



Sarvajanik Education Society
Sarvajanik College Of Engineering & Technology , Surat
Master Of Computer Applications
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Interactive Karaoke Experience

Presented By :-

Aayush Chauhan D [ET24MTCA73]

Dhruv Sariya J [ET24MTCA122]

Agrawal Nimit A [ET24MTCA069]

Under The Guidance Of :-

Prof. Karuna N. Patel



SingIT

“From **SHOWER** singer to
STAGE Singer”





Table of contents

01

**Project
Abstract**

02

Objective

03

**System
Description**

04

**Database Design
/Data Dictionary**

05

Diagrams

06

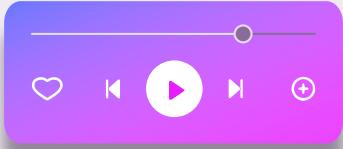
**Screen
Shots**

07

Limitations

08

References



Project Abstract

- SingIT is an Android-based interactive karaoke app that enhances the singing experience with audio processing and synced lyrics.
- The system separates each song into three parts—original track, user vocals, and instrumental—and uses a dynamic sound-bar to blend or switch between them.
- Users can record their vocals, which are processed and mixed with the instrumental to create personalized karaoke tracks.
- The app provides smooth, accurate lyric synchronization and a fully customizable singing environment optimized for mobile devices.



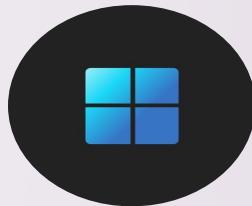
Objectives

- To develop an Android application that allows users to enjoy music in three distinct modes – original song with lyrics, user's vocal recording, and instrumental (karaoke) version.
- Users can sign up, log in, and manage their accounts.
- To implement a sound bar controller that enables smooth switching or blending between original vocals, user vocals, and instrumental tracks.
- To allow users to record their own vocals and overlay them on instrumental tracks.
- To create a user-friendly interface that makes music interaction enjoyable and intuitive.

System Description

Operating System

Windows 11



App Language

Flutter



Back-end Tools

PHP



Database

MySQL



Front-end Tools

HTML, CSS, Bootstrap,
JS, jQuery, Ajax



Web Server

Xampp



Database Design & Dictionary

Admin Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Admin Id
2.	name	varchar (20)	NOT NULL	Admin Name
3.	email	varchar (50)	NOT NULL	Admin Email Id
4.	password	varchar (255)	NOT NULL	Password
5.	photo	varchar (255)	NOT NULL	Admin Image

Artist Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Artist Id
2.	name	varchar (20)	NOT NULL	Artist Name
3.	email	varchar (50)	NOT NULL	Artist Email Id
4.	password	varchar (255)	NOT NULL	Password
5.	photo	varchar (255)	NOT NULL	Artist Image

User Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	User Id
2.	name	varchar (20)	NOT NULL	User Name
3.	email	varchar (50)	NOT NULL	User Email Id
4.	password	varchar (255)	NOT NULL	Password
5.	photo	varchar (255)	NOT NULL	User Image

Genre Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	gid	int (11)	Primary Key	Genre Id
2.	name	varchar(10)	NOT NULL	Genre Name
3.	image	varchar(255)	NOT NULL	Genre Image

Artist-Song Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	song_id	int (11)	Foreign Key	Song Id
3.	artist_id	int (11)	Foreign Key	Artist id

Genre-Song Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	song_id	int (11)	Foreign Key	Song Id
3.	genre_id	int (11)	Foreign Key	Genre id

Song Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	sid	int (10)	Primary Key	Song Id
2.	name	varchar(50)	NOT NULL	Name
3.	image	varchar(255)	NOT NULL	Photo
4.	length	time	NOT NULL	Length
5.	lyrics	text	NOT NULL	Lyrics
6.	album	varchar(100)	NOT NULL	Album Name
7.	instrumental	varchar(255)	NOT NULL	Instrumental Music
8.	vocal	varchar(255)	NOT NULL	Vocal Music



Favourite Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	song_id	int (11)	Foreign Key	Song Id
3.	user_id	int (11)	Foreign Key	User id

History Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	song_id	int (11)	Foreign Key	Song Id
3.	User_id	int (11)	Foreign Key	User id

Language Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	name	int (11)	String	Language-Name
3.	image_id	int (11)	Foreign Key	Image id

Language - song Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	song_id	int (11)	Foreign Key	Song Id
3.	lid	int (11)	Foreign Key	Language id

Playlist Table:

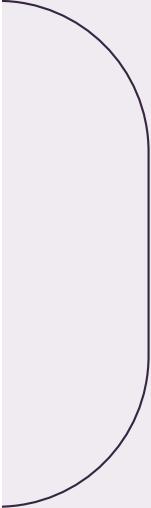
SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	name	string	NOT NULL	Song Name
3.	image	string	NOT NULL	Image url

Playlist - song Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	song_id	int (11)	Foreign Key	Song Id
3.	pid	int (11)	Foreign Key	Playlist id

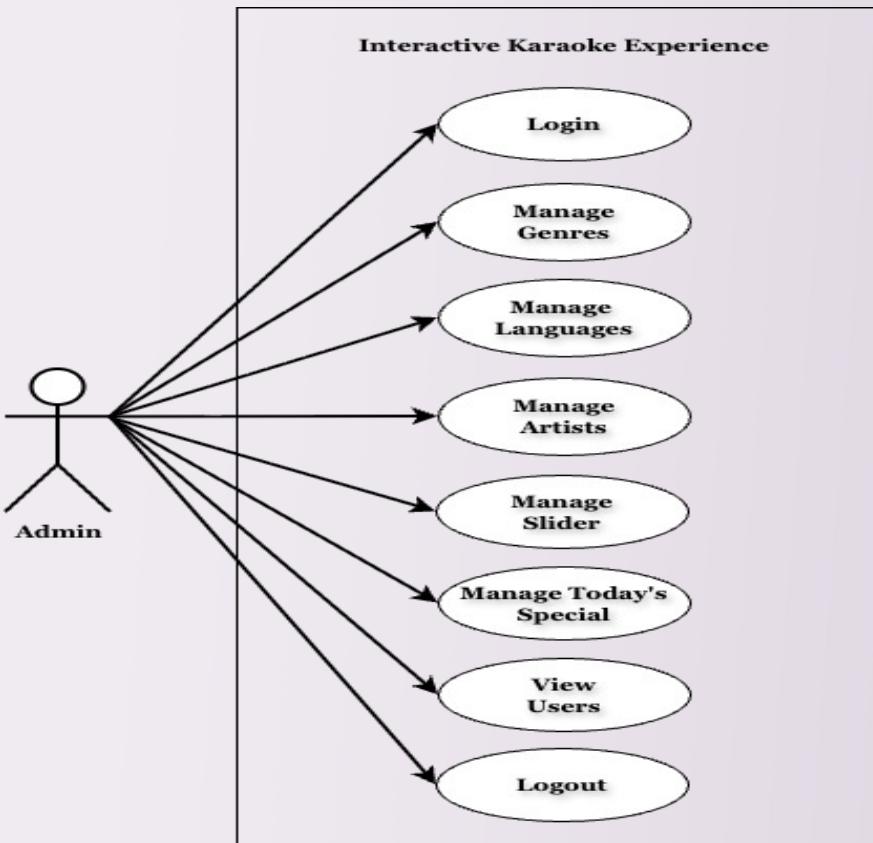
Slider Table:

SR NO.	NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
1.	id	int (11)	Primary Key	Id
2.	song_id	int (11)	Foreign Key	Song Id

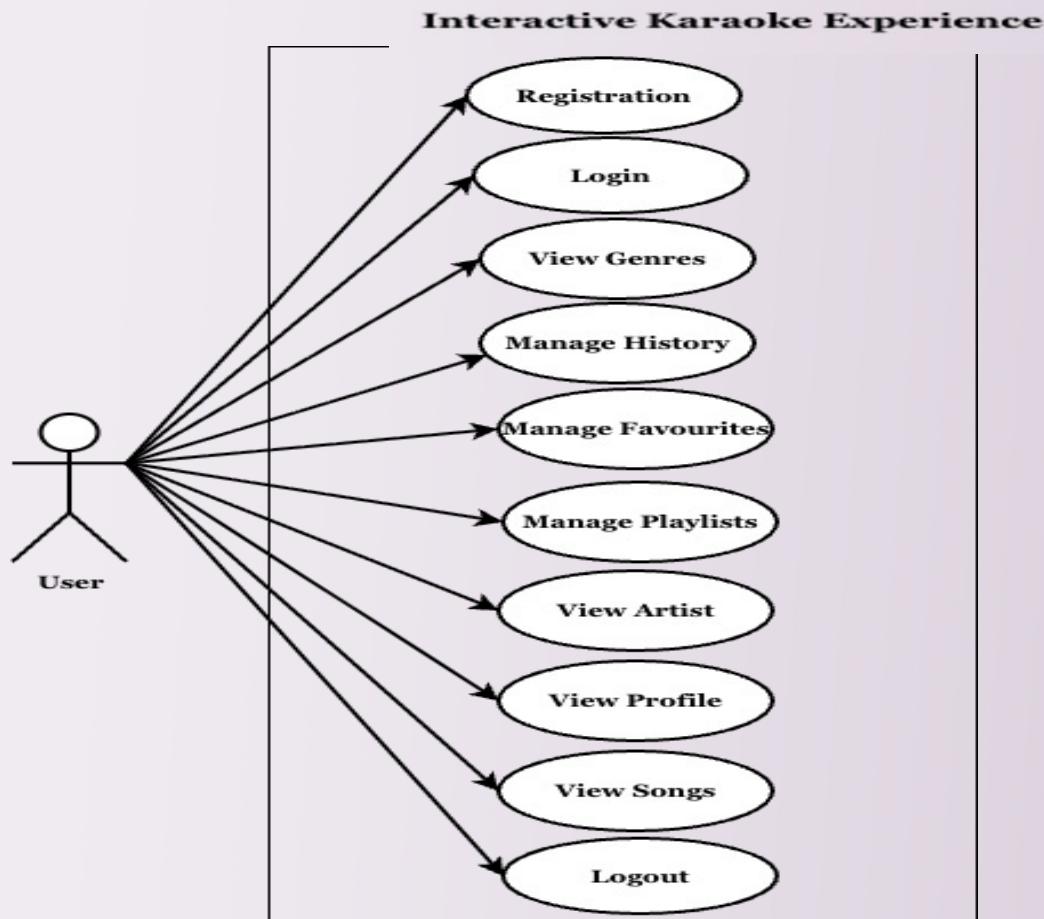


Diagrams

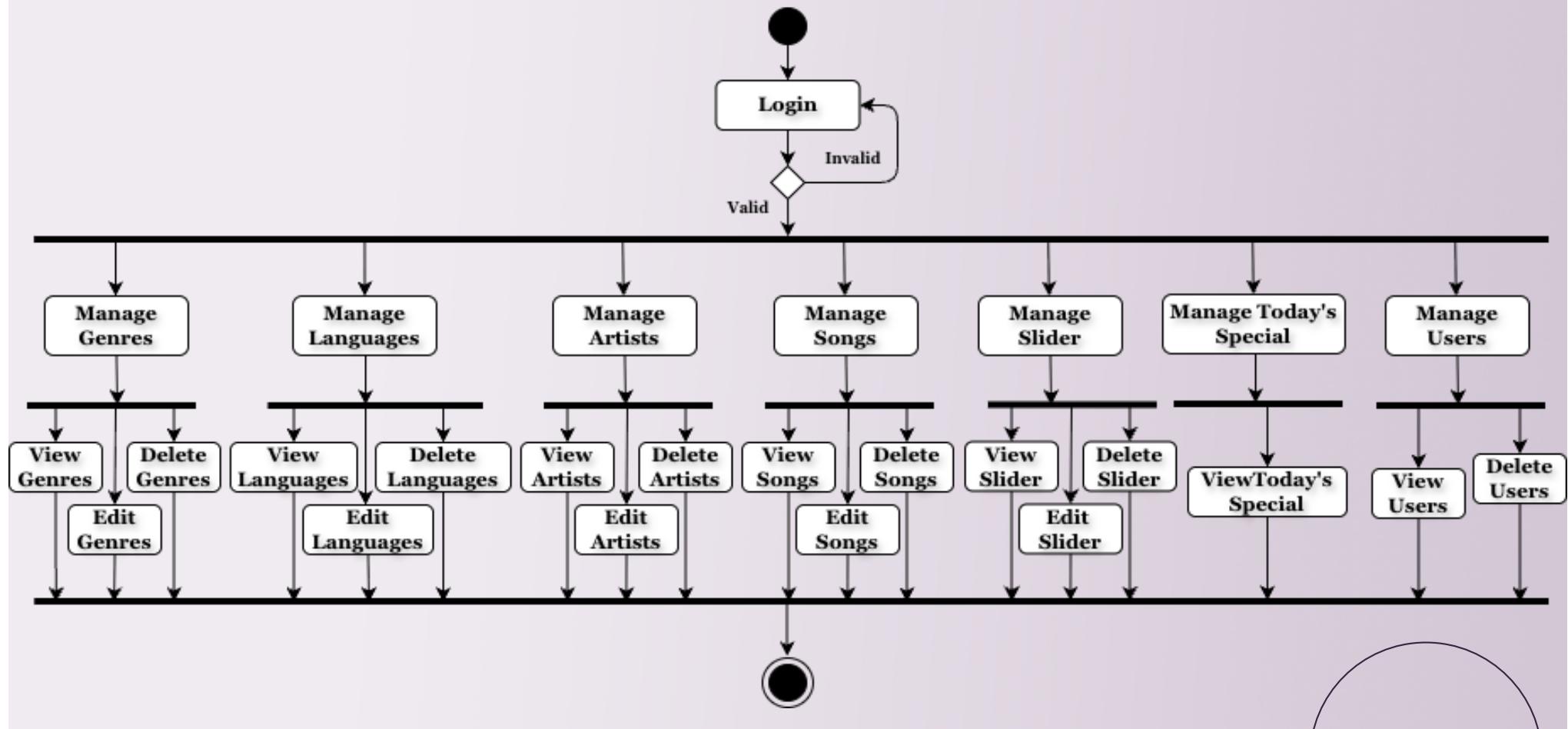
Admin Use-Case Diagram



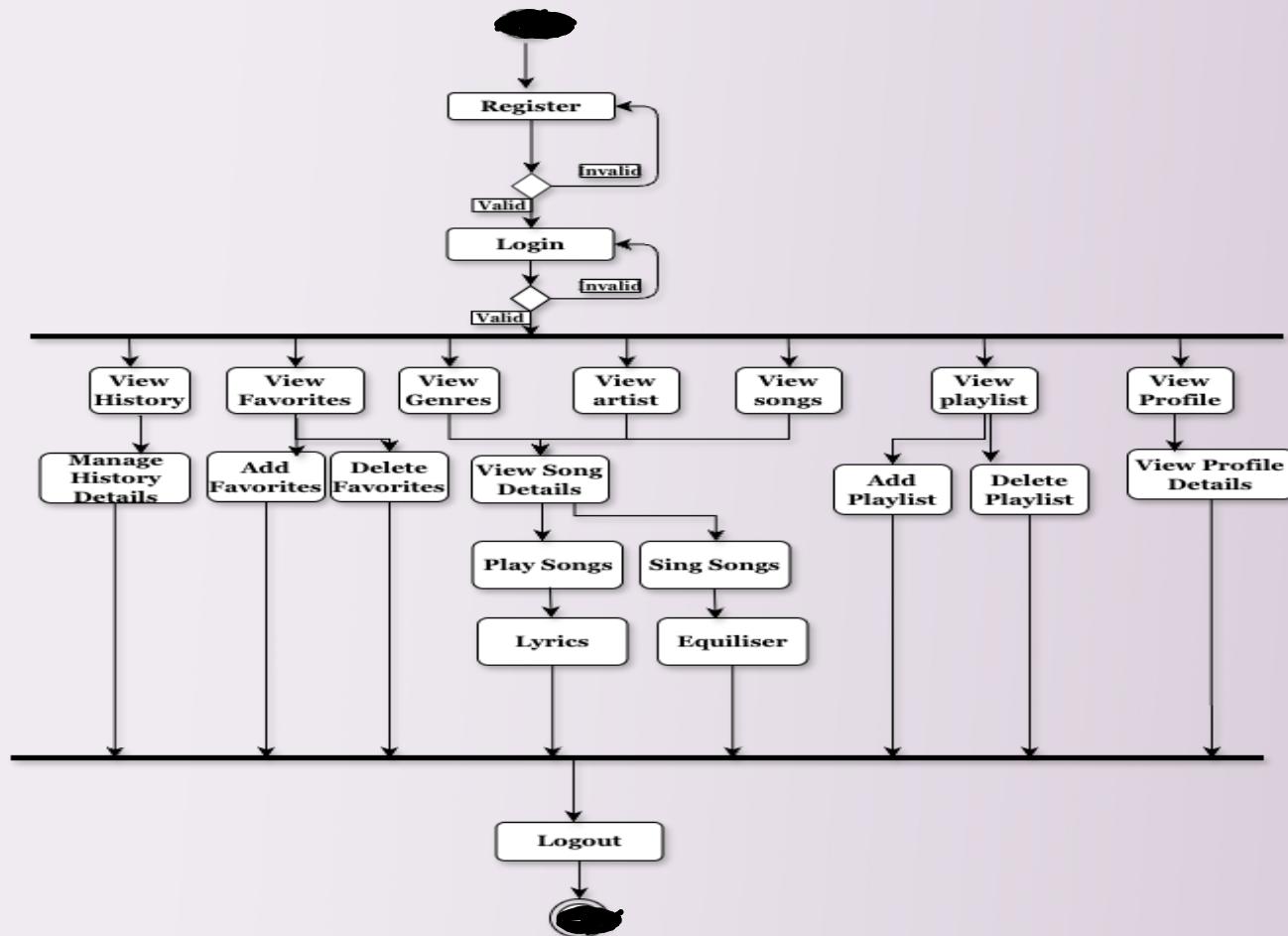
User Use-Case Diagram



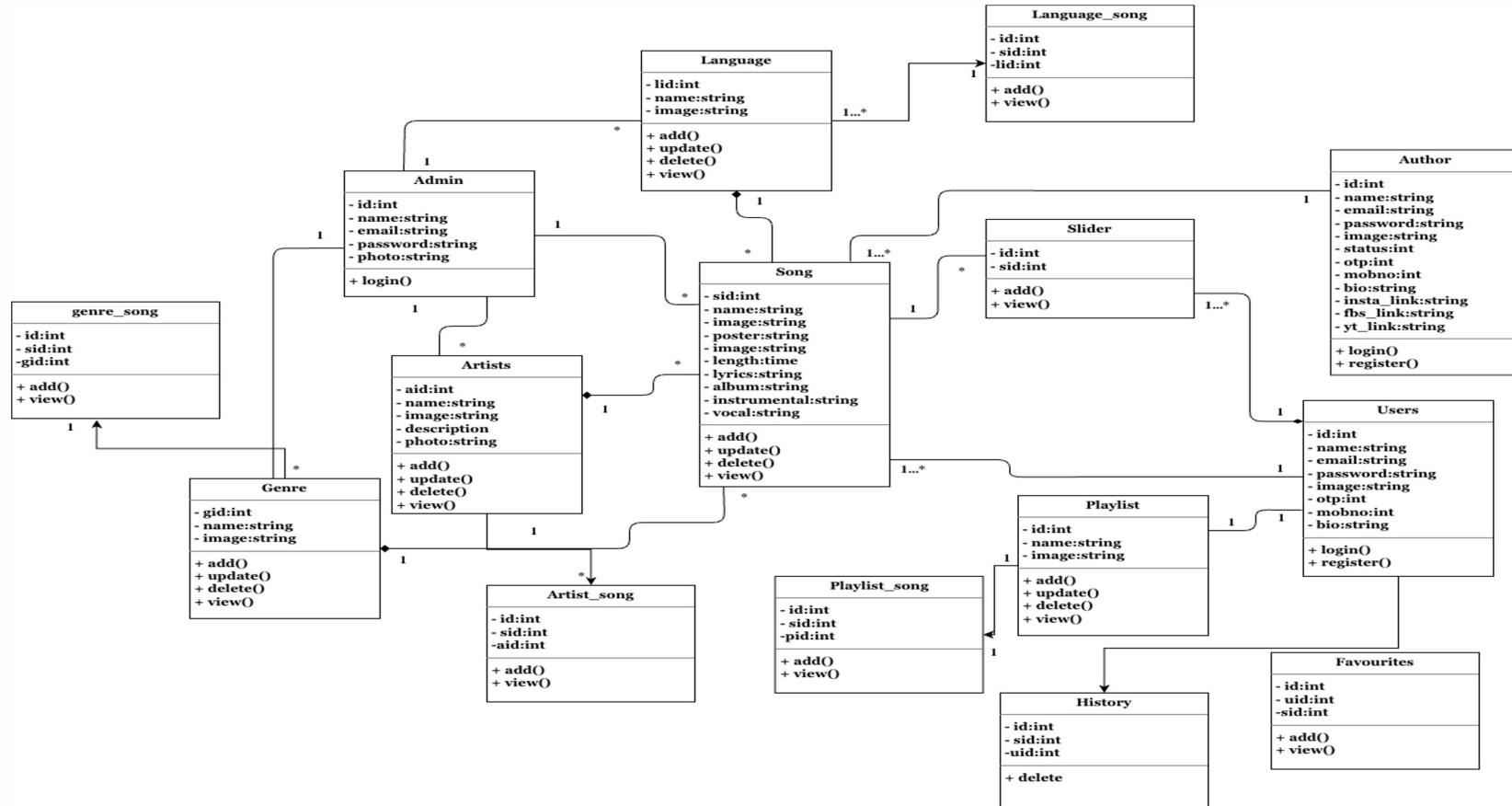
Admin Activity Diagram



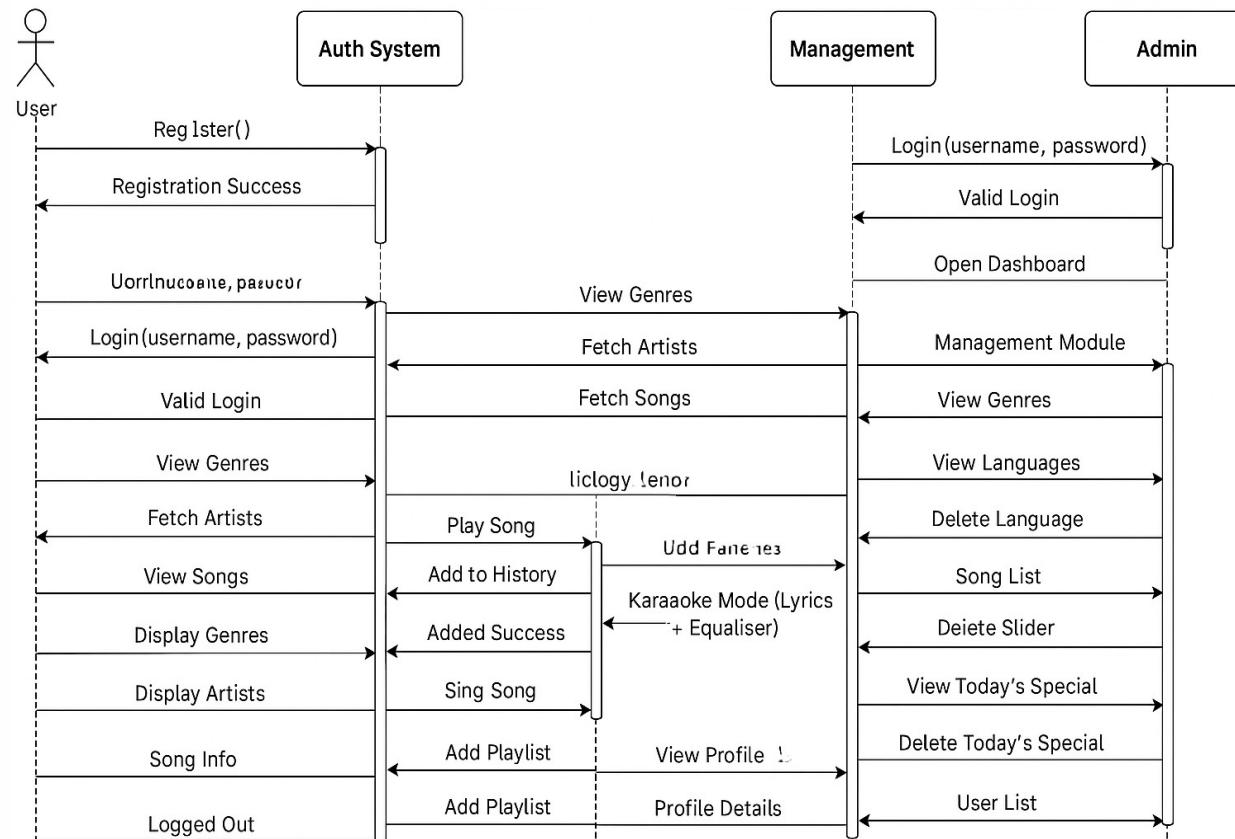
User Activity Diagram

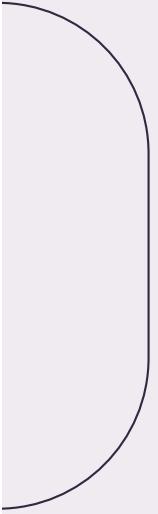


Class Diagram



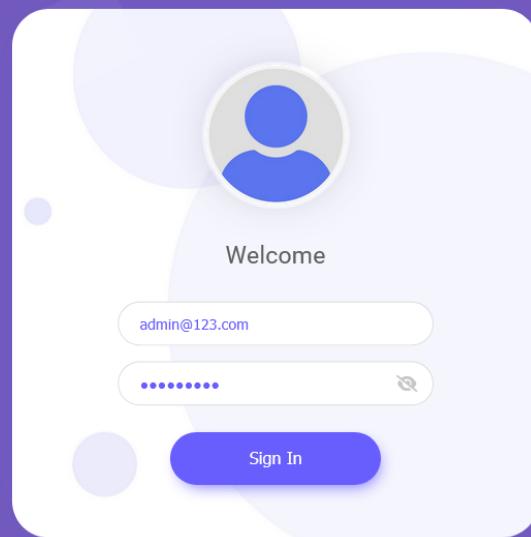
Interaction Diagram

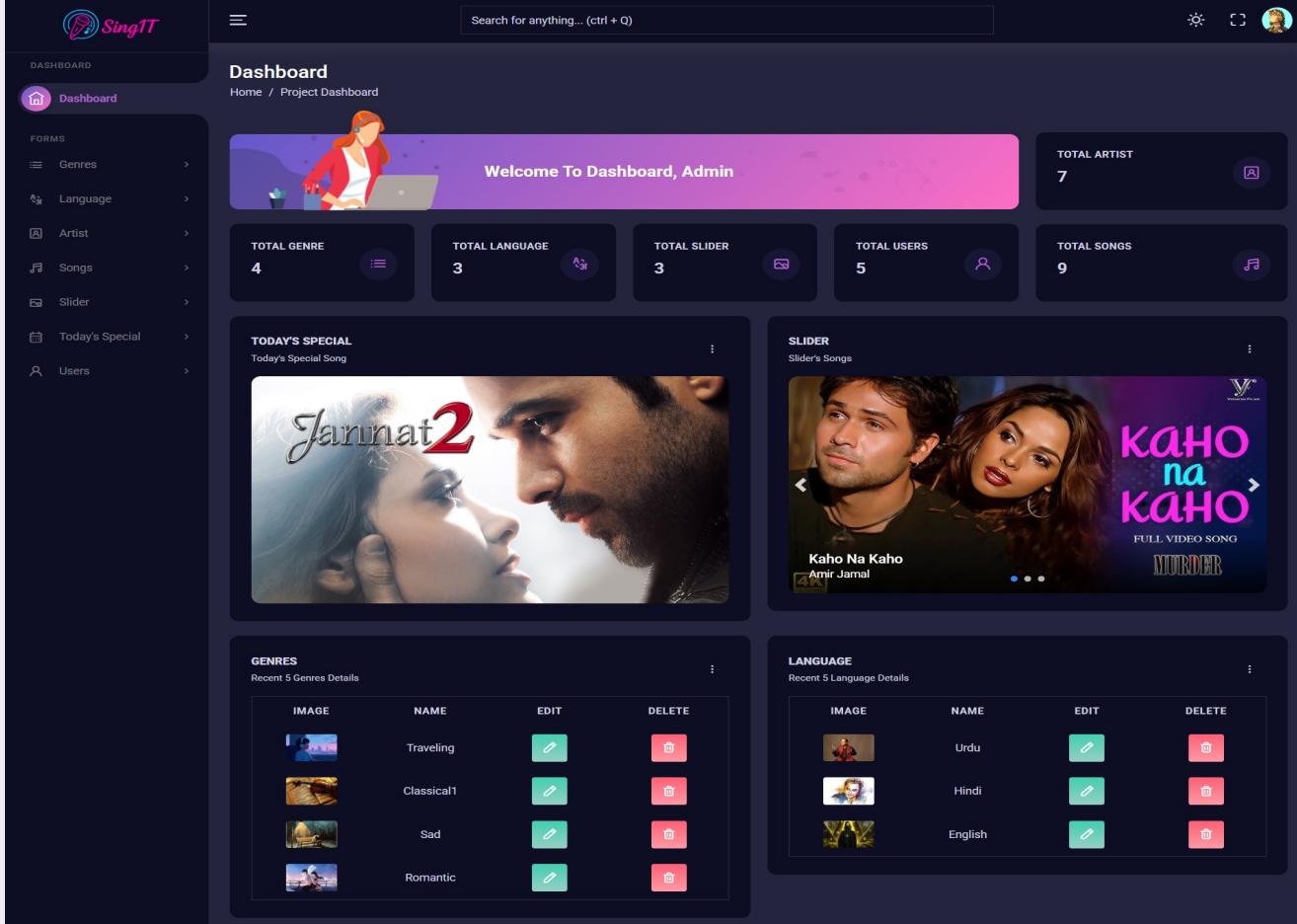




ScreenShots







The image shows the 'SingIT' Project Dashboard. The dashboard has a dark theme with a header bar at the top featuring a search bar and user profile icons. On the left, there's a sidebar with a logo and navigation links for 'Dashboard', 'Forms' (Genres, Language, Artist, Songs, Slider), 'Today's Special', and 'Users'. The main content area includes a welcome banner, summary statistics, and sections for 'TODAY'S SPECIAL' and 'SLIDER'. Below these are tables for 'GENRES' and 'LANGUAGE'.

Welcome To Dashboard, Admin

TOTAL ARTIST
7

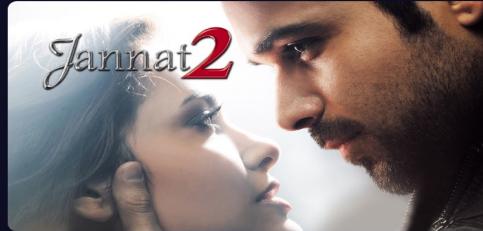
TOTAL GENRE
4

TOTAL LANGUAGE
3

TOTAL SLIDER
3

TOTAL USERS
5

TOTAL SONGS
9

TODAY'S SPECIAL
Today's Special Song


SLIDER
Slider's Songs


GENRES
Recent 5 Genres Details

IMAGE	NAME	EDIT	DELETE
	Traveling		
	Classical1		
	Sad		
	Romantic		

LANGUAGE
Recent 5 Language Details

IMAGE	NAME	EDIT	DELETE
	Urdu		
	Hindi		
	English		

The image shows a screenshot of the SingIT application's "Add Songs" feature. The main interface has a dark theme with a purple header bar containing the "SingIT" logo and a search bar. On the left, there is a sidebar with navigation links for Dashboard, FORMS (Genres, Language, Artist), and Songs (Add Songs, View Songs, Slider, Today's Special, Users). The "Add Songs" link under the Songs section is highlighted.

The central area displays the "Add Songs" page with the title "Add Songs" and a breadcrumb trail "Home / Add Songs". A large modal window titled "Song Form" is open, containing fields for Track Name, Genre(s), Artist(s), Language(s), Album Name, Duration (in seconds), and Lyrics. Each field has an "Enter" placeholder and a dropdown menu labeled "0 Selected". Below these fields are sections for uploading album, poster, vocal, and instrumental audio files, each with a "CHOOSE A FILE" button and a message indicating "No file chosen, yet.". At the bottom of the modal is an "Insert" button.

At the very bottom of the page, there is a footer with the text "Copyright © 2024 . Designed by DJSariya. All rights reserved." and a small purple square icon.



SingIT

DASHBOARD

Dashboard

FORMS

Genres

Language

Artist

Songs

Add Songs

View Songs

Slider

Today's Special

Users

View All Songs

Home / View Songs

Search for anything... (ctrl + Q)

☰

SONG LIST

Copy Excel PDF Column visibility ▾

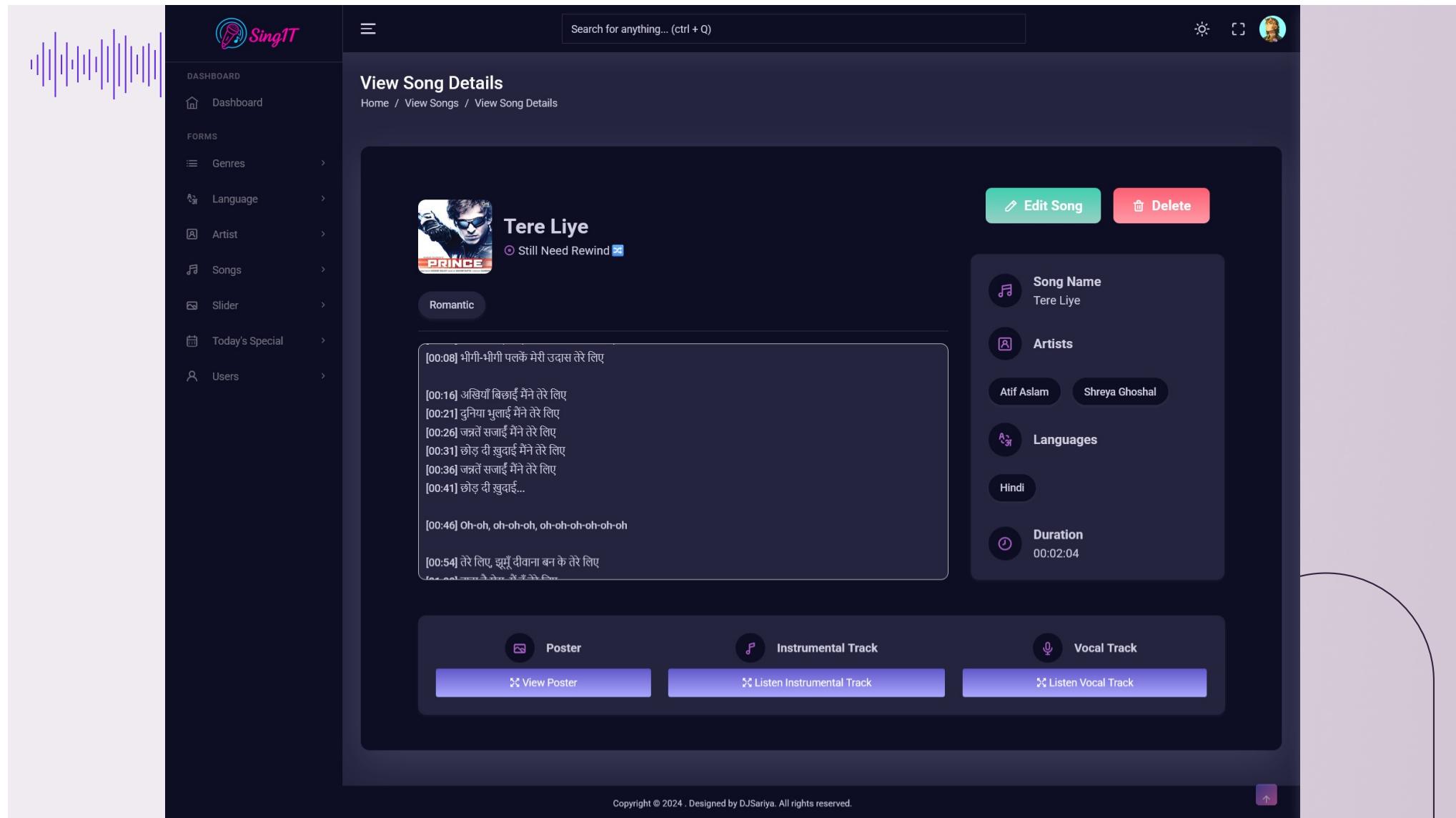
Search:

NAME	LENGTH	ALBUM				
Zara Sa	00:03:04	Jannat (Original Motion Picture Soundtrack)				
Tere Liye	00:02:04	Still Need Rewind				
Believer	00:02:04	Evolve				
Tum To Thehre Pardesi	00:02:29	Tum To Thehre Pardesi				
Kaho Na Kaho	00:03:12	MURDER				
Kaise Mein Kahun Tujhse	00:03:44	Rehnaa Hai Terre Dil Mein				
Tum To Thehre Pardesi	00:00:00	Tum To Thehre Pardesi				
Tujhe Sochta Hoon	00:05:13	Jannat 2				
Jo Bhi Kasmein	00:05:38	Raaz				

Showing 1 to 9 of 9 entries

Previous **1** Next

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The screenshot shows the SingIT application interface. The left sidebar contains navigation links for Dashboard, Forms (Genres, Language, Artist, Songs, Slider, Today's Special, Users), and a search bar at the top. The main content area displays song details for "Tere Liye" by Atif Aslam and Shreya Ghoshal. It includes a poster, lyrics, and playback controls for instrumental and vocal tracks. A dark mode toggle and user profile are in the top right.

SingIT

DASHBOARD

Dashboard

FORMS

Genres

Language

Artist

Songs

Slider

Today's Special

Users

Search for anything... (ctrl + Q)

☰

View Song Details

Home / View Songs / View Song Details

 **Tere Liye**
Still Need Rewind 

Romantic

[00:08] भीगी-भीगी पलके मेरी उदास तेरे लिए
[00:16] अखियाँ बिछाई मैंने तेरे लिए
[00:21] दुनिया खुलाई मैंने तेरे लिए
[00:26] ज़रते सजाई मैंने तेरे लिए
[00:31] छोड़ दी खुदाई मैंने तेरे लिए
[00:36] ज़रते सजाई मैंने तेरे लिए
[00:41] छोड़ दी खुदाई...
[00:46] Oh-oh, oh-oh-oh, oh-oh-oh-oh-oh-oh
[00:54] तेरे लिए, झूँझूँ दीवाना बन के तेरे लिए

 Edit Song  Delete

Song Name
Tere Liye

Artists
Atif Aslam Shreya Ghoshal

Languages
Hindi

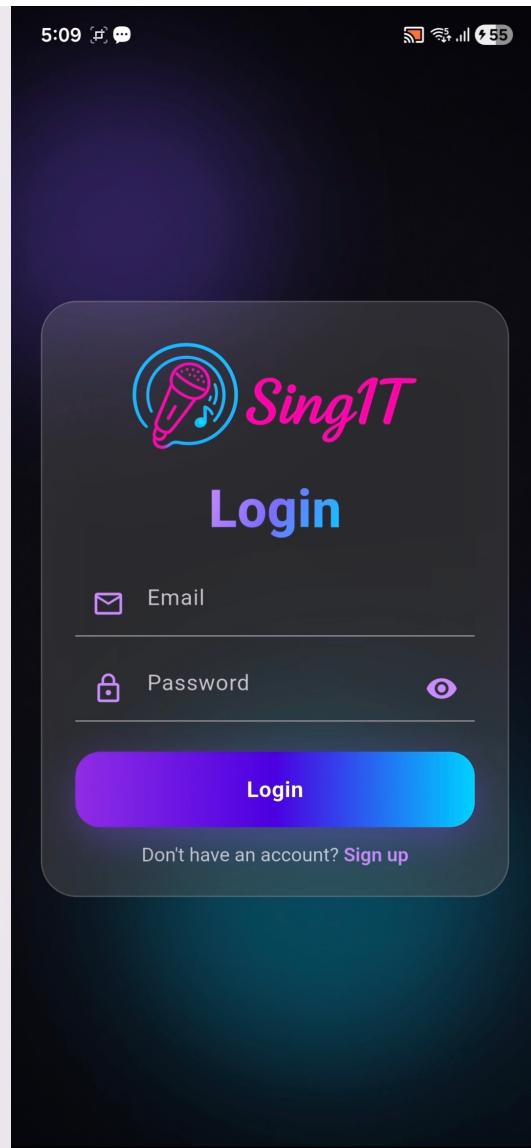
Duration
00:02:04

 Poster  Instrumental Track  Vocal Track

 View Poster  Listen Instrumental Track  Listen Vocal Track

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Limitations

- **Audio Quality Issues** – Vocal and instrumental separation may not always be 100% accurate, leading to background noise or distortion.
- **Performance Constraints** – Real-time processing of songs requires high CPU/GPU power, which may affect performance on low-end Android devices.
- **Internet Dependency** – Streaming and Storing may need a stable internet connection as it directly been stored on Cloud.
- **Background Noise in Recording** – User's recording quality depends on the device microphone and environment.





References

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