

Dharamsinh Desai University, Nadiad



Faculty of Technology  
Computer Engineering Department

**B.Tech. CE sem-V**  
**Subject: (CE-515) Advanced Technology**

### **Music Listening Website**

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# Dharmsinh Desai University, Nadiad

Faculty of Technology, Department of Computer Engineering

## CERTIFICATE

This is to certify that Advanced Technologies Project entitled  
**“Music Listening Website”** is the bonafied report of work  
carried out by

1) Milan Prajapati

(17CEUBG027)

2) Devendra Raiyani

(17CEUOG022)

Department of Computer Engineering ,Semester V, academic  
year 2019-2020, under our supervision and guidance.

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### Guide

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## **ABSTRACT**

Music plays a very important role in human's daily life and in the modern advanced technologies.

The main aim of developing this online music world site advanced technologies based web application, it's a collection of songs in one place where users can get their like songs and listen the songs on our website at free of cost only is to just create new account in our site.

This is one type of online music player. Now a day's in the most of music websites has some constraints that is if user want to download particular song then user has to create premium account.

So in our website to eliminate that situation user has to just login and after that user can play & listen selected music and also download it without any cost. The main advantage is it is user friendly provide 24 hours customer service and decrease the manual efforts and time.

- Developer's Team  
(Devendrakumar & Milan)

# **INTRODUCTION**

Our Project topic is Music World. We have developed this site for users satisfaction. Now a day's Music has held an important place in people's lives.

The main aim of this music world site is to manage the details of the music, customer, album type. It manages all the information about music, track, album type, music. The project is built at administrative end and thus only the administrative is guaranteed the access. In this project user can play and listen songs and even download the songs without any cost but for that user must have account in this website. in this website users can select any playlist and song list will be displayed. By selecting any song from the list song will be played and audio player will be displayed at the bottom of the window with song title. And also there is like button user can press that button and particular song will be added in favourite playlist of the user and if click it again then song will be removed.

## **Tools/Technologies Used**

Technologies: HTML5,  
CSS3,  
Bootstrap4,  
Angular cli,  
Typescript,  
Node JS,  
Mongo DB

Tools: Visual Studio Code

Platforms: localhost/4200 for angular,  
localhost/3000 for node js,  
mongodb://127.0.0.1:27017 for Mongo db

- Developer's Team  
(Devendrakumar & Milan)

# **SOFTWARE REQUIREMENT SPECIFICATION**

## **for**

### **MUSIC LISTENING WEB SITE**

#### **R1. User log in :-**

*Description:* If users want to log in or sign up then users can do that. Users can log in or sign up by email id. Users can still access the home page without login or sign up.

*Input:* User enters email id.

*Output:* Successfully logged in message and home page.

#### **R2. Home Page:-**

*Description:* It contains search, user menu, queue buttons and various play lists like New Released, Film Album, Recently Played (If user logged in), Hit Songs, Romantic Songs, Artists Albums and other albums generated by admin.

##### **R2.1 Search:**

*Input:* Song Name

*Output:* Results of Related Songs

##### **R2.2 Play Lists:**

*Input:* User selection

*Output:* All songs of that play lists

##### **R2.3 Queue of Songs:**

*Description:* User add songs in queue to listen songs in sequence.

*Input:* User selection

*Output:* Show queue songs

##### **R2.4 User Menu:**

*Description:* If users logged in then they can see their details and log out button.

*Input:* User Selection

*Output:* User details, User's Play lists, User's favourite songs, Log out button.

#### **R3. My Play Lists:-**

*Description:* Users can create their own play lists by selecting songs from different playlist after logged in.

*Prerequisite condition:* User must be logged in.

*Input:* User Selection of songs

*Output:* Successful message

#### **R4. My Favourite:-**

*Description:* Songs liked by user are shown here.

*Prerequisite condition:* User must be logged in.

*Input:* User Selection

*Output:* Display Songs

#### **R5. Play Song:**

*Input:* User Selection

*Output:* Play song

**R6. User Access to Songs:-**

*Description:* Song Details such as name, duration, artists name, number of likes, number of time played. User can download, share songs and like song.

*Input:* User Selection

*Output:* Song will be played, details of song.

**R6.1 Like Song:**

*Prerequisite condition:* User must be logged in.

*Input:* User Selection

*Output:* If user is logged in then they can like otherwise redirected to log in page

**R6.2 Download Song:**

*Input:* User Selection

*Output:* Downloading will be started

**R6.3 Share Song:**

*Description:* User can share song via email or can copy link of song.

*Input:* User selection

*Output:* Successful message

**R7. Feedback:-**

*Description:* User can give general feedback by email without logged in.

*Input:* User details and message

*Output:* Successful message

**R8. Admin Panel:-**

*Description:* Admin can manage songs, view general statistics, manage feedback.

**R8.1 Add Songs:**

*Input:* Song Details and upload mp3 file of song

*Output:* Successful message

**R8.2 Remove Song:**

*Input:* Song Id

*Output:* User selection to remove and then remove song

**R8.3 General Statistics:**

*Description:* Admin can see total likes, total songs, total visitors, feedback.

*Input:* User Selection

*Output:* Display Data

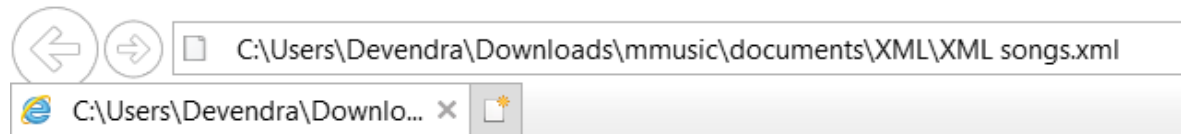
## DESIGN

### ➤ XML for songs:-

```
<?xml version="1.0" encoding="utf-8" ?>
<?xml-stylesheet type="text/xsl" href="XSLT_SONGS.xslt"?>
<songs>
  <song s_id="1">
    <name>Bekhayali</name>
    <filmname>Kabir Singh</filmname>
    <singer>Sachet Tandon</singer>
    <releasedate>2019-05-24</releasedate>
    <link>/Kabir_Singh/Bekhayali</link>
  </song>
  <song s_id="2">
    <name>Tuhje Kitna Chahne Lage</name>
    <filmname>Kabir Singh</filmname>
    <singer>Arijit Singh</singer>
    <releasedate>2019-05-31</releasedate>
    <link>/Kabir_Singh/Tuhje_Kitna_Chahne_Lage</link>
  </song>
  <song s_id="3">
    <name>Duniyaa</name>
    <filmname>Luka Chuppi</filmname>
    <singer>Akhil,Dhvani Bhanushali</singer>
    <releasedate>2019-02-25</releasedate>
    <link>/Luka_Chuppi/Duniyaa</link>
  </song>
  <song s_id="4">
    <name>Slow Motion</name>
    <filmname>Bharat</filmname>
    <singer>Shreya Ghoshal,Nakash Aziz</singer>
    <releasedate>2019-04-25</releasedate>
    <link>/Bharat/Slow_Motion</link>
  </song>
  <song s_id="5">
    <name>Apana Time Aayega</name>
    <filmname>Gully Boy</filmname>
    <singer>Ranveer Singh</singer>
    <releasedate>2019-01-24</releasedate>
    <link>/Gully_Boy/Apana_Time_Aayega</link>
  </song>
</songs>
```



O/p:



```
<?xml version="1.0" encoding="UTF-8"?>
- <songs>
  - <song s_id="1">
    <name>Bekhayali</name>
    <filmname>Kabir Singh</filmname>
    <singer>Sachet Tandon</singer>
    <releasedate>2019-05-24</releasedate>
    <link>/Kabir_Singh/Bekhayali</link>
  </song>
  - <song s_id="2">
    <name>Tuhje Kitna Chahne Lage</name>
    <filmname>Kabir Singh</filmname>
    <singer>Arijit Singh</singer>
    <releasedate>2019-05-31</releasedate>
    <link>/Kabir_Singh/Tuhje_Kitna_Chahne_Lage</link>
  </song>
  - <song s_id="3">
    <name>Duniyaa</name>
    <filmname>Luka Chuppi</filmname>
    <singer>Akhil,Dhvani Bhanushali</singer>
    <releasedate>2019-02-25</releasedate>
    <link>/Luka_Chuppi/Duniyaa</link>
  </song>
  - <song s_id="4">
    <name>Slow Motion</name>
    <filmname>Bharat</filmname>
    <singer>Shreya Ghoshal,Nakash Aziz</singer>
    <releasedate>2019-04-25</releasedate>
    <link>/Bharat/Slow_Motion</link>
  </song>
  - <song s_id="5">
    <name>Apana Time Aayega</name>
    <filmname>Gully Boy</filmname>
    <singer>Ranveer Singh</singer>
    <releasedate>2019-01-24</releasedate>
    <link>/Gully_Boy/Apana_Time_Aayega</link>
  </song>
</songs>
```

## ➤ DTD:-

```
<!ELEMENT songs (song+)>
<!ELEMENT song (name,filmname,singer,releasedate,link)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT filmname (#PCDATA)>
<!ELEMENT singer (#PCDATA)>
<!ELEMENT releasedate (#PCDATA)>
<!ELEMENT link (#PCDATA)>
<!ATTLIST song s_id CDATA #REQUIRED>
```

## ➤ XSLT:-

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:template match="/">
    <html>
      <body>
        <h2>Information about Songs!</h2>
        <table border="1">
          <tr bgcolor="#9acd32">
            <th>Id</th>
            <th>Name</th>
            <th>FilmName</th>
            <th>Singer</th>
            <th>ReleaseDate</th>
            <th>Link</th>
          </tr>
          <xsl:for-each select="songs/song">
            <tr>
              <td><xsl:value-of select="@s_id"/></td>
              <td><xsl:value-of select="name"/></td>
              <td><xsl:value-of select="filmname"/></td>
              <td><xsl:value-of select="singer"/></td>
              <td><xsl:value-of select="releasedate"/></td>
              <td><xsl:value-of select="link"/></td>
            </tr>
          </xsl:for-each>
        </table>
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

## O/p:-



## Information about Songs!

Id	Name	FilmName	Singer	ReleaseDate	Link
1	Bekhayali	Kabir Singh	Sachet Tandon	2019-05-24	/Kabir_Singh/Bekhayali
2	Tuhje Kitna Chahne Lage	Kabir Singh	Arijit Singh	2019-05-31	/Kabir_Singh/Tuhje_Kitna_Chahne_Lage
3	Duniyaa	Luka Chuppi	Akhil,Dhvani Bhanushali	2019-02-25	/Luka_Chuppi/Duniyaa
4	Slow Motion	Bharat	Shreya Ghoshal,Nakash Aziz	2019-04-25	/Bharat/Slow_Motion
5	Apana Time Aayega	Gully Boy	Ranveer Singh	2019-01-24	/Gully_Boy/Apana_Time_Aayega

## ➤ XSD:-

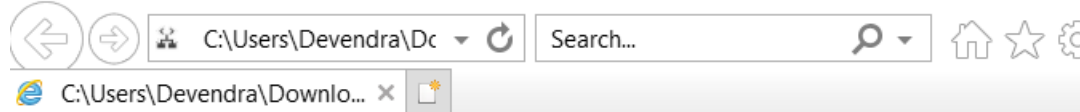
```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema id="XMLSchema1"
  targetNamespace="http://tempuri.org/XMLSchema1.xsd"
  elementFormDefault="qualified"
  xmlns="http://tempuri.org/XMLSchema1.xsd"
  xmlns:mstns="http://tempuri.org/XMLSchema1.xsd"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  >
  <xs:element name="songs">
    <xs:complexType>
      <xs:all>
        <xs:element name="song" type="songType" minOccurs="1"/>
      </xs:all>
    </xs:complexType>
  </xs:element>

  <xs:complexType name="songType">
    <xs:sequence>
      <xs:element name="name" type="nameType"/>
      <xs:element name="filmname" type="nameType"/>
      <xs:element name="singer" type="nameType"/>
      <xs:element name="releasedate" type="xs:date"/>
      <xs:element name="link" type="linkType"/>
    </xs:sequence>
    <xs:attribute name="s_id" type="xs:integer" use="required"/>
  </xs:complexType>

  <xs:simpleType name="nameType">
    <xs:restriction base="xs:string">
      <xs:whiteSpace value="collapse"/>
      <xs:minLength value="1"/>
      <xs:maxLength value="50"/>
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="linkType">
    <xs:restriction base="xs:string">
      <xs:minLength value="2"/>
      <xs:maxLength value="255"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```

## O/p:-

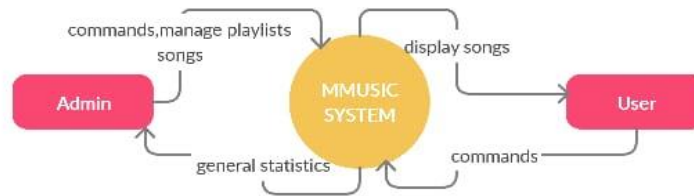


```
<?xml version="1.0" encoding="UTF-8"?>
- <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:mstns="http://tempuri.org/XMLSchema1.xsd"
  xmlns="http://tempuri.org/XMLSchema1.xsd"
  elementFormDefault="qualified"
  targetNamespace="http://tempuri.org/XMLSchema1.xsd"
  id="XMLSchema1">
  - <xs:element name="songs">
    - <xs:complexType>
      - <xs:all>
        <xs:element name="song" minOccurs="1"
          type="songType"/>
      </xs:all>
    </xs:complexType>
  </xs:element>
  - <xs:complexType name="songType">
    - <xs:sequence>
      <xs:element name="name" type="nameType"/>
      <xs:element name="filmname" type="nameType"/>
      <xs:element name="singer" type="nameType"/>
      <xs:element name="releasedate" type="xs:date"/>
      <xs:element name="link" type="linkType"/>
    </xs:sequence>
    <xs:attribute name="s_id" type="xs:integer" use="required"/>
  </xs:complexType>
  - <xs:simpleType name="nameType">
    - <xs:restriction base="xs:string">
      <xs:whiteSpace value="collapse"/>
      <xs:minLength value="1"/>
      <xs:maxLength value="50"/>
    </xs:restriction>
  </xs:simpleType>
  - <xs:simpleType name="linkType">
    - <xs:restriction base="xs:string">
      <xs:minLength value="2"/>
      <xs:maxLength value="255"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```

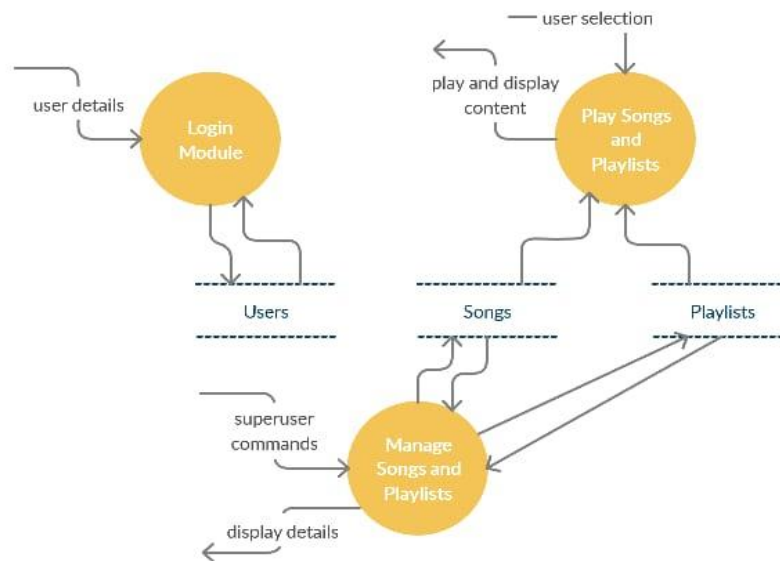
---

## ➤ DFD:-

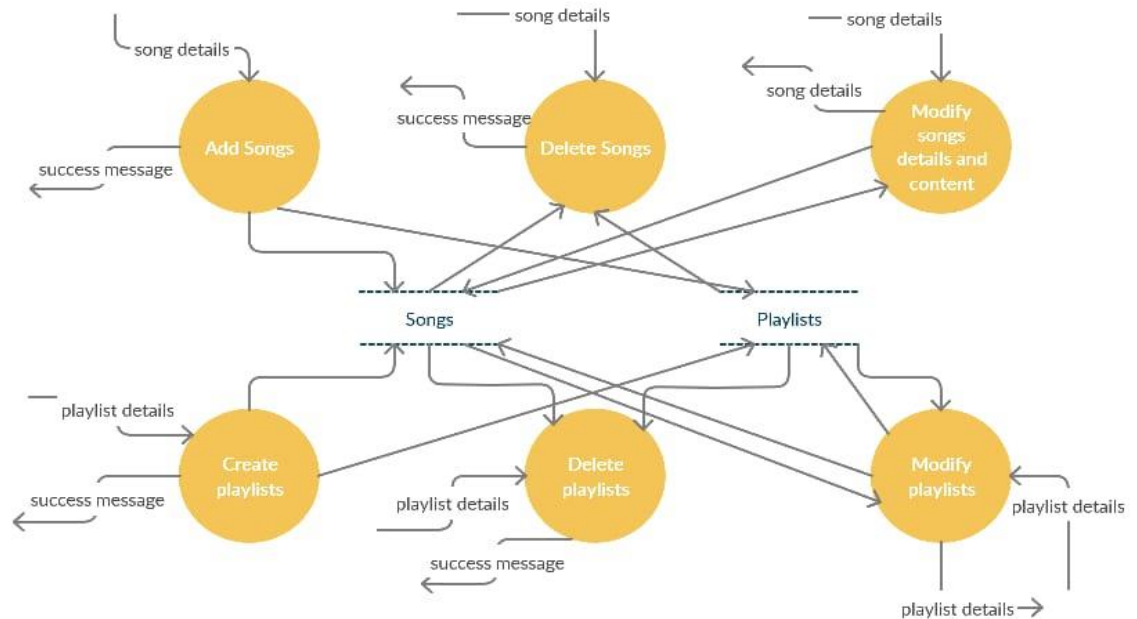
Level-0



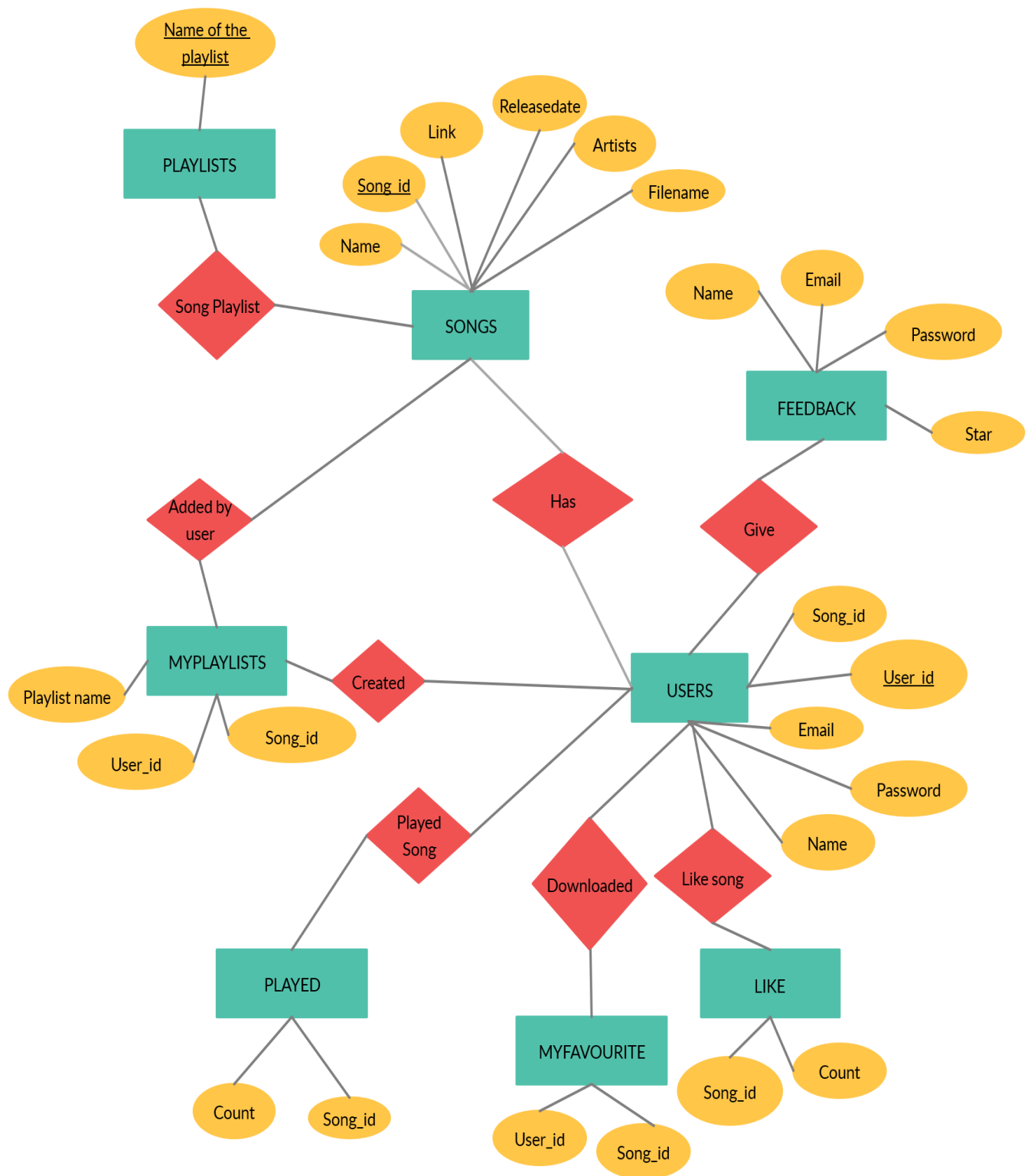
Level-1



Level-2



➤ **E-R diagram:-**



➤ **Data dictionary:-**

1)

Feedback								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	name	varchar2	30	yes	yes	FK	Users	
2.	email	varchar2	25	yes	yes	FK	Users	
3.	star	number	5	yes	yes			
4.	message	varchar2	150	yes	yes			

2)

Users								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	user_id	varchar2	5	yes	yes	PK		
2.	name	varchar2	30	yes	yes			
3.	email	varchar2	25	yes	yes			
4.	password	varchar2	12	yes	no			
5.	song_id of played song	number	5	yes	yes	FK	Users	

3)

Songs								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	song_id	number	5	yes	yes	PK		
2.	name	varchar2	30	yes	yes			
3.	filmname	varchar2	30	yes	yes			
4.	release date	date	25	yes	no			
5.	artists	varchar2	25	yes	yes			
6.	link	varchar2	50	yes	yes			

4)

Playlists								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	name of playlists	varchar2	25	yes	yes	PK		

5)

Liks								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	song_id	number	5	yes	yes	FK	Songs	
2.	count	number	5	no	yes			

6)

Played								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	song_id	number	5	yes	yes	FK	Songs	
2.	count	number	5	no	yes			

7)

My Favourite								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	user_id	number	5	yes	Yes	FK	Users	
2.	song_id	number	5	yes	Yes	FK	Songs	

8)

My Playlists								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	user_id	number	5	yes	Yes	FK	Users	
2.	playlist name	varchar2	25	yes	Yes	FK	Playlists	
3.	song_id	number	5	yes	Yes	FK	Songs	



## **IMPLEMENTATION DETAILS**

### ➤ Modules:-

- **Login Module:**  
If users want to log in or sign up then users can do that. Users can log in or sign up by email id. If user forgot account password then by giving account email user can do, by OTP verification.
- **Player module:**  
Song selected by user from song list will be played by audio player.
- **Playlist module:**  
In home page all playlists will be displayed in some groups like Top Songs, Recently Released, etc.
- **Song list module:**  
All songs of particular playlist will be displayed and user can select a song to play it.
- **My Favourites module:**  
All favourite songs for particular user is managed. User can add and remove songs as per his/her interest.

### ➤ Major Functionalities:-

- log in
- sign up
- play song
- song details
- user menu
- playlist created by user
- favourite songs of users
- footer

## **TESTING**

EXECUTED	Passed	12
	Failed	0
	Total (Passed + Failed)	12
Pending		0
In Process		0
Blocked		0
(Sub-Total) Total		12

### ➤ **Testing of Individual Function :-**

#### Function 1:- Display Playlists

Case 1: MongoDB isn't connected

O|P: playlists will not be displayed

Case 2: MongoDB is connected

O|P: playlists will be displayed

#### Function 2:- Display Songs of Selected Playlist

Case 1: MongoDB isn't connected

O|P: songs will not be displayed

Case 2: MongoDB is connected

O|P: songs will be displayed

#### Function 3:- Play Selected Song

Case 1: Song is not found in 'Songs' folder

O|P: song will not be played

Case 2: Song is found in 'Songs' folder

O|P: song will be played

#### Function 4:- Display Songs of My Favourite

Case 1: Favourite songs are not found for a User

O|P: songs will not be displayed

Case 2: Favourite songs are found for a User

O|P: songs will be displayed

### Function 5:- Like Song

Case 1: User has been logged in

O|P: Song is liked and alert box with message “Song is added to My Favourite”

Case 2: User again press like button

O|P: Song is dis liked and alert box with message “Song is removed from My Favourite”

Case 3: User has not been logged in

O|P: Like button will not be displayed

### Function 6:- Remove Song from My Favourite

Case 1: User press remove button

O|P: Song is removed from My Favourite, alert box with message “Song is removed from My Favourite” and list will be updated

Case 2: User again press like button

O|P: Song is dis liked and alert box with message “Song is removed from My Favourite”

Case 3: User has not been logged in

O|P: Like button will not be displayed

### Function 7:- User Login

Case 1: User details is not found in MongoDB

O|P: Alert box with message “User not found”

Case 2: User details is found in MongoDB but password is incorrect

O|P: Alert box with message “Invalid username/password”

Case 3: Correct user details

O|P: User will be redirected to home page, cookie is set for one your and Login/Signup button will be changed with user icon

### Function 8:- User Signup

Case 1: User email is found in MongoDB

O|P: Alert box with message “Already exists mmusic account on given email id”

Case 2: Password and confirm password are not matched

O|P: Alert box with message “Both password must be same”

Case 3: Correct user details

O|P: OTP will be sent on given email and user will redirected to OTP page

### Function 9:- Forgot Password

Case 1: User email is found in MongoDB

O|P: OTP will be sent on given email and user will redirected to OTP page

Case 2: User email is not found in MongoDB

O|P: Alert box with message “Not mmusic account on give email id”

### Function 10:- OTP Verification

Case 1: OTP entered by user and OTP which is sent to user are not match

O|P: Alert box with message “Incorrect OTP”

Case 2: OTP entered by user and OTP which is sent to user are match

O|P: Based on cookie value if user is signing up then redirected to home page, cookie is set for one your and Login/Signup button will be changed with user icon. Otherwise redirected to change password page.

### Function 11:- Change Password

Case 1: Password and Conform Password are not same

O|P: Alert box with message “Both password must be same”

Case 2: Password and Conform Password are same

O|P: Password will be updated in MongoDB and alert box with message “Password is updated successfully. Now, login with new password”

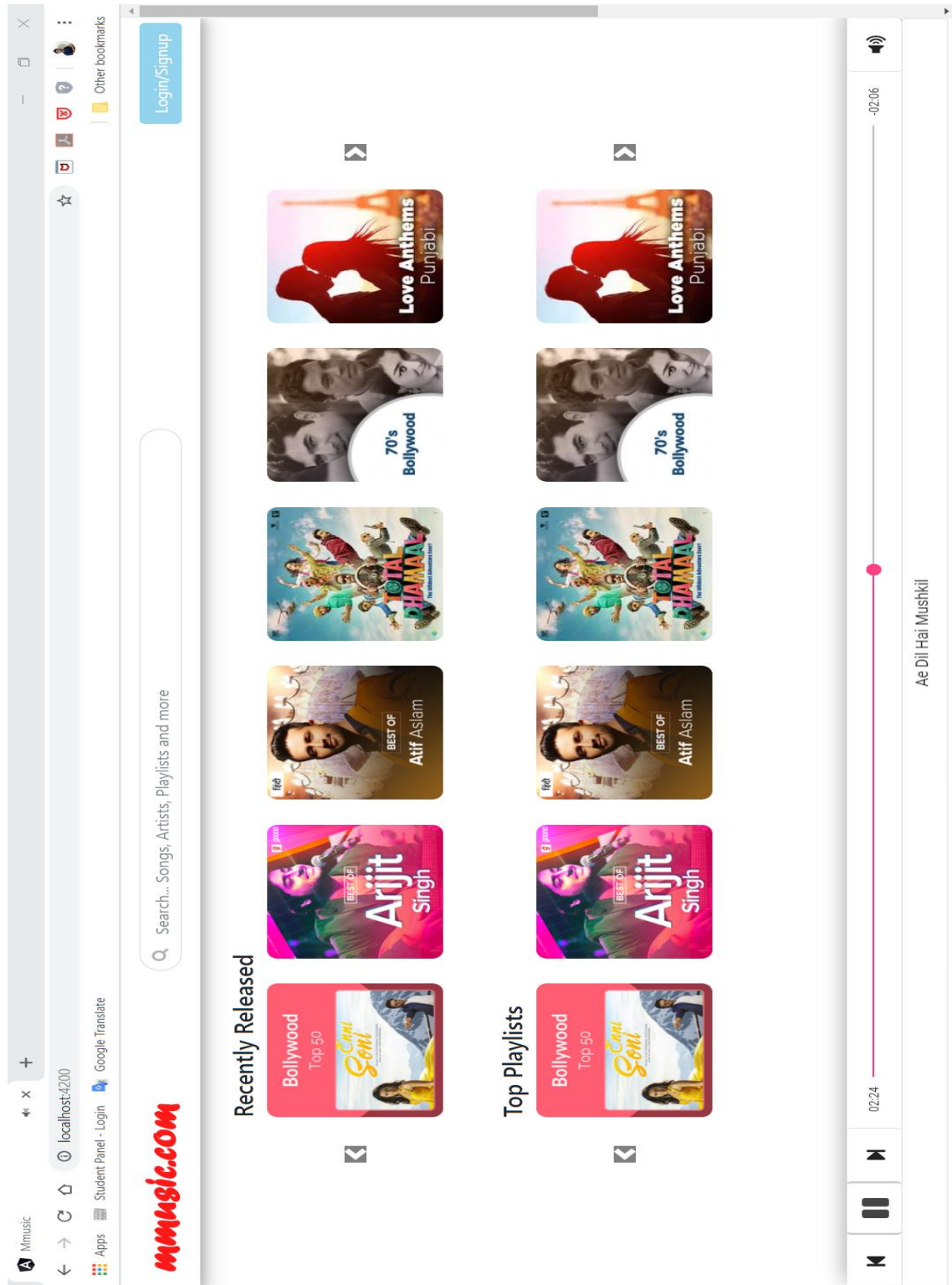
### Function 12:- User Logout

Case 1: User will be logout


O|P: cookie of login will be destroyed and user icon will be changed to Login/Signup button.

# SCREEN-SHOTS


## ➤ Home:-



➤ **All Songs of Playlist:-**

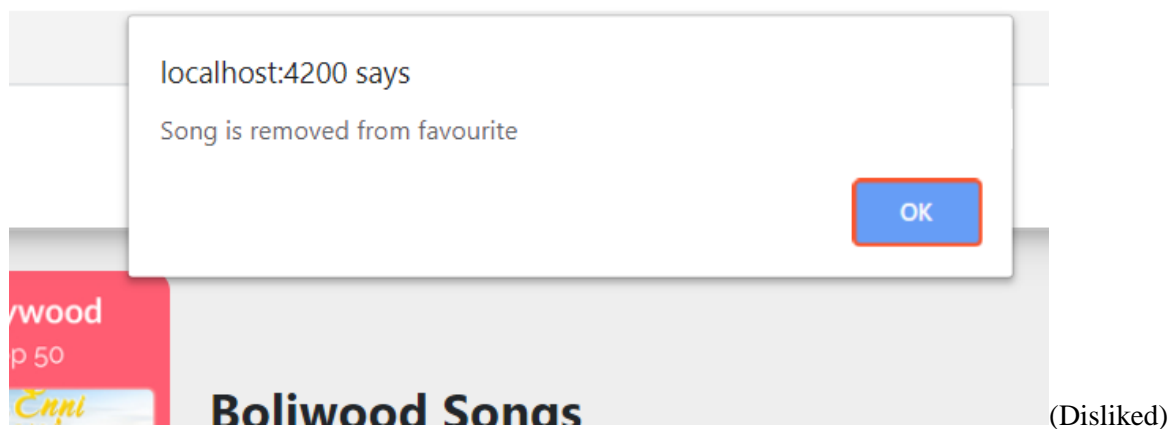
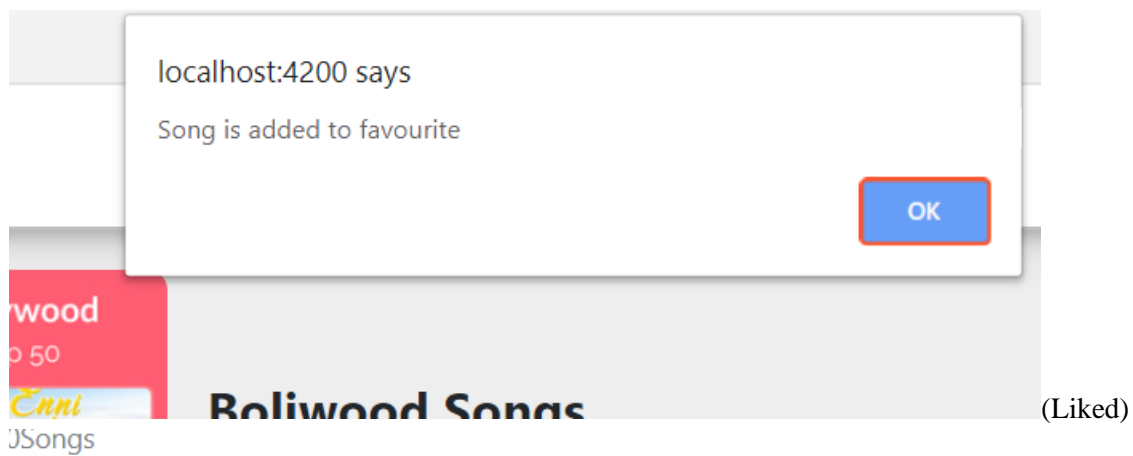
<div> <div> Bollywood Top 50 </div>  </div> <div>Boliwood Songs</div>		
#	TITLE	ARTISTS
1	Ae Dil Hai Mushkil	Arijit Singh
2	Bom Diggy Diggy	Kishor Kumar
3	Dekhate Dekhte	Arijit Singh
4	Haal E Dil	Atif Aslam
5	Nit Khair Manga	Atif Aslam

(Without Login)

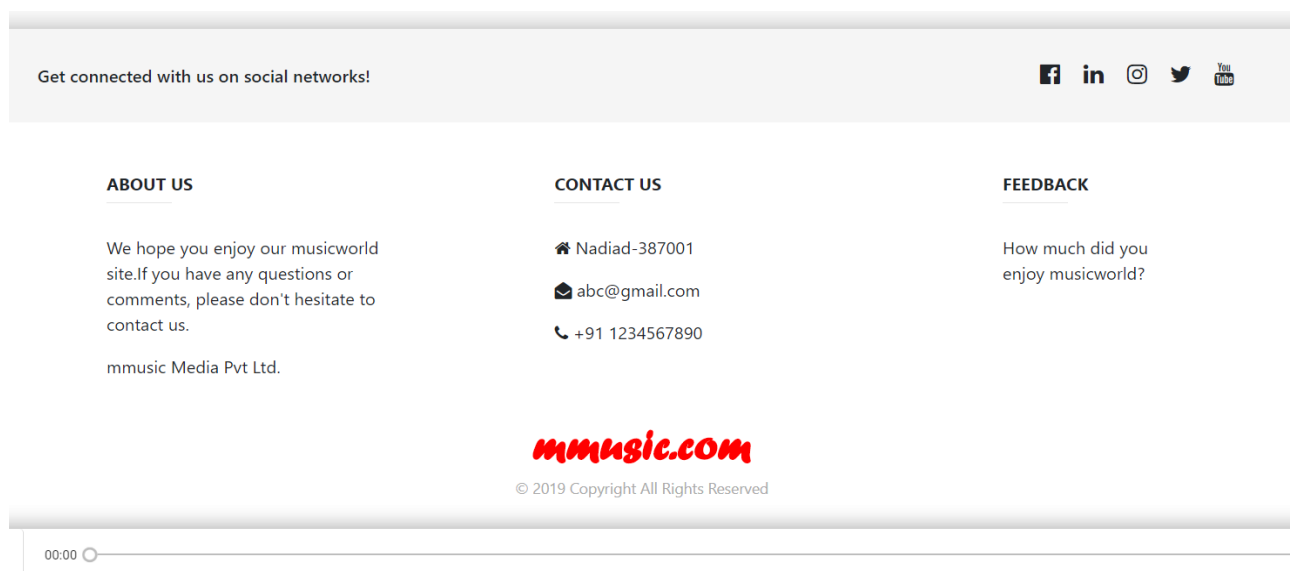
				
#		TITLE	ARTISTS	FILMNAME
1	♡	Ae Dil Hai Mushkil	Arijit Singh	Ae Dil Hai Mushkil
2	♡	Bom Diggy Diggy	Kishor Kumar	Sonu Ke Titu Ka Faisla
3	♡	Dekhate Dekhte	Arijit Singh	Batti Gul Meter Laga
4	♡	Haal E Dil	Atif Aslam	Haal E Dil
5	♡	Nit Khair Manga	Atif Aslam	Nit Khair Manga

(After Login)


## ➤ Like and Dislike Songs:-







## ➤ Footer:-




➤ **My Favourites:-**



## My Favourites

#	TITLE	ARTISTS	FILMNAME	
1	Bom Diggy Diggy	Kishor Kumar	Sonu Ke Titu Ki Sweety	
2	Dekhte Dekhte	Arijit Singh	Batti Gul Meter Chalu	
3	Haal E Dil	Atif Aslam	Haal E Dil	
4	Nit Khair Manga	Atif Aslam	Nit Khair Manga	

(After removing any song)  
list



## My Favourites

localhost:4200 says  
Song is removed from favourite  

OK



➤ Login:-

***mmusic.com***  
***all your music at one place***

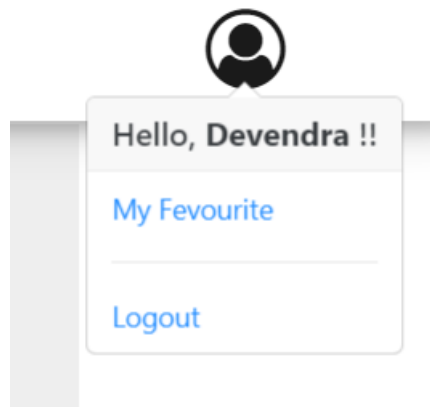
Login

[Forgot Password ?](#)

No mmusic account ? [Signup](#)

[Home](#)

➤ After Login:-



➤ Signup:-

***mmusic.com***

***all your music at one place***

Sign Up

Have mmusic account ? [Login](#)

[Home](#)

➤ Forgot Password:-

***mmusic.com***

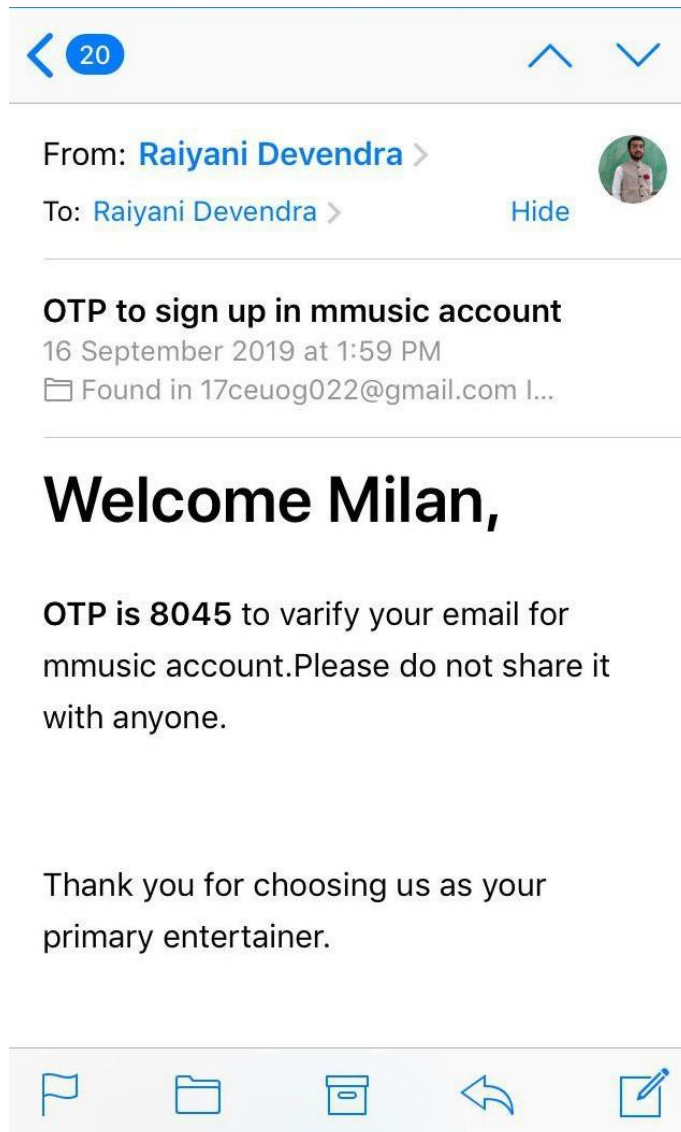
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➤ **OTP on User Email ID:-**



## **CONCLUSION**

In this project user can login, signup, logout and change password. By selecting any playlist song list will be displayed. By selecting any song from that list, song will be played and audio player will be displayed at the bottom of the window with song title. By pressing like button of particular song, that song will be added in My Favourite playlist of that user.

## **LIMITATIONS** **&** **FUTURE EXTENSION**

- **Limitations:**
  - User can't play entire playlist
  - User can't create your own playlists. E.g: old 80's favourite, new 19's favourites etc
- **Not Implemented Functionality:**
  - Search bar
- **Future Extension:**
  - When new songs are released, email will be sent to all registered users.
  - Search bar
  - User can play entire playlist
  - User can create your own playlists. E.g: old 80's favourite, new 19's favourite etc

## **BIBLIOGRAPHY**

To build this project we have taken references from following websites,

- W3schools – <https://www.w3schools.com/>
- StackOverflow – <https://stackoverflow.com/>
- NpmJS – <https://www.npmjs.com/>
- Angular – <https://angular.io/docs>
- NodeJS – <https://nodejs.org/en/docs/>
- MongoDB – <https://docs.mongodb.com/>
- Tutorialspoint – <https://www.tutorialspoint.com>