Software Project Management (IT-414)

Lyrics Search Application
Project Report

Group-25

Margi Hingrajia (201801014)

Tejaswa Alia (201801054)

Rahul Khatri (201801055)

Contents

1. Project team details and roles of team members.

Name	Student Id	Roles
Margi Hingrajia	201801014	Leader, front-end developer
Tejaswa Alia	201801054	UI/UX designer, front-end developer
Rahul Khatri	201801055	Backend developer

2. Project background

a. Purpose of project

Music is a very significant part of a person's life, it acts as a companion irrespective of the mood and situation. Many times, listening to music becomes more of a burden than pleasure due to many reasons: the listener could not understand the lyrics well, a person liking a song in some other language or just wants to know the lyrics so as to enjoy it well or sing along. This project aims to tackle these issues.

We created a Lyrics Search Application that would show the lyrics of any song that a user wants to hear. The songs can be of any language, from any country, can be new or very old, in any case, our product comes handy. It has a very simple and elegant interface and very easy navigation to make sure that even if someone is not very familiar with the technology they can still use it comfortably and make the best use of it.

We will also present a list of top 10 songs globally and it would be updated regularly. It would help people add new songs to their playlists and also keep people updated with current music trends. We take our user's privacy very seriously and hence we will have a login/sign-up page for the users so that only they can sign in using their ID and password.

b. Scope of the project

- ❖ Our platform aims at helping listeners find the lyrics to their music.
- ❖ We aim at helping everyone stay updated with the latest trends related to music.
- ❖ The product will help people filter songs based on factors like explicit lyrics, date of release which would save people's time while deciding songs to add to the playlist.
- ❖ We aim at providing a product that is very simple to use so that we get a very wide user base across all age groups and nationalities.

c. Relevant background information (if available, needed to understand the project)

The Lyrics Search Application is used in finding the lyrics of the desired applications. The stakeholders of our project are the developers, designers, API providers and users. API providers will make sure that lyrics are in place and have the licensed version of lyrics that will be authentic.

So, the users can use this application without second thoughts.

3. Perspectives

a. Who will use the system?

The stakeholders of our project are the developers, designers, API providers and users. API providers will make sure that music is updated on a regular basis and developers integrate it with the system so that users can have a hassle-free experience. Regardless, any of the stakeholders can use the system and music is not limited to anyone. Our product works on both PC/laptops and mobile phones so it won't be a problem either.

b. Who can provide input about the system?

Any of the stakeholders can provide input to the system. Each user is supposed to have their own ID password to enter the system. After that, if they do not want to listen to a song that is in the top 10, they can input the name of the song in the search bar and look for its lyrics and related information.

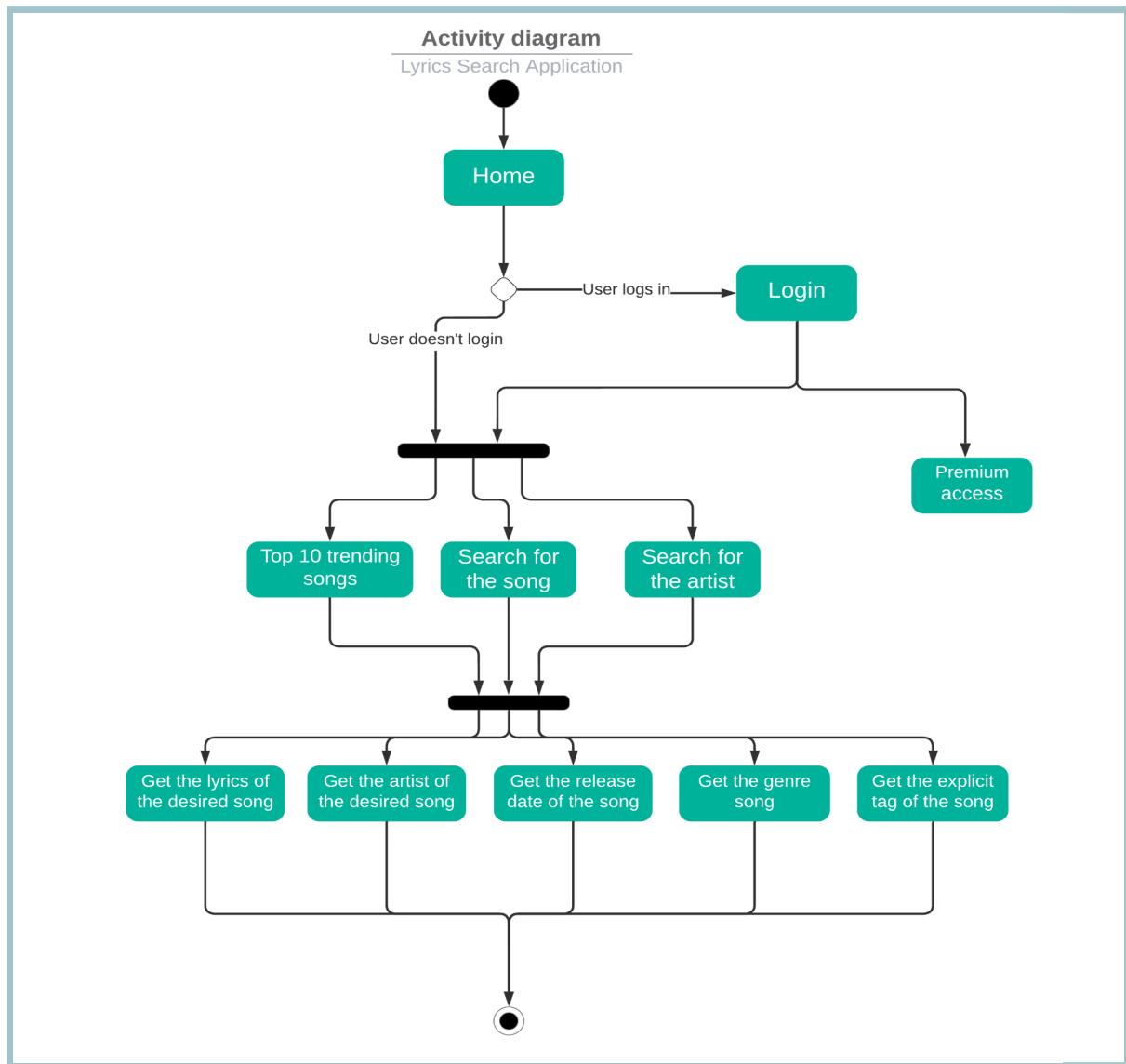## 4. Project Objectives

a. Business rules for your system

The business rules for the system are as identified below:

- ❖ The lyrics should not have copyright issues.
- ❖ There shouldn't be any licensing issues while handling any song's lyrics.
- ❖ Time taken by the application should be minimal and it should be scalable in the paid version.
- ❖ Credits due must be given to the writers of the songs.

b. System information and/or diagrams(mainly UML Use Case, class, and interaction models)

Activity diagram
Lyrics Search Application

Home

User logs in → Login

User doesn't login

Premium access

Top 10 trending songs   Search for the song   Search for the artist

Get the lyrics of the desired song   Get the artist of the desired song   Get the release date of the song   Get the genre song   Get the explicit tag of the song

Use case diagram

Lyrics Search Application

System

Login

Manage profile

Extends

Musixmatch API

See top 10 trending songs

User

Search for song lyrics

Get genre

Extends

Get release date

Extends

Get explicit tag

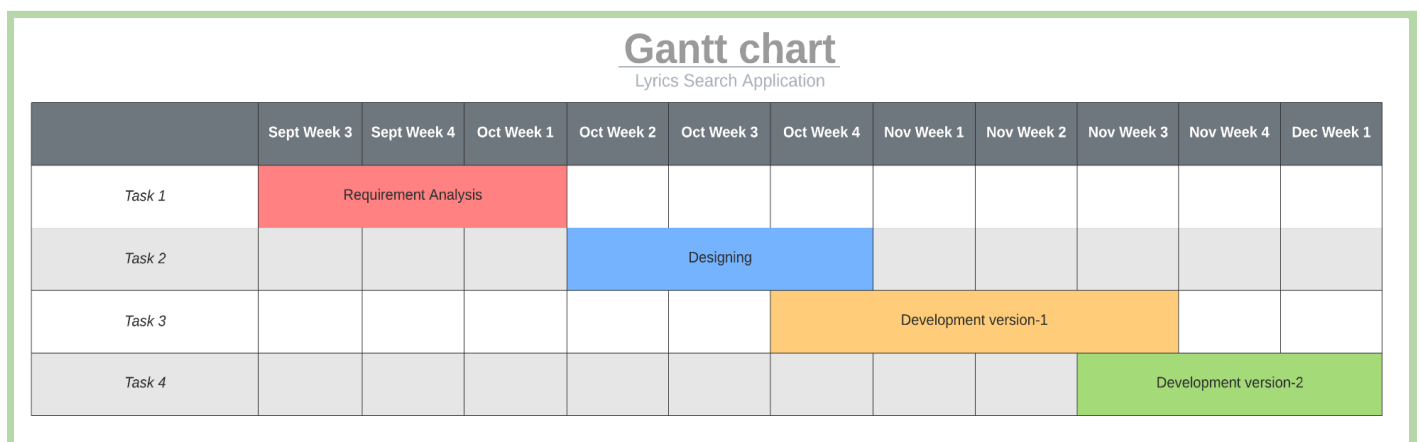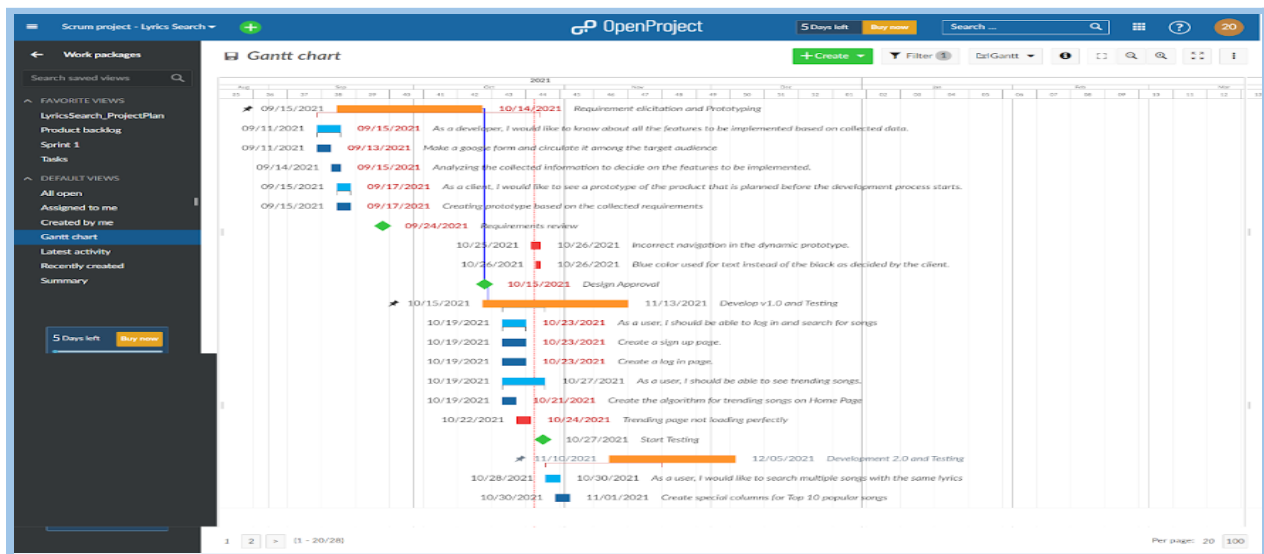*Extends*

Get artist names

Extends
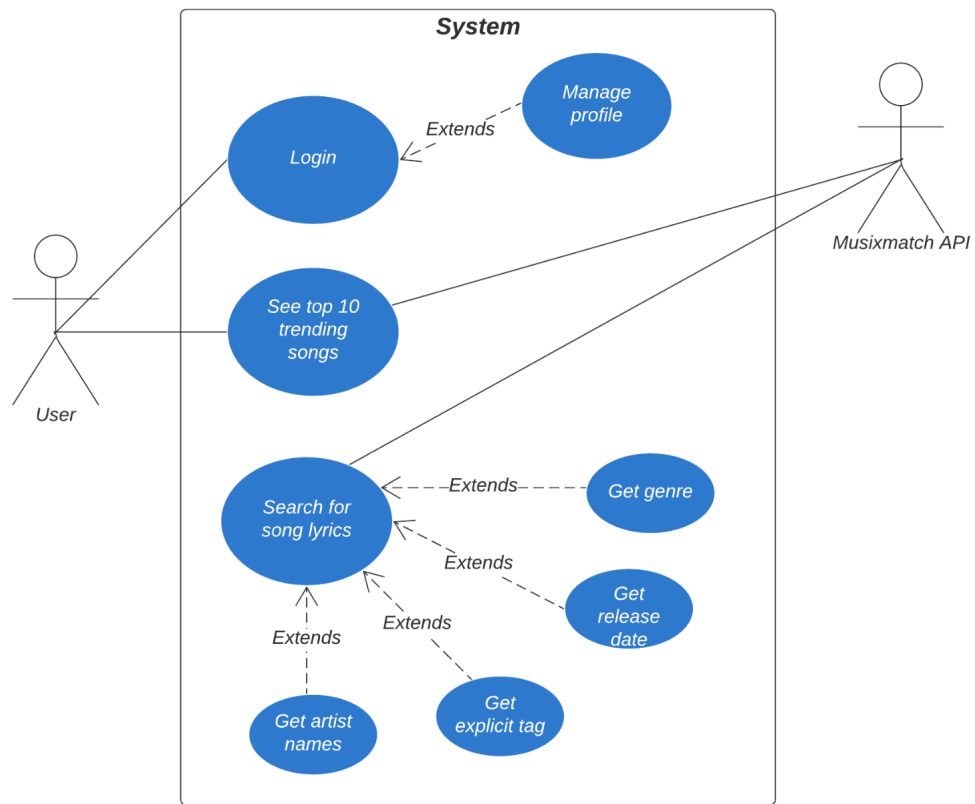
c. **Assumptions and dependencies, including time and effort estimates, details on tasks done by specific team members.**

ACTIVITY	TASKS	ESTIMATED TIMES	ESTIMATED DURATIONS	DONE BY
PLANNING	Deciding initial features of the product. (24 hrs)	60 hrs	8 days 14 Sept - 21 Sept	All
	Deciding budget. (12 hrs)			Margi
	Dividing roles among the team members. (12 hrs)			Margi
	Presented all the information to the client. (12 hrs)			Tejaswa
REQUIREMENT GATHERING AND ANALYSIS	Making and circulating a google form. (12 hrs)	96 hrs	24 days 22 Sept - 18 Oct (Mid-semester exam break included)	Rahul
	Taking interviews of prospective users. (48 hrs)			Margi
	Analyze data and product results from it. (24 hrs)			Tejaswa
	Feasibility study of collected requirements done by developers. (6 hrs)			All
	Developers meeting and decide tech stack based on collected requirements. (6 hrs)			All
DESIGNING AND PROTOTYPING	Making a prototype based on the requirements. (45 hrs)	61 hrs	12 days 18 Oct - 30 Oct	Tejaswa
	Getting approval from the client. (6 hrs)			Margi

	Testing the prototype and making changes before developers refer to it. (6 hrs)			Rahul
	Making the prototype dynamic. (4 hrs)			Tejaswa
IMPLEMENTATION	Finding an appropriate API for the product. (24 hrs)	188 hrs	41 days 1 Nov - 11 Dec	All
	Making the sign-up/sign-in page. (24 hrs)			Margi
	Making the Home page with top 10 lyrics using front-end tools. (50 hrs)			Margi
	Making the lyrics page using front-end tools. (48 hrs)			Tejaswa
	Link the lyrics page and home page. (12 hrs)			Rahul
	Integrating API to retrieve all the required information. (18 hrs)			Margi
	Add explicit (yes/no), release date and other information on the lyrics page. (12 hrs)			Tejaswa

Task	Dependency	Type of predecessor	Dependency type
Deciding the budget of the project.	Deciding initial features of the product.	Start-to-Finish	Softgoal dependency
Presenting all the information to the client	Deciding the budget of the project.	Finish-to-Start	Task dependency
Analyze data and product results from it	Making and circulating a google form.	Finish-to-Start	Task dependency
Analyze data and product results from it	Taking interviews of prospective users.	Finish-to-Start	Task dependency
Feasibility study of collected requirements done by developers.	Analyze data and product results from it.	Finish-to Finish	Task dependency
Developers meeting and deciding tech stack based on collected requirements.	Feasibility study of collected requirements done by developers.	Finish-to Finish	Task dependency
Making a prototype based on the requirements.	Analyze data and product results from it.	Finish-to-Start	Task dependency
Making the Home page with top 10 lyrics using front-end tools.	Finding an appropriate API for the product.	Finish-to Finish	Task dependency
Making the lyrics page using front-end tools.	Finding an appropriate API for the product.	Finish-to Finish	Task dependency
Integrating API in the backend to retrieve the top 10 songs and search for them.	Finding an appropriate API for the product.	Finish-to Finish	Task dependency

d. Project plan based on 4(c) using Gantt charts

Gantt chart
Lyrics Search Application

	Sept Week 3	Sept Week 4	Oct Week 1	Oct Week 2	Oct Week 3	Oct Week 4	Nov Week 1	Nov Week 2	Nov Week 3	Nov Week 4	Dec Week 1
Task 1	Requirement Analysis										
Task 2				Designing							
Task 3						Development version-1					
Task 4										Development version-2	

e. Design and implementation constraints

Below are the design and implementation constraints that are identified in the project:

❖ Provide a safe secure login option along with the usual email and password (via third-party applications like Google account sign-in).

❖ The Musixmatch API is paid and hence the version we currently use is the

free/demo version.

❖   Store the data for a personalized playlist of songs and favorites.

5. **Risks associated with your project and its mitigation strategies**

RISK	MITIGATION STRATEGY
Online security breach: Hackers may have access to sensitive information of a user like their ID/password if proper security measures are not taken	This risk can be handled by creating a firewall, i.e., by adding layers of network security, we can make the system more secure
Breach of intellectual property: If IP and other information related to the software/institute is not protected, then one must face dire consequences.	This breach can be stalled by enforcing strong copyright rules.
API will stop responding as we have only 100 calls available on a weekly basis. It can cause severe losses to the company.	This risk can be handled by buying an API with unlimited calls even though it may be expensive but it can save our customer base.

6. UI/UX design of the complete system

Figma Design

LYRIC FINDER

GO BACK

SEVEN BY TAYLOR SWIFT

Please picture me
In the trees
I hit my peak at seven feet
In the swing
Over the creek
I was too scared to jump in
But I, I was high in the sky
With Pennsylvania under me
Are there still beautiful things?
Sweet tea in the summer
Cross your heart, won't tell no other
And though I can't recall your face
I still got love for you
Your braids like a pattern
Love you to the moon and to Saturn
Passed down like folk songs
The love lasts so long
And I've been meaning to tell you
I think your house is haunted
Your dad is always mad and that must be why
And I think you should come live with
Me and we can be pirates
Then you won't have to cry
Or hide in the closet
And just like a folk song
Our love will be passed on
Please picture me
In the weeds
Before I learned civility
I used to scream ferociously
Any time I wanted
I, I
Sweet tea in the summer
Cross my heart, won't tell no other
And though I can't recall your face
I still got love for you
Pack your dolls and a sweater
We'll move to India forever
Passed down like folk songs
Our love lasts so long

ALBUM : FOKLORE
GENRE: FOLK MUSIC
RELEASE DATE: 24 july, 2020
EXPLICIT: NO

The Home Page

🎵 Search For A Song

Get the lyrics for any song

Song title...

Get Track Lyrics

Search Results

Easy On Me
▶ **Artists**: Adele
◉ **Album**: 30

> View Lyrics

Heat Waves
▶ **Artists**: Glass Animals
◉ **Album**: Dreamland

> View Lyrics

All I Want for Christmas Is You
▶ **Artists**: Mariah Carey
◉ **Album**: All I Want For Christmas Is You

> View Lyrics

Buy Dirt
▶ **Artists**: Jordan Davis feat. Luke Bryan
◉ **Album**: Buy Dirt

> View Lyrics

Santa Tell Me
▶ **Artists**: Ariana Grande
◉ **Album**: Santa Tell Me - Single

> View Lyrics

Shivers
▶ **Artists**: Ed Sheeran
◉ **Album**: =

> View Lyrics

Merry Christmas
▶ **Artists**: Ed Sheeran feat. Elton John
◉ **Album**: Merry Christmas - Single

> View Lyrics

Santa, Can't You Hear Me
▶ **Artists**: Kelly Clarkson feat. Ariana Grande
◉ **Album**: Santa, Can't You Hear Me

> View Lyrics

I Can Feel It
▶ **Artists**: Sickick
◉ **Album**: I Can Feel It - Single

> View Lyrics

Rockin' Around the Christmas Tree
▶ **Artists**: Brenda Lee
◉ **Album**: Golden Star Collection

> View Lyrics

The Lyrics Page

Go Back

All I Want for Christmas Is You by Mariah Carey

I don't want a lot for Christmas There is just one thing I need I don't care about the presents underneath the Christmas tree I just want you for my own More than you could ever know Make my wish come true All I want for Christmas is you Yeah I don't want a lot for Christmas There is just one thing I need (and I) Don't care about the presents underneath the Christmas tree I don't need to hang my stocking there upon the fireplace Santa Claus won't make me happy with a toy on Christmas Day I just want you for my own More than you could ever know Make my wish come true ... ******* This Lyrics is NOT for Commercial use ******* (1409622241779)

Album ID: 27762682

Song Genre: Christmas

Explicit Words: No

Release Date: 12/21/2021

Search for a song lyrics

🎵 Search For A Song

Get the lyrics for any song

tere sang

Get Track Lyrics

Search Results

Tere Sang
▶ **Artists**: Sonu Nigam feat. Jaspinder Narula
◎ **Album**: Apne (Original Motion Picture Soundtrack)

> View Lyrics

Sang Tere (Live)
▶ **Artists**: Bridge Music feat. Amit Kamble, Nehemiah Kulothungan & Rachel Francis
◎ **Album**: Sang Tere

> View Lyrics

Tere Sang Yaara
▶ **Artists**: Atif Aslam
◎ **Album**: Atif Aslam

> View Lyrics

Tere Sang Yaara - Remix
▶ **Artists**: Atif Aslam
◎ **Album**: Tere Sang Yaara - Remix (From "Rustom")

> View Lyrics

Tere Sang Yaara (From "Rustom")
▶ **Artists**: Atif Aslam
◎ **Album**: Tere Sang Yaara (From "Rustom")

> View Lyrics

Sang Hoon Tere
▶ **Artists**: Pritam feat. Nikhil D'Souza
◎ **Album**: Jannat 2 (Original Motion Picture Soundtrack)

> View Lyrics

Tere Sang Yaara Denny The Tropical RnB Mix
▶ **Artists**: Arko feat. Denny & Atif Aslam
◎ **Album**: Tere Sang Yaara Denny The Tropical RnB Mix

> View Lyrics

Tere Sang Pyar Main
▶ **Artists**: Lata Mangeshkar
◎ **Album**: The Legend Forever - Lata Mangeshkar - Vol.2

> View Lyrics

Tere Sang Pyar Main Nahin Torna - Part 1 - Nagin / Soundtrack Version
▶ **Artists**: Lata Mangeshkar feat. Mahendra Kapoor
◎ **Album**: Nagin (OST)

> View Lyrics

Tere Sang Pyar Main Nahin Torna (From "Nagin")
▶ **Artists**: Lata Mangeshkar
◎ **Album**: Magical Moments

> View Lyrics

Get song lyrics of desired songs

Lyrics Search Application

Go Back

Tere Sang Yaara by Atif Aslam

तेरे संग यारा खुश रंग बहारा तू रात दीवानी मैं ज़र्द सितारा ओ करम खुदाया है तुझे मुझसे मिलाया है तुझपे मरके ही तो मुझे जीना आया है ओ तेरे संग यारा ख़ुश रंग बहारा तू रात दीवानी मैं ज़र्द सितारा ओ तेरे संग यारा ख़ुश रंग बहारा में तेरा हो जाऊं जो तू करदे ईशारा कहीं किसी भी गली में जाऊं मैं तेरी खुशबू से टकराऊं में ... ******* This Lyrics is NOT for Commercial use ******* (1409622241779)

Album ID: 31932922

Song Genre: NO GENRE AVAILABLE

Explicit Words: No

Release Date: 12/21/2021

Search for songs by an artist

🎵 Search For A Song

Get the lyrics for any song

arijit singh

Get Track Lyrics

Search Results

Main Hoon Deewana Tera
▶ **Artists**: Meet Bros Anjjan feat. Arijit Singh
◉ **Album**: Bollywood Party With Meet Bros

> View Lyrics

Chal Ghar Chalen (feat. Arijit Singh)
▶ **Artists**: Mithoon
◉ **Album**: Malang - Unleash the Madness (Original Motion Picture Soundtrack)

> View Lyrics

Bekhayali (Arijit Singh Version) [From "Kabir Singh"]
▶ **Artists**: Arijit Singh feat. Sachet-Parampara, Shahid Kapoor & Kiara Advani
◉ **Album**: Bekhayali (Arijit Singh Version) [From "Kabir Singh"]

> View Lyrics

Bekhayali (Arijit Singh Version) Remix
▶ **Artists**: Arijit Singh feat. Sachet-Parampara & Dj Chetas
◉ **Album**: Bekhayali (Arijit Singh Version) Remix

> View Lyrics

Woh Din (Arijit Singh Version) [From "Chhichhore"]
▶ **Artists**: Arijit Singh feat. Pritam
◉ **Album**: Woh Din (Arijit Singh Version) [From "Chhichhore"] - Single

> View Lyrics

Salamat (From "Sarbjit") (feat. Arijit Singh, Tulsi Kumar)
▶ **Artists**: Amaal Mallik feat. Arijit Singh & Tulsi Kumar
◉ **Album**: Mesmeric Vocalzz - Tulsi Kumar

> View Lyrics

Darkhaast (From "Shivaay") (feat. Arijit Singh, Sunidhi Chauhan)
▶ **Artists**: Sunidhi Chauhan
◉ **Album**: Hits of Sunidhi Chauhan

> View Lyrics

Zinda Dili (feat. Arijit Singh)
▶ **Artists**: Salim–Sulaiman feat. Arijit Singh
◉ **Album**: Bhoomi 2020

> View Lyrics

Darkhaast (From "Shivaay") (feat. Sunidhi Chauhan)
▶ **Artists**: Arijit Singh
◉ **Album**: Loveholic Arijit Singh

> View Lyrics

Ki Honda Pyaar (Arijit Singh Version)
▶ **Artists**: Arijit Singh
◉ **Album**: Jabariya Jodi (Original Motion Picture Soundtrack)

> View Lyrics

7. System architecture model (or Implementation model)
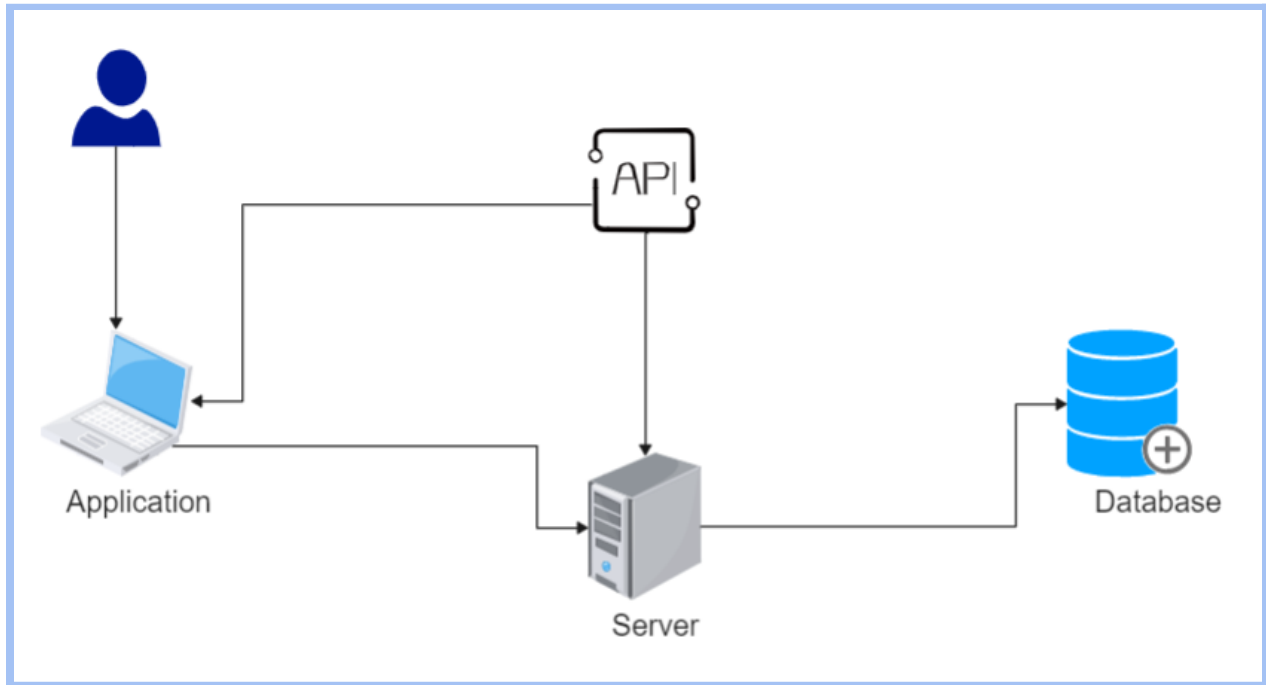
8. Implementation Technologies including front-end and back-end decisions

The following are the front-end technologies used for the project:

1. Context API: The React Context API is a way for a React app to effectively produce global variables that can be passed around.
2. Bootstrap: It is an HTML, CSS and JavaScript framework used for simplification of informative web pages and maintains consistency across tools.
3. FontAwesome: It is a front-end framework based on CSS which provides a toolkit for fonts and icons for the application.
4. React.js: The most important tool in this project is a library written in JavaScript and used front-end development to build good user interfaces for the users.
5. HTML and JavaScript are the two languages used for the development of this application.

The following are the back-end technologies used for this project:

1. Musixmatch API: We used the API of a popular lyrics database system and it is a robust service that permits you to search and retrieve lyrics in a simple manner.

9. **Details justifying how various team members contributed and their extent of contribution.**

Name - Id	Contribution in implementation	Contribution in documentation
Margi Hingrajia - 201801014	- Requirement analysis techniques - front-end development source code handling - back-end part for the database of the Lyrics Search App - Integrated the back-end with the front-end - Helping in API selection	- Defined the business rules. - Created all the diagrams for the projects including - Gantt Chart - Activity diagram - Use case diagram - System architecture diagram - Written down the design and implementation constraints.
Tejaswa Alia - 201801054	- Requirement analysis techniques like interviews - Designing of the	- Project background information: - Purpose - Scope

	prototype. ● Implementing the CSS of the project ● Helping in finding the API.	○ Relevant information for understanding ● Perspectives of the project ● UI/UX design diagrams ● Risk analysis and mitigation of the same.
Rahul Khatri - 201801055	● Requirement analysis techniques ● Back-end part handling ● API management and learnings	● Describing all the different technologies that we have used in detail. ● Future enhancements that are possible in the project. ● Open or unresolved issues in the project currently.

10. Future enhancements to the system.

There are a number of improvements that can be made to the application. These enhancements include:

1. Improvements on the lyrics displayed in terms of fonts and web page design. Bootstrap can be used much more extensively to decorate the user interface and give the feel of an authentic website.
2. The home page can contain much more content, considering the Musixmatch API provides a variety of functionality that can be implemented, if necessary.
3. The user login process can be merged more smoothly and efficiently.
4. Purchase of unlimited access to the Musixmatch API can display the entire lyrics of the song, enhancing user experience.

5. There can be a feature to store user preferences and recommend related songs on the basis of this history of preferences.
6. A new feature can be added that directs the user to a website such as Spotify, Amazon Music, YouTube Music or gaana.com where they can listen to the song that they searched for.

11. Open, unresolved Issues (if any)

a. The login feature allows the users to log in using a unique identification number and password. This feature is not implemented in the demo version of the application, that is, the one that uses limited access to the Musixmatch API.

   Other features are all in perfect working condition.

12. GitHub link

https://github.com/margihingrajia/lyrics-search-system