GRAD 695 Research Methodology & Writing

Applied Project

Design Document and Proposed Solution

Title: MusicOn, a music player emulator

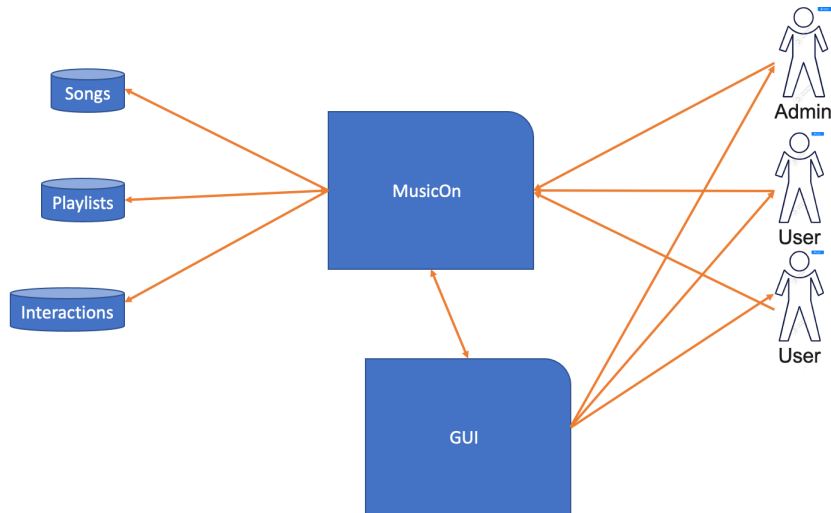Professor: Abrar Qureshi

Author: Prafulla Chandra Munugoti
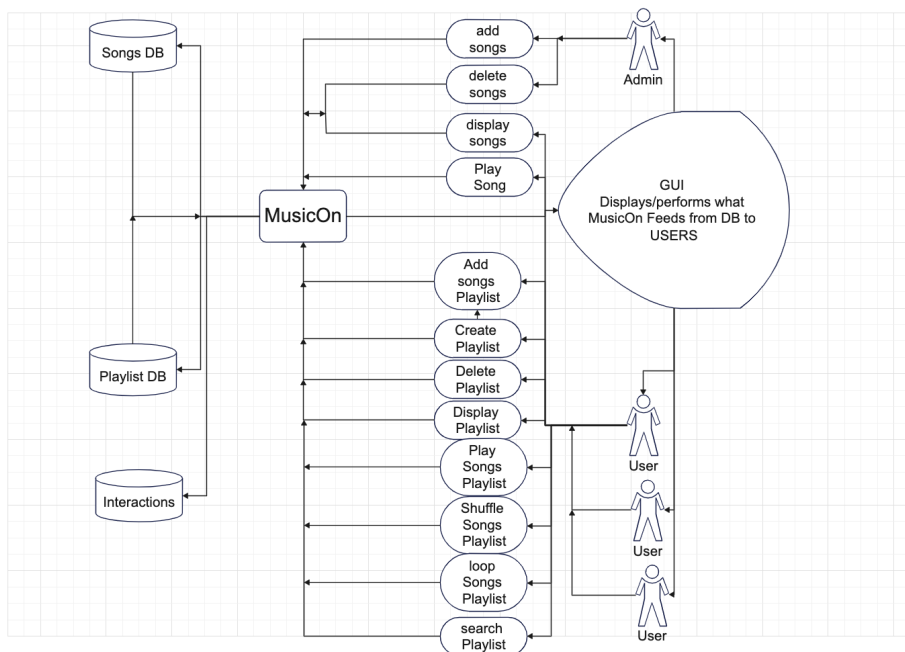
Term: Spring 2023

Date: 02/19/2023

➢ Introduction

The purpose of this document is providing the basic overview of the system architecture and detailed features that MusicOn system can support as part of the project. This document provides information about few testcases that are used for testing the system by relating them to the functional requirements.
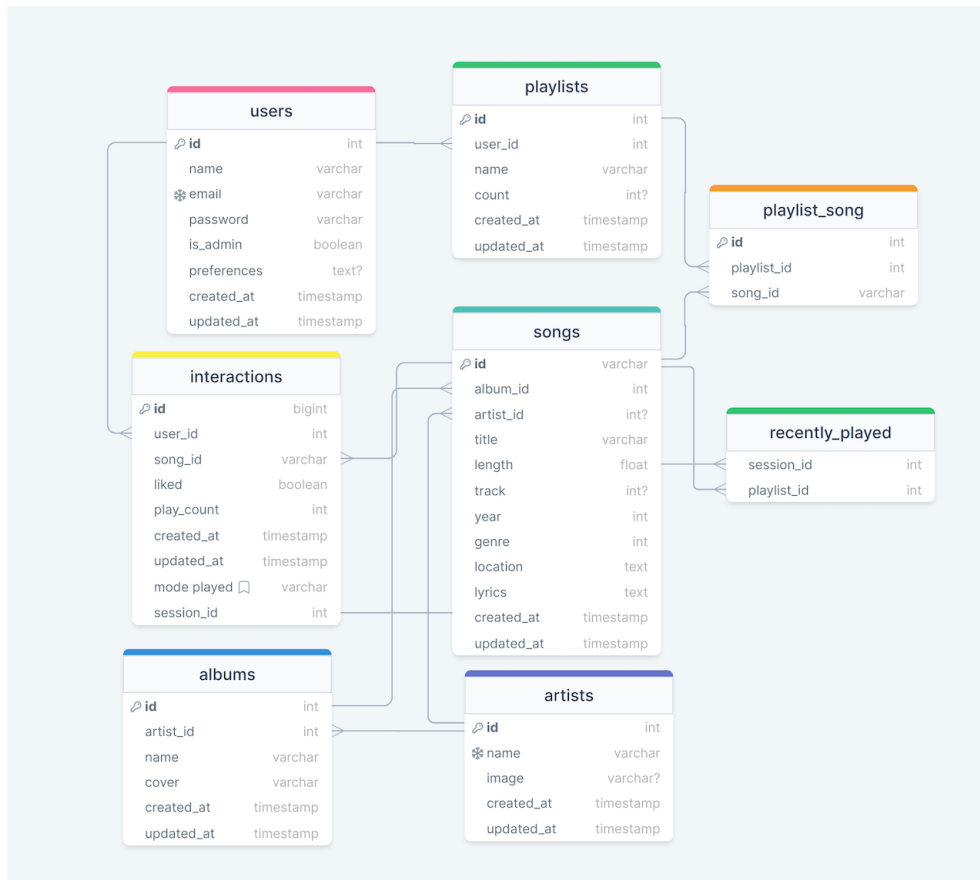
➢ System Architecture:

➢ Detailed Design Approach:

➢ DB Entity Relationship Diagram:

➢ Test Cases:

Test Case Number: TC1
Revision: Rev. 1
Author: Prafulla Chandra Munugoti
Date Conducted: Feb 19, 2023
Test Conductor: Prafulla Chandra Munugoti
Customer Representative: Prafulla Chandra Munugoti

Description: to test the functionality of creating a new playlist and testing various scenarios around it. The related use case for this test case is Use CaseID 002.

Pre-Test Setup:
1. Ensure MusicOn system is up and running.
2. Ensure user has permissions to read/write to DB for the operations.
3. Database is up and running.

Use Case ID's: 002   Flow: Normal Flow

ID	User Action	Expected results	Pass/Fail	Comments
1.1	Input playlist name as "", empty string	Playlists count in DB should be same, pops up an error to check the name.		FR2.1, Covers empty string case
1.2	Input playlist name as "playlist1"	Playlists count + 1 in the DB, displays successful creation message		FR2.1, Covers general input
1.3	Input "playlist1", which already exists	Playlists count in DB should be same, displays warning message that playlist already exists		FR2.1, Covers duplication
1.4	Input "Pl@yL1sT", combination of alphabets, numbers, special characters	Playlists count + 1 in the DB, displays successful creation of the playlist.		FR2.1, Covers alpha numeric case
1.5	Inputs "1234567890", only numbers	Playlists count + 1 in the DB, displays successful creation of the playlist.		FR2.1, Covers numeric case

Test Case Number: TC2
Revision: Rev. 1
Author: Prafulla Chandra Munugoti
Date Conducted: Feb 19, 2023
Test Conductor: Prafulla Chandra Munugoti
Customer Representative: Prafulla Chandra Munugoti

Description: to test the functionality of displaying the existing playlists in DB and testing various scenarios around it. The related use case for this test case is Use CaseID 002.

Pre-Test Setup:
1. Ensure MusicOn system is up and running.
2. Ensure user has permissions to read/write to DB for the operations.
3. Database is up and running.

Use Case ID's: 002   Flow: Normal Flow

ID	User Action	Expected results	Pass/Fail	Comments
2.1	Click on the button to display playlists	Playlists count in DB should be same, display the existing playlists for the user		FR2.3

Test Case Number: TC3
Revision: Rev. 1
Author: Prafulla Chandra Munugoti
Date Conducted: Feb 19, 2023
Test Conductor: Prafulla Chandra Munugoti
Customer Representative: Prafulla Chandra Munugoti

Description: to test the functionality of adding songs to the existing playlists in DB and testing various scenarios around it. The related use case for this test case is Use CaseID 002.

Pre-Test Setup:
1. Ensure MusicOn system is up and running.
2. Ensure user has permissions to read/write to DB for the operations.
3. Database is up and running.

Use Case ID's: 002   Flow: Normal Flow, Exception Flow

ID	User Action	Expected results	Pass/Fail	Comments
3.1	Inputs an available playlist name, inputs a valid song name	Songs in playlist count +1 in the DB and displays a message that song is added to the playlist		FR2.4
3.2	Inputs an empty playlist name, inputs a valid song title	No changes to existing playlist count. Displays error message to enter correct playlist name		FR2.4
3.3	Inputs a valid playlist name, inputs an invalid song title	No changes to existing playlist count. Displays error message to enter correct song title		FR2.4
3.4	Inputs an invalid playlist name, inputs invalid song name	No changes to existing playlist count. Displays error message to enter correct playlist name, correct Song title		FR2.4

Test Case Number: TC4
Revision: Rev. 1
Author: Prafulla Chandra Munugoti
Date Conducted: Feb 19, 2023
Test Conductor: Prafulla Chandra Munugoti
Customer Representative: Prafulla Chandra Munugoti

Description: to test the functionality of shuffling songs present in the existing playlist in DB and testing various scenarios around it. The related use case for this test case is Use CaseID 002.

Pre-Test Setup:
1. Ensure MusicOn system is up and running.
2. Ensure user has permissions to read/write to DB for the operations.
3. Database is up and running.

Use Case ID's: 002   Flow: Normal Flow, Exception Flow

ID	User Action	Expected results	Pass/Fail	Comments
3.1	Inputs an empty playlist name	displays an error message to enter correct playlist name		FR1.7.2, FR2.7.2
3.2	Create a new playlist and add one song and click on shuffle.	Displays Playlist creation is successful and displays song addition to playlist is successful. Order is shuffled.		FR1.7.2, FR2.7.2
3.3	Add more 5 songs to the playlist created above and click on shuffle.	Displays songs in shuffled mode after 1 shuffle different from previous playing order		FR1.7.2, FR2.7.2
3.4	Click on shuffle on already shuffled playlist	Displays songs are shuffled and presents new shuffled list different from previous order.		FR1.7.2, FR2.7.2