

CS6314.002

Web Programming Language

Project Final Report

Online Music Store

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Online Music

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1. Project Title

Online Music Website

2. Name for the Website

Songster

3. Project Description:

An Online Music Store has been implemented. The usually starts of with the Login Page which contains Signup Button. Every New User should register by clicking on the Signup button and every existing user should Login with his credentials of Email and Password. Once the User logins in, he will be redirected to Home page which has the list of tracks in the library. There is also a Favourites Tab which contains the list of Favourite Tracks. The user can login as an admin or a User. To differentiate both, our Database table Users contains isADMIN() attribute which is set as 0 for the User and 1 for the Admin.

Every time a new user registers, the user has to provide basic information about him/her. The registration form contains four fields for the user to fill. The fields and their mandatory checks are:

Input Field	Constraints
Name	This field cannot be empty.
Username	This field: (cannot be empty.) <ul style="list-style-type: none">• Must contain at least 5 to 20 characters• Checks by AJAX if already exists in the database.
Password	This field: (cannot be empty.) <ul style="list-style-type: none">• Should be at least 8 characters• At least one Uppercase letter, one Lowercase letter• A special character from @\$!%*
Email	This field: (cannot be empty.) <ul style="list-style-type: none">• Must contain a '@' character.• Checks by AJAX if already exists in the database.

When the user has filled all the information on the registration page, it checks if all the constraints are met. If any of the fields is wrongly filled or not yet filled and the user clicks on the SIGN UP, Error Message pops up in each of the division where the error occurs. If form input satisfies all the validations, then the given User Information is updated in the Users Database. The password has been hashed and stored in the Database and while retrieving it has been unhashed and used again.

4. Webpage Components and Functions:

4.1. Login and Signup Pages

4.1.1. Description: This is the initial page in the project setup. The Login Page is used to Login an existing User to the Webpage whereas the Signup Page is used to add a new User to the Online Music Application. For Signup, User must click on Sign Up at Navigation bar on the Login Page.

Login Page and Signup Pages(Index.html)

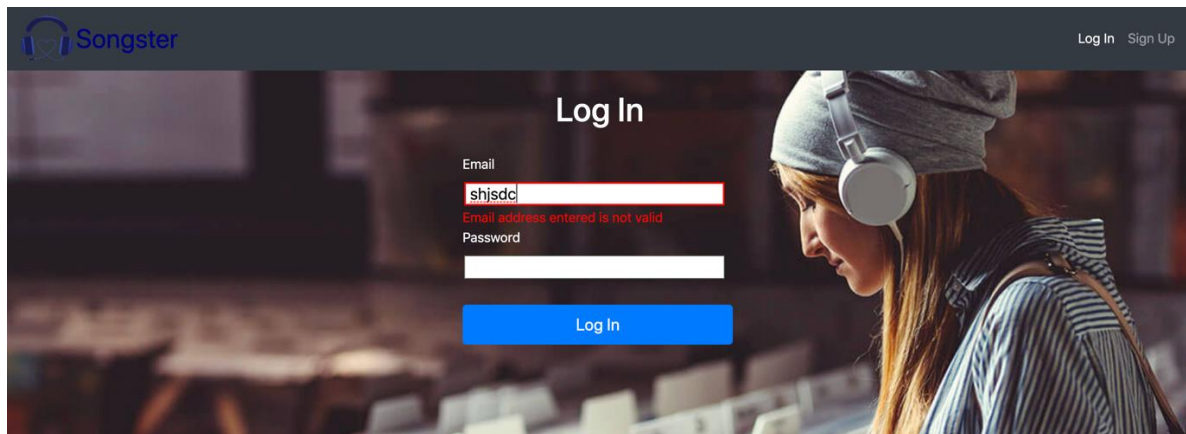
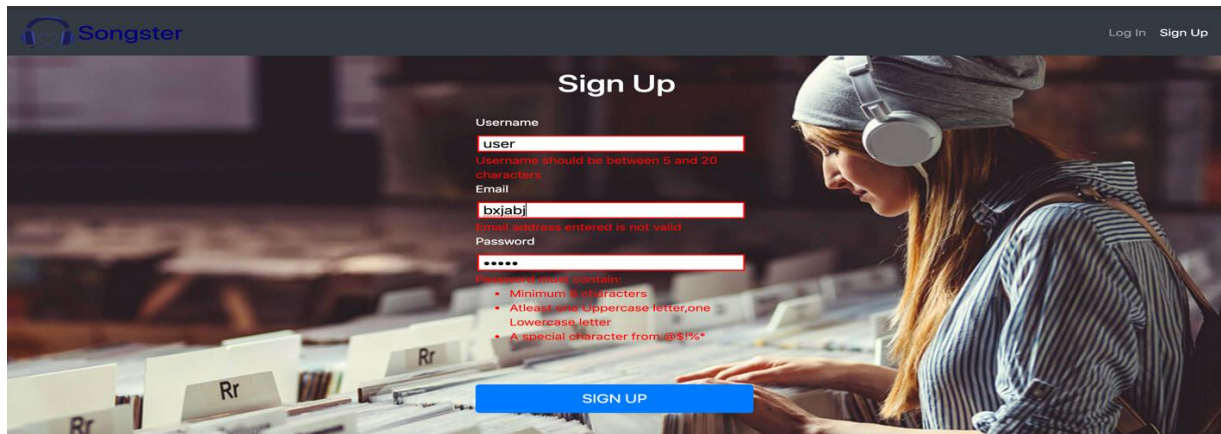


Figure 4.1 – When user inputs an incorrect email without character @



The screenshot shows the 'Sign Up' form on the Songster website. The form is overlaid on a background image of a person wearing headphones. The form fields and their validation messages are as follows:

- Username:** The input field contains 'user'. Below it, a red error message states: 'Username should be between 5 and 20 characters'.
- Email:** The input field contains 'bxlabj'. Below it, a red error message states: 'Email address entered is not valid'.
- Password:** The input field contains six dots. Below it, a red error message states: 'Password must contain:
 - Minimum 8 characters
 - Atleast one uppercase letter,one Lowercase letter
 - A special character from @\$!%*''.

A blue 'SIGN UP' button is located at the bottom of the form.

Figure 4.2 – Validations on User Sign up

4.2. Homepage

4.2.1. Description: Once the user is logged in after obeying all the rules set up by the validations, the user is taken to the Homepage where he can explore the list of tracks which are available in the Library on clicking the explore option.

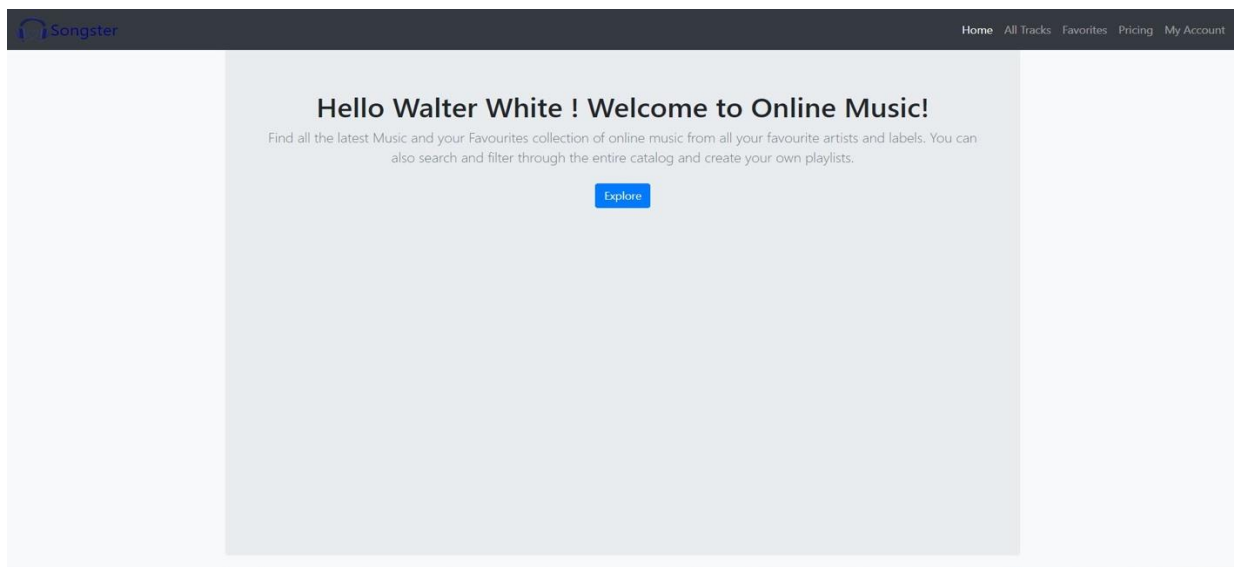


Figure 4.3 – Homepage for the User

The Homepage for admin user has additional Add Track button which gives privilege to admin to add a new track to release to the library.

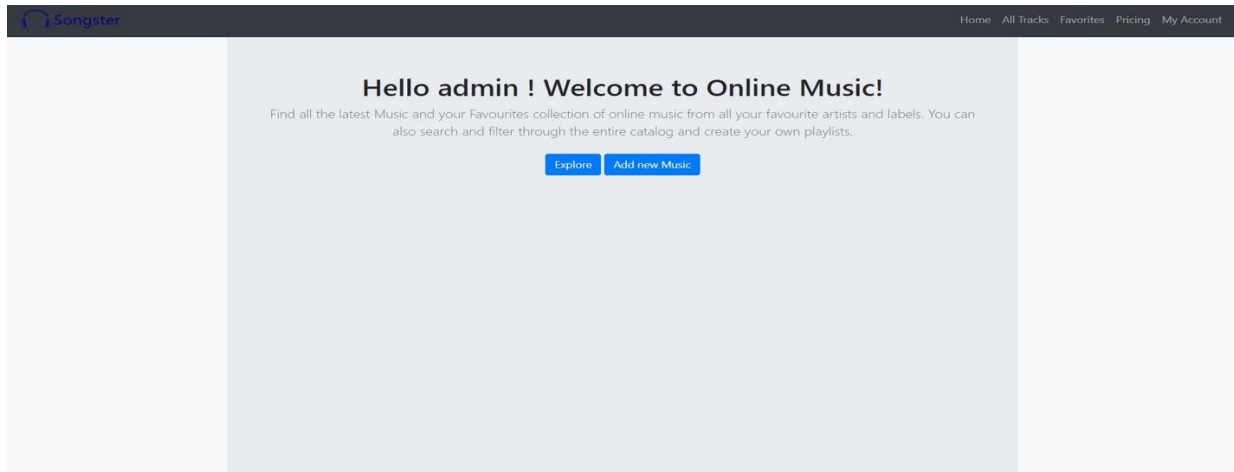


Figure 4.4 – Homepage for the Admin User with additional Add new Button

The image displays the 'Add a song' form within the admin interface. The form is set against a light blue background. It begins with the title 'Add a song' in a large, bold font. Below the title, there are seven input fields, each preceded by a label: 'Title' (with placeholder 'Song Name'), 'Artist' (with placeholder 'Artist Name'), 'Genre' (with placeholder 'Genre'), 'Album' (with placeholder 'Album Name'), 'Year' (with placeholder 'Year when the song was released'), and 'Image' (with placeholder 'Image Name'). Each input field is a simple white rectangle with a thin border.

Figure 4.5 – When the Admin clicks the add new Button, he can add the details of track he wishes to put forth in library.

The screenshot shows the 'Add' form on the Songster website. The form includes input fields for Artist Name, Genre, Album Name, Year (with a placeholder 'Year when the song was released'), Image Name, and Duration of the song. Below these fields is a file upload section with a 'Choose File' button and a preview image of a person with their hands clasped. At the bottom are 'Add' and 'Cancel' buttons.

Figure 4.6 - The Picture is loaded from file directory as the user chooses File from the location.

4.3. All Tracks Page

When the user presses All Tracks Page or Explore Button in the Homepage, he is directed to All Tracks which gives him the list of all tracks which are available in the Library.

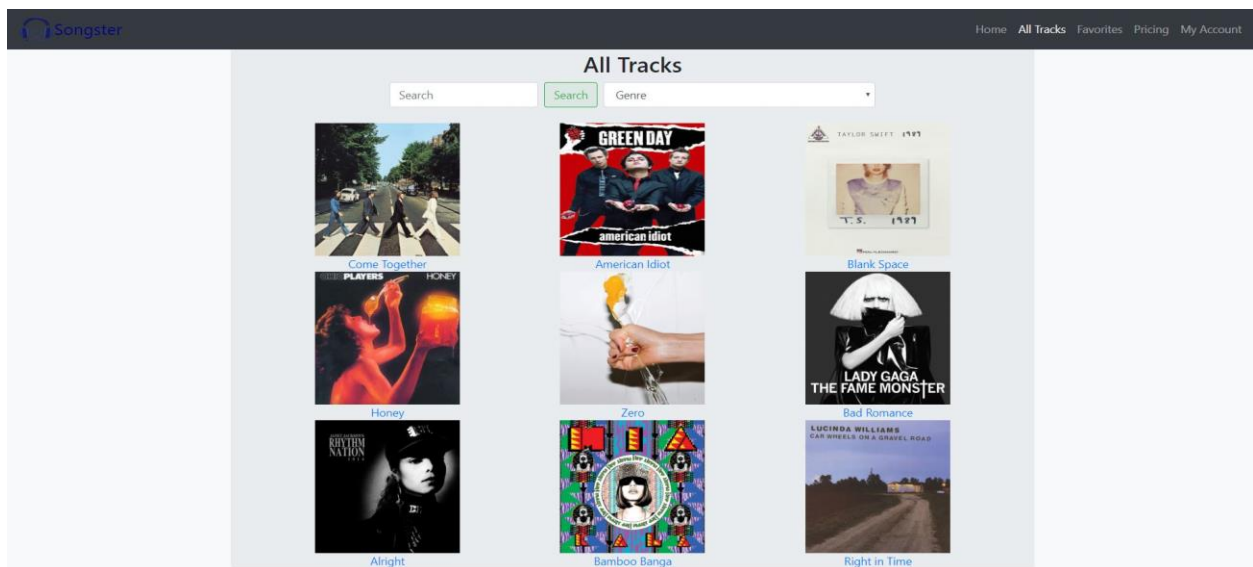


Figure 4.7 – The list of all available tracks in the library

The User can search and Filter on the Tracks with Genre of Track he/she wishes to view along with any of the Track Details such as Year of Release, Artist or Album.

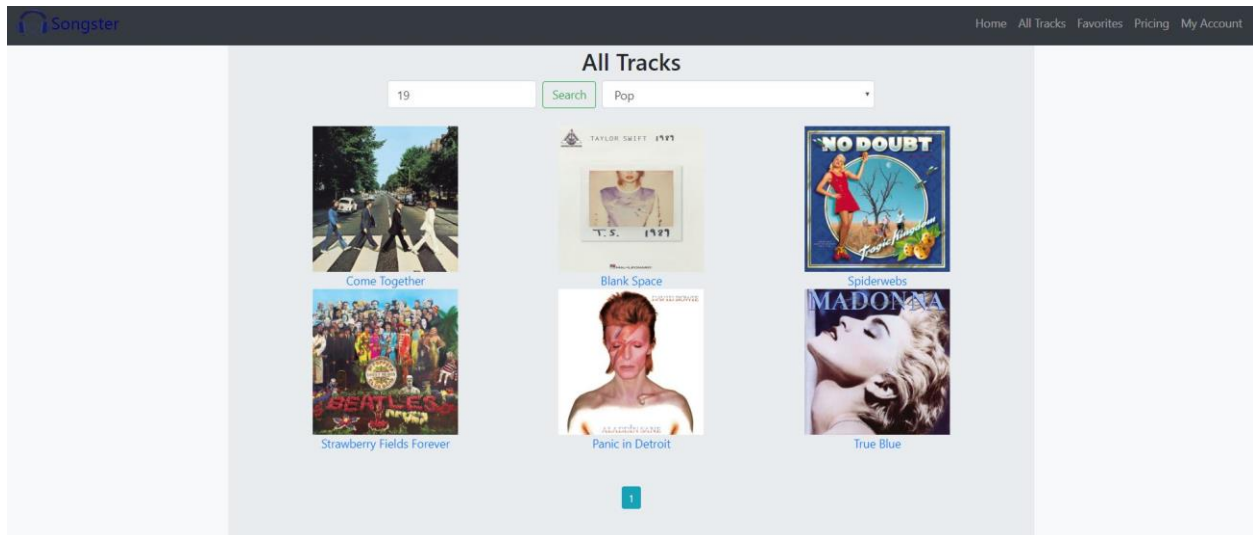


Figure 4.8 – The list of all available tracks in the library

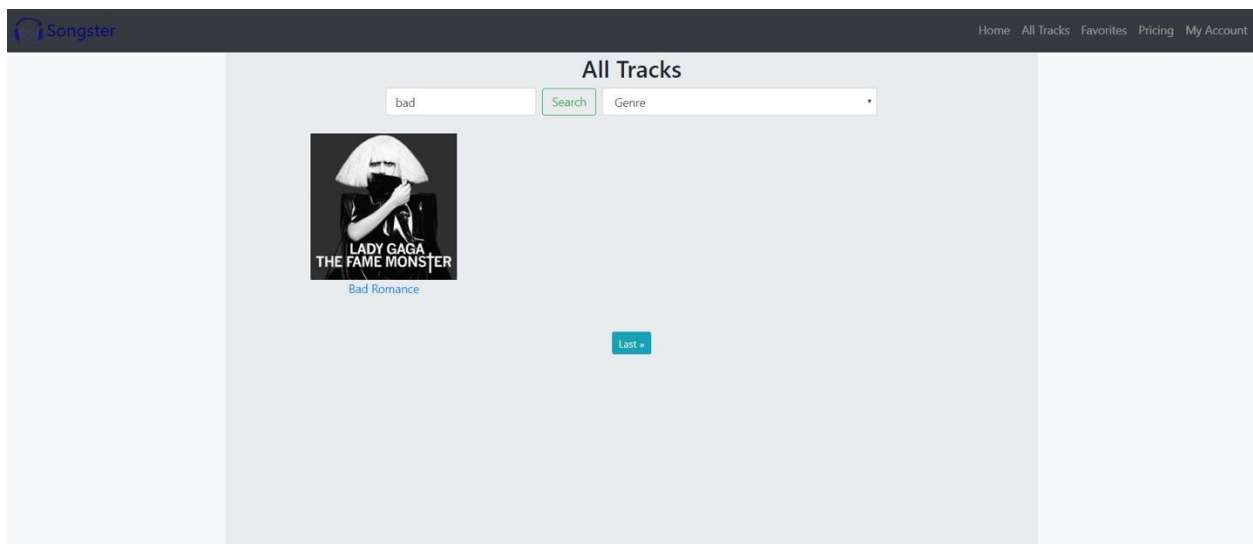


Figure 4.9– Search and Filter Functionality

When the User clicks on the link of the Track, the User is taken to Track Information Page which selects the particular track and displays the information of the particular Track.



Figure 4.10 – Add to Favourites button is shown if Track is not listed as favorite.

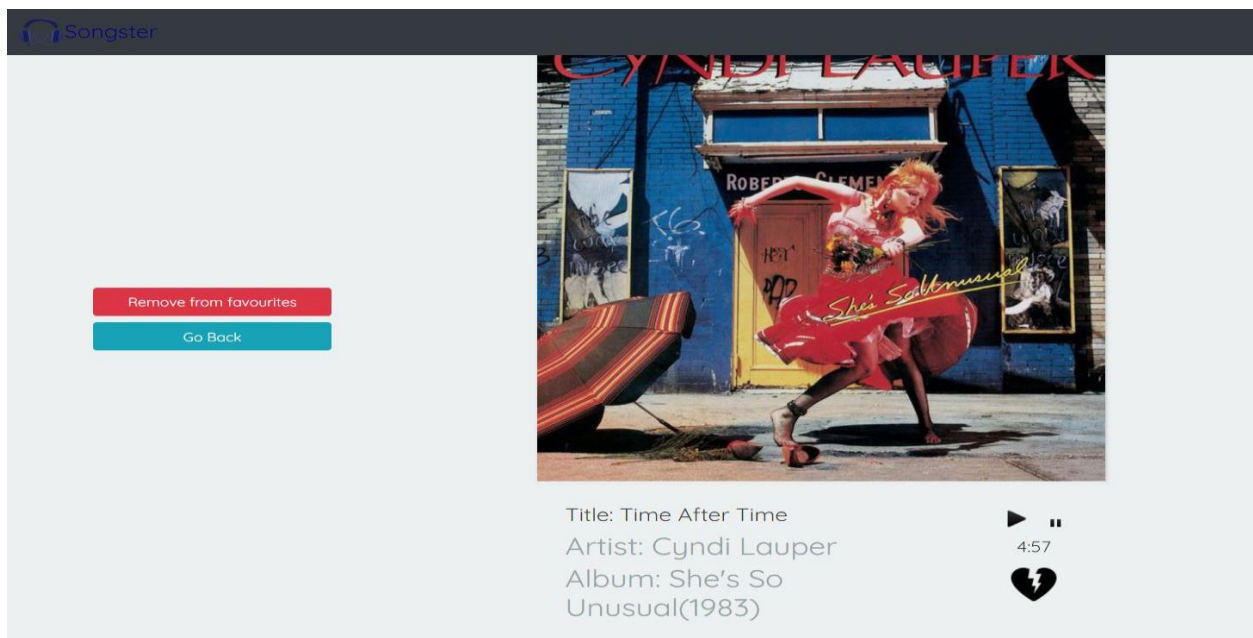


Figure 4.11 – Remove from Favourites if the track is already set as Favourite

The User when logging in for the first time will have Add to Favourites and once the track is set as Favourite, the User can remove it from Favourites using Remove from Favourites button as shown above.

The Admin has special Privileges for viewing and updating the track record and deleting the Track from library. However, User doesn't have such privileges. The track detail has the play

and pause button. Since the MP4 data is restricted, we have just displayed those buttons on viewing the track.



Figure 4.12 – Admin Track Information Page on viewing a particular track

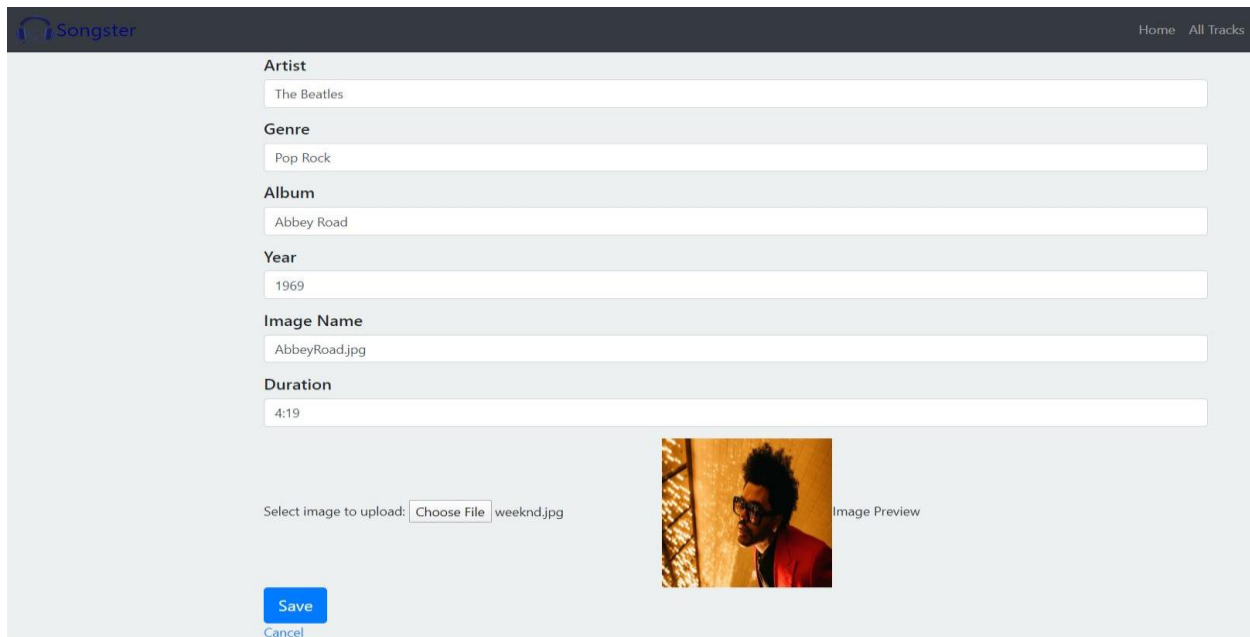


Figure 4.13 – Admin Update Information Page on clicking Update Button on viewing the track.

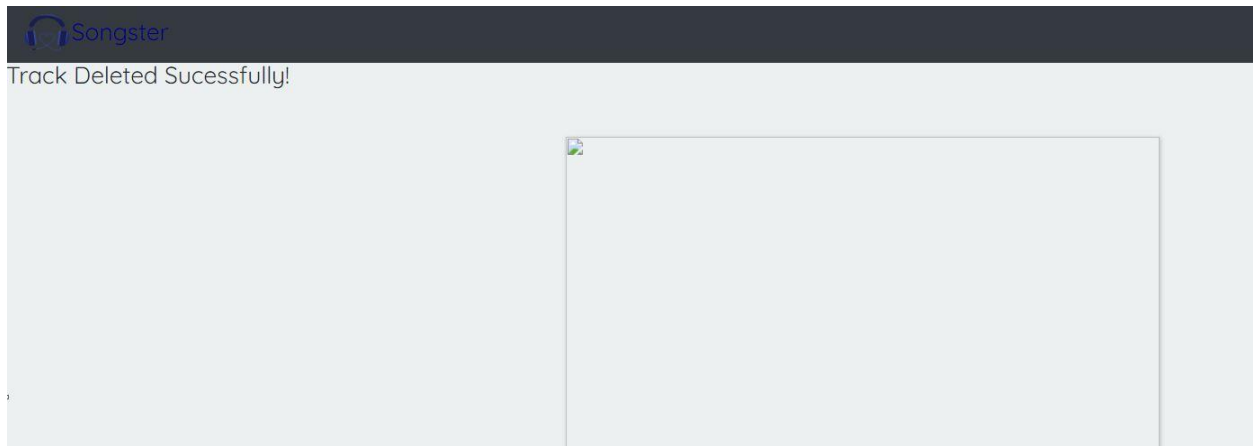


Figure 4.14 – When Admin deletes the track, the track is unavailable for User to view.

4.4. Favorites

Description: The User can view the list of Favourite tracks which have been marked previously as Favourite by him. Admin too has such privilege. The Favourites page also has the Searching and Filtering functionality.

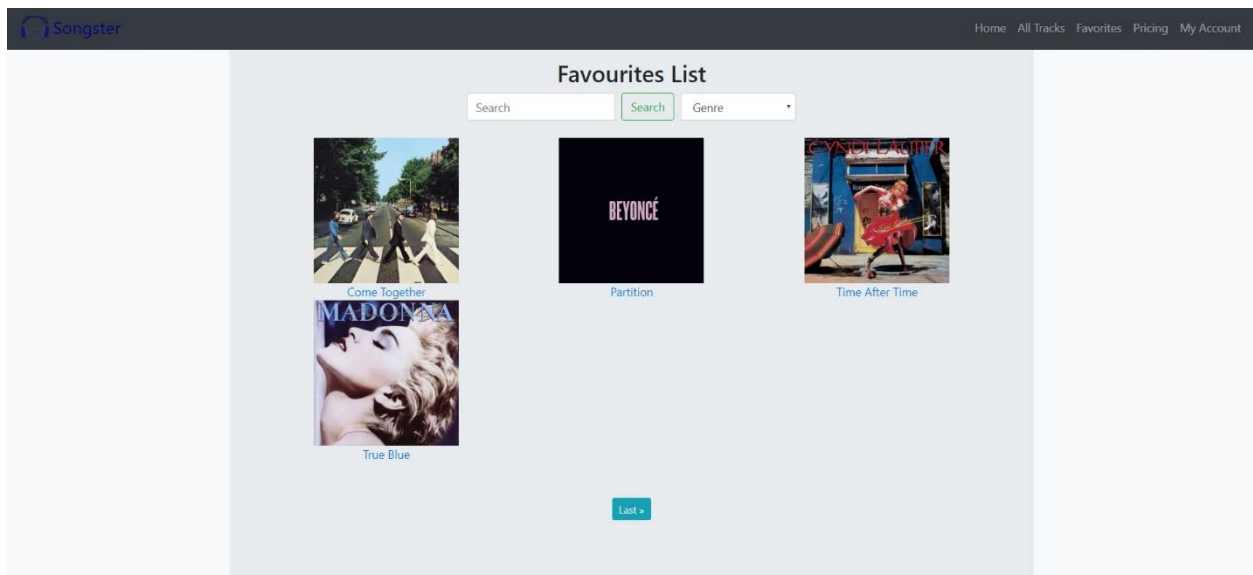


Figure 4.15 – Favourite list for an already existing User.

4.5. Pricing

Description: There are several plans which the User can opt for. The Pricing Page lists the available plans for subscribing to the Product. User can subscribe by choosing the plan they want to opt for.

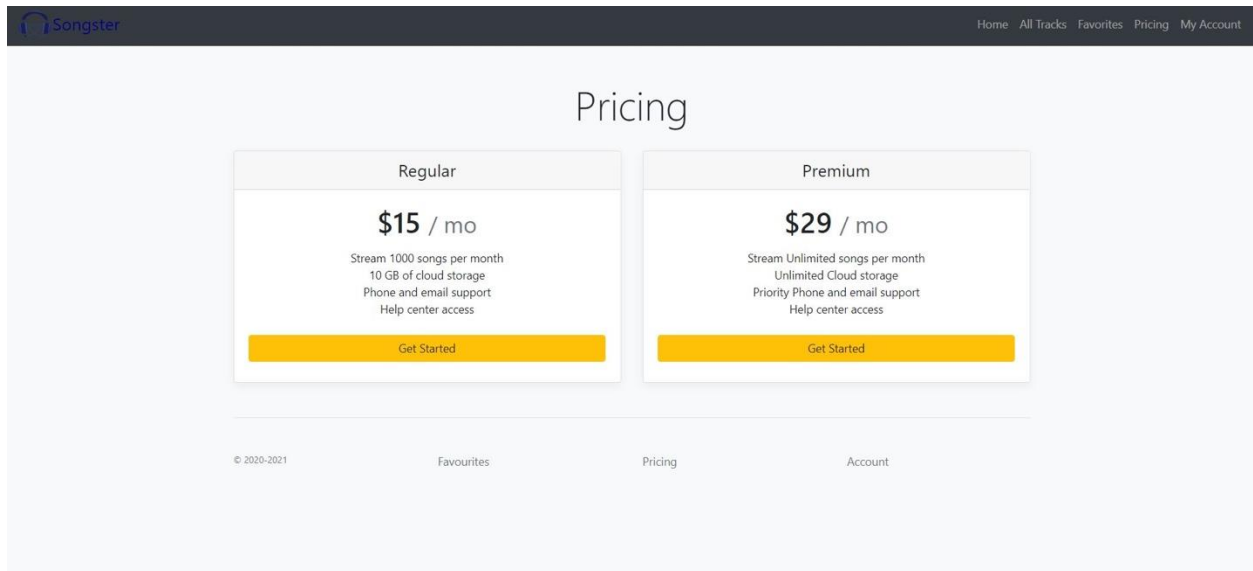


Figure 4.16 – Pricing plans for the User

4.6. Account

Description: The Account contains the User Profile Page. The User can update his information namely Username, Email, Full Name and also Mobile in the User Profile

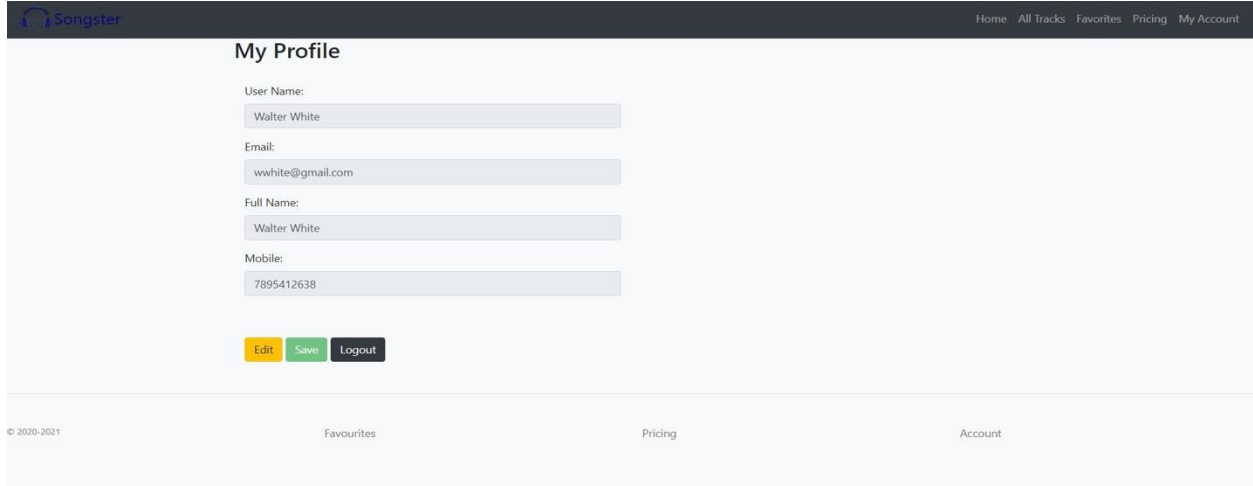


Figure 4.16 - The Account Profile Page.

User can edit his credentials and email ID in the same Page and has when he/she clicks the Logout option all his SESSION Variables will be destroyed, and he can login again from scratch.

5. Database Design:

Users Table

Attribute	Type	Constraint
UserID	int(11)	Primary Key
UserName	varchar(50)	
Email	varchar(50)	
PWD	varchar(100)	
Name	varchar(30)	
Phone	varchar(15)	
ISSUBSCRIBED	tinyint(1)	
ISADMIN	tinyint(1)	

The ISADMIN takes the value 1 is the User is an admin user else the Normal User has the value of 0 for ISADMIN attribute. The ISSUBSCRIBED indicates whether the user has subscribed to the Application. The sample data and Structure of Users DB from PhpMyAdmin is below

Showing rows 0 - 6 (7 total, Query took 0.0005 seconds.)

SELECT * FROM `users`

Number of rows: 25 Filter rows: Search this table Sort by key: None

	UserID	UserName	Email	PWD	Name	Phone	ISSUBSCRIBED	ISADMIN
	1	admin	admin@gmail.com	\$2y\$10\$9gQFCzLeW1Myuw6IEINCI.88i555.QhmHeIKBiHjP...	Admin123	9876543212	1	1
	2	User1	user1@gmail.com	\$2y\$10\$9gQFCzLeW1Myuw6IEINCI.88i555.QhmHeIKBiHjP...	User1	9876543213	1	0
	3	User2	user2@gmail.com	\$2y\$10\$9gQFCzLeW1Myuw6IEINCI.88i555.QhmHeIKBiHjP...	User2	9876543214	0	0
	4	NewUser	newuser@gmail.com	\$2y\$10\$9gQFCzLeW1Myuw6IEINCI.88i555.QhmHeIKBiHjP...	NewUser	NULL	NULL	NULL
	5	User3	user3@gmail.com	\$2y\$10\$U2C8HTb0L738urGRJvvyO/8s.NW5F0vAFja9pE13op...	User3		0	0
	6	Walter White	wwhite@gmail.com	\$2y\$10\$0nHDZAggSGsldnmb123F0.q3QheUbr/Z4AbjDZbNhoW...	Walter White	7895412638	0	0
	7	Jesse Pinkman	jpman@gmail.com	\$2y\$10\$KZ0mcFrdgR0q0CF5lnRe8Wl7W/eXMGp3Bx1oC5s/...	Jesse Pinkman		0	0

Query results operations: Print Copy to clipboard Export Display chart Create view

Table structure

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	UserID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	UserName	varchar(20)	utf8_general_ci		No	None			Change Drop More
3	Email	varchar(50)	utf8_general_ci		No	None			Change Drop More
4	PWD	varchar(100)	utf8_general_ci		No	None			Change Drop More
5	Name	varchar(30)	utf8_general_ci		No	None			Change Drop More
6	Phone	varchar(15)	utf8_general_ci		Yes	NULL			Change Drop More
7	ISSUBSCRIBED	tinyint(1)			Yes	NULL			Change Drop More
8	ISADMIN	tinyint(1)			Yes	NULL			Change Drop More

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY		BTREE	Yes	No	UserID	6	A	No	

Create an index on 1 column(s) Go

Partitions

Fig 5.1 – Users DB and Data

TRACK Table

Attribute	Type	Constraint
TRACKID	int(11)	Primary Key
TITLE	varchar(100)	
ARTIST	varchar(100)	
GENRE	varchar(50)	
ALBUM	varchar(100)	
YEAR	int(11)	
PIC	varchar(200)	
Duration	varchar(10)	
ISDELETE	tinyint(1)	

The ISDELETE is set as 1 if the track is to be marked for deletion (Mainly for Admin Users). ISDELETE is set as 0 if track is not to be deleted.

The screenshot displays a database management interface with two main sections: a data view and a table structure view.

Data View: Shows a list of tracks with the following columns: TRACKID, TITLE, ARTIST, GENRE, ALBUM, YEAR, PIC, DURATION, and ISDELETE. The data includes tracks like 'Come Together' by The Beatles, 'American Idiot' by Green Day, 'Blank Space' by Taylor Swift, etc.

Table Structure View: Shows the schema of the TRACK table. The columns and their attributes are as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	TRACKID	int(11)		No	None			AUTO_INCREMENT	Change, Drop, More
2	TITLE	varchar(100)	utf8_general_ci	No	None				Change, Drop, More
3	ARTIST	varchar(100)	utf8_general_ci	No	None				Change, Drop, More
4	GENRE	varchar(50)	utf8_general_ci	No	None				Change, Drop, More
5	ALBUM	varchar(100)	utf8_general_ci	No	None				Change, Drop, More
6	YEAR	int(11)		Yes	NULL				Change, Drop, More
7	PIC	varchar(200)	utf8_general_ci	No	None				Change, Drop, More
8	DURATION	varchar(10)	utf8_general_ci	Yes	NULL				Change, Drop, More
9	ISDELETE	tinyint(1)		Yes	NULL				Change, Drop, More

The interface also includes options for creating an index on the table and viewing partitions.

Fig 5.2 – Tracks DB and Data

Favourites Table

Attribute	Type	Constraint
USERID	int(11)	Primary Key
TRACKID	int(11)	Primary Key
ISREMOVE	tinyint(1)	

The ISREMOVE is set as 1 if the Track is to be removed from Favourite List and is 0 if not.

The screenshot displays a database management tool interface. The top section shows a table view of the 'favourites' table with 26 rows. The columns are USERID, TRACKID, and ISREMOVE. The data shows various combinations of USERID and TRACKID, with ISREMOVE values of 0 or 1. The bottom section shows the table structure, including column names, types, collations, attributes, nullability, defaults, comments, and actions. It also displays indexes, including a primary key on USERID and TRACKID, and a foreign key on TRACKID. The interface includes tabs for Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, and Triggers.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	USERID	int(11)			No	None			Change Drop More
2	TRACKID	int(11)			No	None			Change Drop More
3	ISREMOVE	tinyint(1)			Yes	NULL			Change Drop More

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	USERID 7	A	No		
Edit Drop	FK_TRACK	BTREE	No	No	TRACKID 23	A	No		

Fig 5.3 – Favourites DB and Data

6. Languages/frameworks used:

Client: HTML5, CSS, HTML 5 templates, AJAX, jQuery and JavaScript.

Server: MAMP (Apache, MySQL, PHP).

7. Work Division:

7.1. Srivasthavan Rengarajan

Fav.js, Fav.php, FavJS.php, Favourites.php, favsearchfilter.php, trackdetails.php, trackdetails.css, trackdetails.js, update.php, updateTrack.php

7.2. Yogesh Kumar Chandrasekar

Account.php, AccountJS.php, User_update.php, Homepage.php, Pricing.php, musicapp.css, logout.php

7.3. Nikkhil Negglur

Index.html, login.js, signup.js, signup.php, style.css, add.html, add.php, musicapp.css, musicapp.js

Conclusion:

An online music store with above functionalities are implemented. All the Database Components and functions of each page are listed as above.