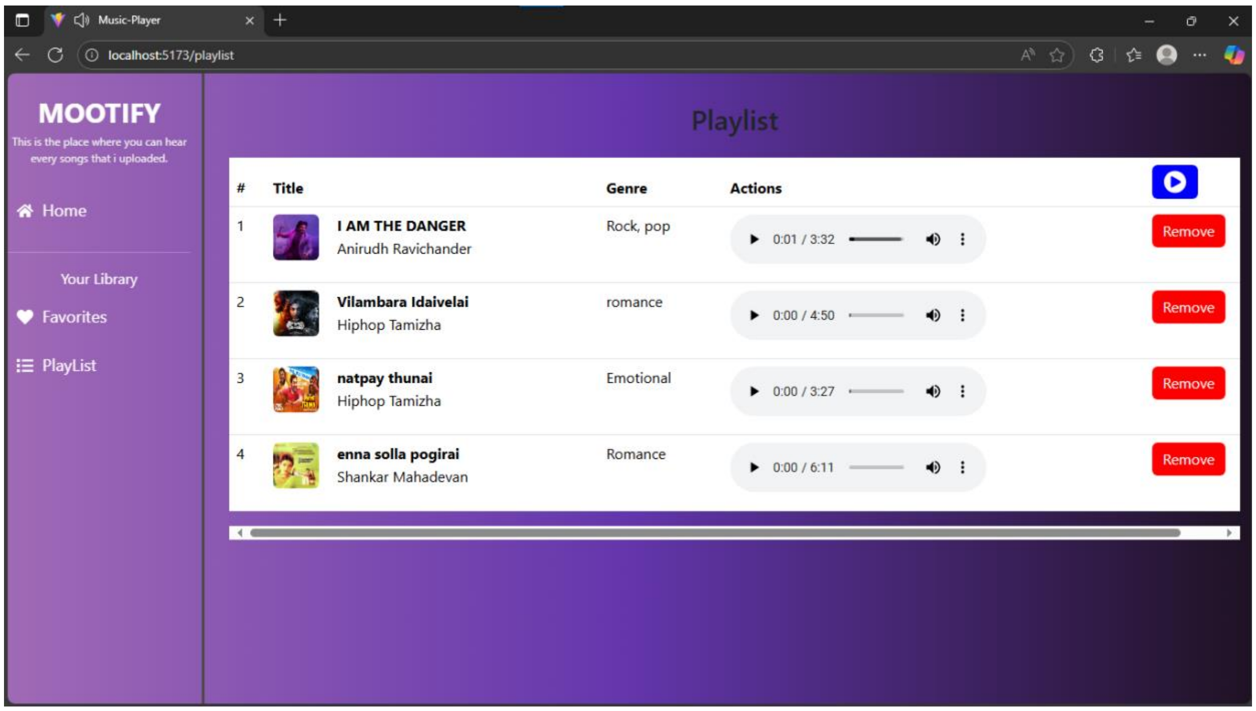
Vilambara Idaivelai
Genre: romance
Singer: Hiphop Tamizha
0:00 / 4:50
Add to Playlist

**Screen shot of Home page:** Where you can search the songs based on genre, artist, or by using song name.


Music-Player
localhost:5173/favorities
MOOTIFY
This is the place where you can hear every songs that i uploaded.
Home
Your Library
Favorites
PlayList
Favorites

| # | Title | Genre | | Actions |
|---|---|---|---|---|
| 1 | **mazhai kuruvi** A. R. Rahman | Emotional | ♥ | 0:00 / 5:47 |
| 2 | **powerhouse** Anirudh Ravichander | Indian pop | ♥ | 0:00 / 3:28 |
| 3 | **Salamabala** Anirudh Ravichander | indian pop | ♥ | 0:00 / 3:56 |
| 4 | **Thangapoovay** Ravi G, Anirudh Ravichander | Romantic | ♥ | 0:00 / 2:35 |

Favorites



| # | Title | Genre | Actions | |
|---|---|---|---|---|
| 1 | **I AM THE DANGER** Anirudh Ravichander | Rock, pop | 0:01 / 3:32 | Remove |
| 2 | **Vilambara Idaivelai** Hiphop Tamizha | romance | 0:00 / 4:50 | Remove |
| 3 | **natpay thunai** Hiphop Tamizha | Emotional | 0:00 / 3:27 | Remove |
| 4 | **enna solla pogirai** Shankar Mahadevan | Romance | 0:00 / 6:11 | Remove |

Playlist

Live Demo Link: https://drive.google.com/file/d/1oiYaXnEw4DQhq-qfwLUm8qtqu362Bih7/view?usp=drivesdk demo video link from G-drive

## 13. Known Issues

- Occasional delays in song loading due to API limits

- Playlist feature may require additional optimization for large data sets

## 14. Future Enhancements

- Implement User Authentication for personalized playlists

- Introduce Podcast and Radio Streaming Integration

- Social Sharing Feature for tracks and playlists

- Offline Mode for saved playlists without an internet connection