

CISC 699 Final Applied Project

Design Document and Test Cases

Title: MusicOn, a music player emulator

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➤ Introduction

The intention of this document is to provide a high-level overview of the MusicOn system's architecture and features, as well as some of the test cases that can be used to verify that the system meets its functional requirements. This document consists of information regarding how the system operates between users and supported databases in real time. It had information regarding the detailed approach on how to implement such a system to support various functionalities.

➤ System Architecture:

System Architecture consists of 2 process blocks namely “MusicOn System”, “Command Line Interface”, 2 Blocks as view blocks namely “Display”, “Output” and 4 Database Blocks namely “Songs”, “Playlists”, “Radio”, “Podcasts”.

Process Blocks are to perform operations, functionalities of the system. Database Blocks Represent the storage that can take insert, update, delete operations of the required data for the safe operation of the system.

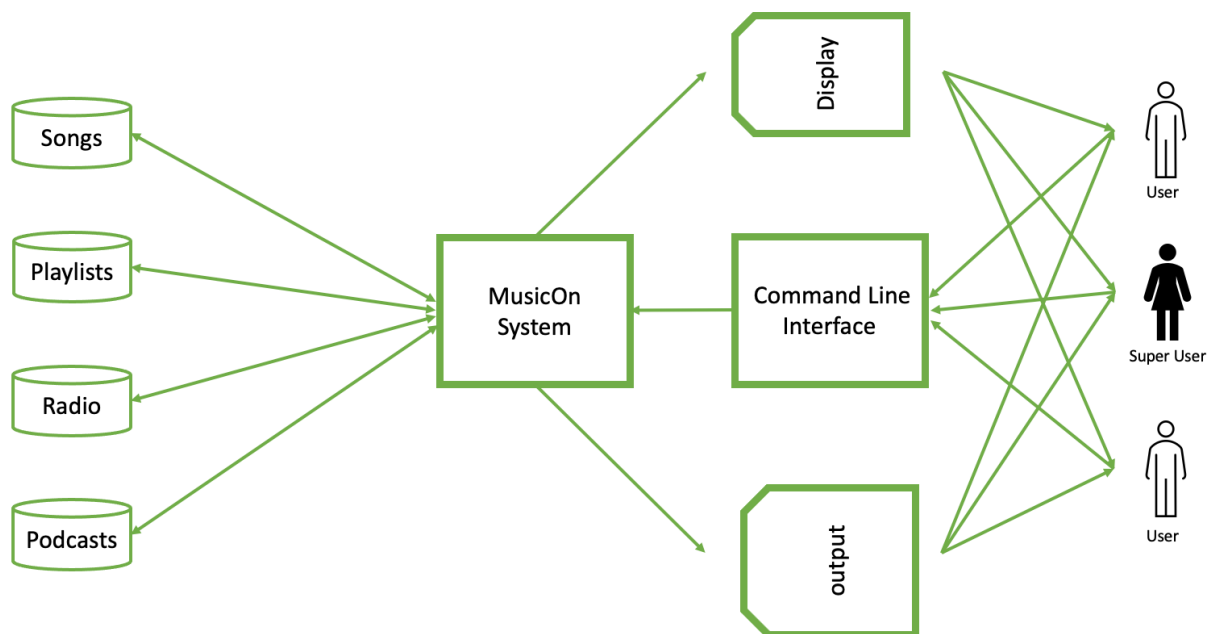


Figure 1: System Architecture Diagram

➤ Detailed Design Approach:

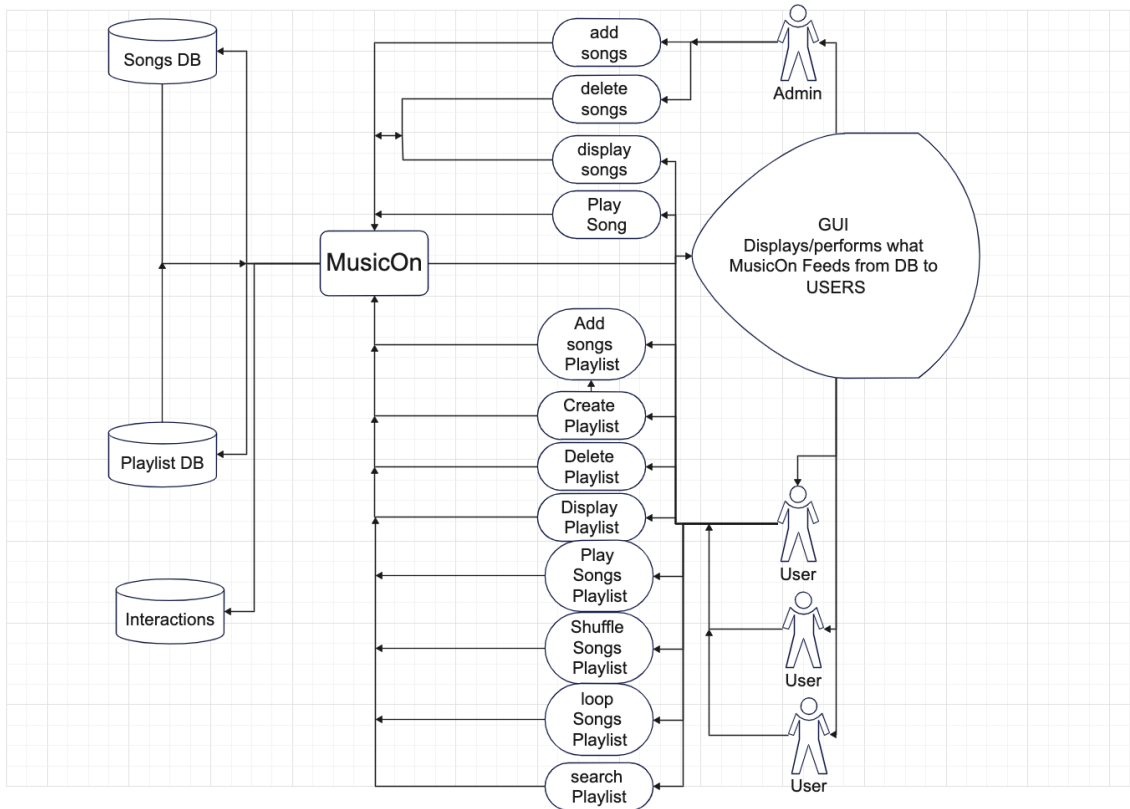


Figure 2: Detailed Design Approach Diagram

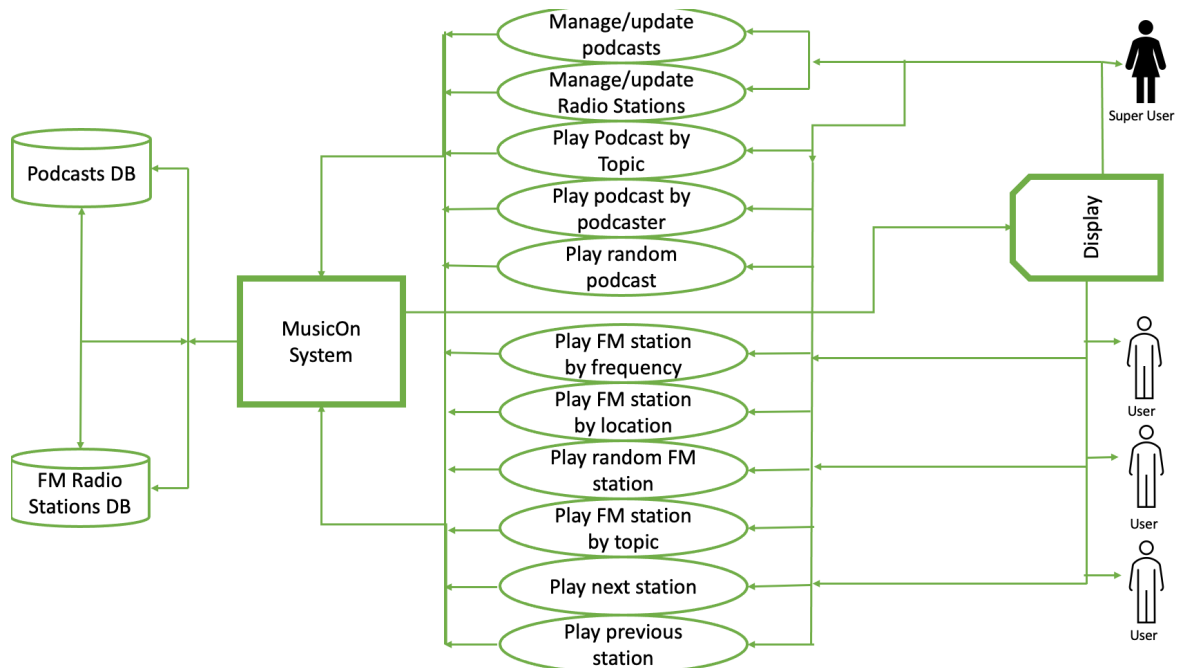
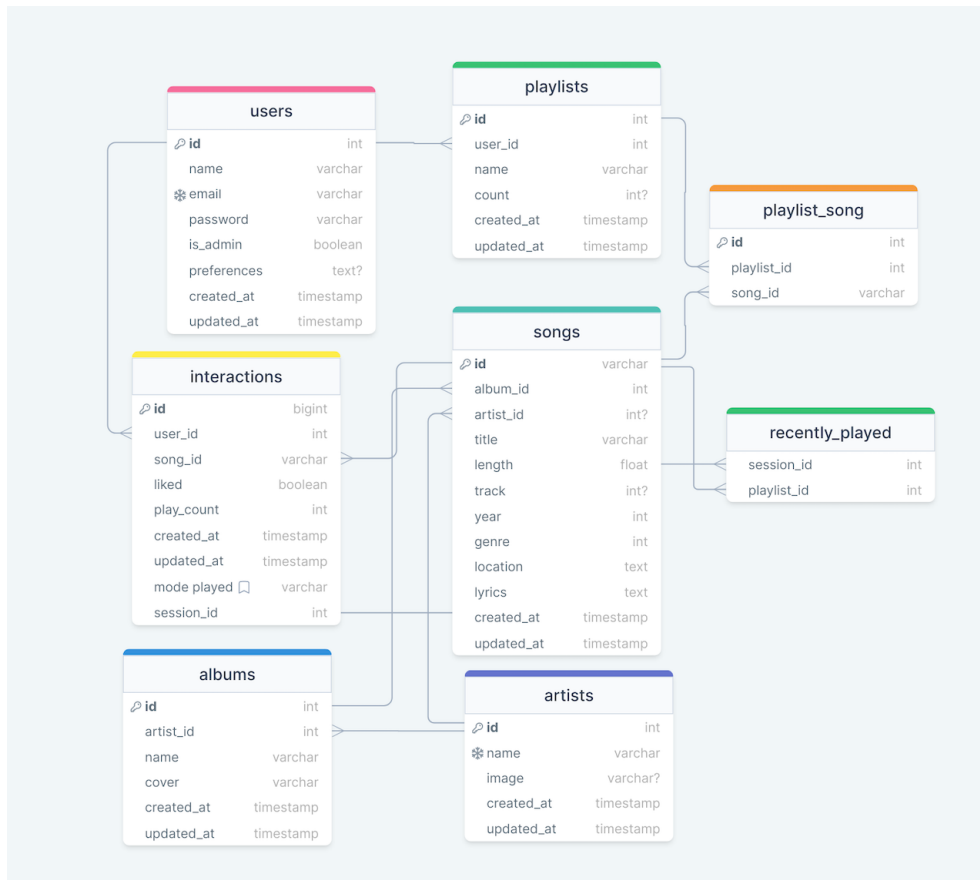


Figure3: Detailed Design Approach Diagram cont....

➤ DB Entity Relationship Diagram:



➤ Test Cases:

Test Case Number: TC1

Revision: Rev. 2

Author: Prafulla Chandra Munugoti

Date Conducted: Jun 19, 2023

Test Conductor: Prafulla Chandra Munugoti

Customer Representative: Prafulla Chandra Munugoti

Description: testing the functionality to create 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 Data Base remains same, displays an error to check the name.		FR2.1, Covers empty string case
1.2	Input playlist name as "playlist1"	Playlists count gets incremented by 1 in the Data Base, displays successful creation message		FR2.1, Covers general input
1.3	Input "playlist1", which already exists	Playlists count in Data Base remains 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 gets incremented by 1 in the Data Base, displays successful creation of the playlist.		FR2.1, Covers alpha numeric case
1.5	Inputs "1234567890", only numbers	Playlists count gets incremented by 1 in the Data Base, displays successful creation of the playlist.		FR2.1, Covers numeric case

Test Case Number: TC2

Revision: Rev. 2

Author: Prafulla Chandra Munugoti

Date Conducted: Jun 19, 2023

Test Conductor: Prafulla Chandra Munugoti

Customer Representative: Prafulla Chandra Munugoti

Description: testing the functionality to display existing playlists in Database 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 Database 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 Data Base should be same, display the existing playlists for the user		FR2.3

Test Case Number: TC3

Revision: Rev. 2

Author: Prafulla Chandra Munugoti

Date Conducted: Jun 19, 2023

Test Conductor: Prafulla Chandra Munugoti

Customer Representative: Prafulla Chandra Munugoti

Description: testing the functionality to add songs to the existing playlists in Database 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 Data Base 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. 2

Author: Prafulla Chandra Munugoti

Date Conducted: Jun 19, 2023

Test Conductor: Prafulla Chandra Munugoti

Customer Representative: Prafulla Chandra Munugoti

Description: testing the functionality to shuffling songs present in the existing playlist in Data Base 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