

Feasibility Report

A) Introduction or Executive Summary

1) Stakeholders:

- **Customers:** Customers will play a major role in determining the requirements and the scope of the project.
- **Project Managers:** The overall workflow of the project will be managed by the project managers and thus have a strong voice in the decision-making of the project.
- **Development Team:** The people who will be developing the project will create a major impact on the overall structure of the project. They will directly impact the outcome of the project.

2) Business Profile:

- **Aim:** We aim to provide a unique and interactive way for users to discover new music by exposing them to different genres, artists, and songs they may not have found otherwise.
- **Industry Analysis:** The music streaming industry is a rapidly growing market, with an estimated worth of \$22 billion by 2023. The industry is driven by the increasing popularity of streaming services, the rise of mobile devices, and the increasing number of people looking for interactive and social ways to discover new music.
- **Target Market:** Our target market is music lovers of all ages, but primarily 18-35 years old, who are looking for an interactive and unique way to discover new music. The website appeals to users who are tired of listening to the same music recommended by their friends or streaming services and want to discover new songs through a more personal and interactive experience.
- **Competitive Analysis:** SoundMingle's main competitors are popular music streaming services such as Spotify and Apple Music. However, SoundMingle differentiates itself by providing an interactive and social platform for discovering new music through Music Rooms, which is not offered by these competitors.

B) Project Scope

In a world where tens of thousands of songs are released every day, it's hard to keep track of your recommendations and pick what songs to listen to next. People get confused about which artists to listen to, or where to discover underrated music artists. These kinds of recommendations generally come from other people, who come across these artists by pure chance, and our platform is designed to make these odds better.

The idea behind the project is to match users of our platform randomly based on their choice of genres and allow them to recommend songs to each other.

Scope:

1. User registration and login: Users will be able to create an account on the platform and log in to access the features.
2. Music matching: Users will be matched with other users based on their music preferences and listening habits.
3. Song recommendations: Users will be able to recommend songs to each other, which will be displayed in a dedicated section of the user's profile.
4. Music streaming: Users will be able to listen to the recommended songs directly on the platform.
5. Artist discovery: The platform will feature new and underrated artists, allowing users to discover new music they may not have otherwise found.
6. User feedback: Users will be able to rate the songs they listen to and provide feedback on the platform.
7. Music Rooms: The platform will also feature music personalized(private) as well as random rooms in which people can join and pitch in their music recommendations.
8. Live Streaming: Authorized and recognized music artists can also hold live events on the platform to grow and gain popularity.
9. Admin panel: Administrators will have the ability to manage the platform and its content, such as removing inappropriate content and banning users.

C) Methodologies and tools used for the feasibility Study:

We used a brainstorming method for the feasibility study. All team members put in their ideas regarding the topic which is the music discovery platform. Other members added their opinions and thoughts to a small idea given by a member which resulted in a larger idea. Before accepting any idea we also analyzed various types of feasibility like technical feasibility, economic feasibility, operational feasibility, etc.

Technical feasibility:

Our project is a MERN project so we had a discussion on what technical resources we need like:

1. What backend do we need?
2. Which API(Application Programming Interface) do we need to get data of various songs?
3. How will the front end be?

We decided to get data from APIs of well-known music platforms such as Spotify, Hungama, Ganna, etc.

We also discussed the maintenance and cost of the server and how the web application will generate revenue in the future when it will have many users.

Economic feasibility:

We discussed the benefits of this platform over the cost. People often tend to choose such platforms where they get more benefits and have to pay less money. In the initial stages, the platform will be free of cost to all users so that they can enjoy listening to their favorite music.

Legal Feasibility:

We also had a discussion on certifications, licenses, and copyright.

We studied various social issues like the privacy of users, accountability, etc.

Time or Scheduling feasibility:

After discussing various aspects of our project we estimated a timespan of 16 weeks.

D) Observations and Findings from the Feasibility Study:

1) Technical Feasibility:

A technical feasibility study gives a report on whether there exists correct required resources and technologies which will be used for project development.

The major observations from the technical feasibility study for our project are:

A Platform like the one we are developing currently does not exist but it can be implemented by integrating existing APIs and data from various platforms.

1. a) We would be using the MERN stack to develop our website.
2. b) The API we would be using is from the major music app, i.e., Spotify.

Major Challenge in technical aspect:

Our website plans to use Spotify's API. Spotify is a paid service so we are unsure if the integration we plan to execute will be possible or not.

- To resolve the above-mentioned challenge our team is working on exploring various other platforms that we can use to implement the given idea.

2) Economic Feasibility:

1. a) Our current revenue generation idea is through advertisements that would be played as soon as any person tries to enter the room. This revenue-generating idea is similar to that of YouTube.
2. b) Next source of revenue would be from the musicians who would like to hold live sessions on our platform where they would be playing their own songs and albums.

This would help them grow as artists and promote their songs to a greater audience.

3) Operational feasibility:

Operational feasibility is dependent on human resources available for the project and involves projecting whether the system will be used if it is developed and implemented.

The project is operationally feasible as we as a team of 5 with all the current technology and skills available can build the website in a time span of 16 weeks.

Once built and implemented it is sure to be used by many people as no such platform currently exists and a website like this where you can explore new music and create playlists in real-time would be a great experience for the end users and music lovers specifically.

This will also help small and growing music artists as they can promote their music by recommending it to others and will help them get unbiased feedback on their music.

4) Legal Feasibility:

1. a) As we are just letting the members play music with the help of music platforms already existing, there is not much legalization required as the music or songs on the platforms we plan to use are already authorized and legalized.
2. b) Only certified and verified musicians would have the access to go live on the platform. So there will be no issues revolving around any kind of obscene or profane content going live online.

5) Schedule Feasibility:

According to the current task understanding and the various elements we plan to inculcate in our project, the feasible duration to be able to complete the project in time and with testing done and bugs resolved is 16 weeks (4 months).

E) Challenges and assumptions considered for the project study:

The Major challenge will be faced in the back end side since we have to provide the user with a wide spectrum of music from different genres. One of the main intentions behind developing this software is to make people aware of underrated and unheard music artists and to help them grow. Also, we are making an assumption that we can play the music on request using Spotify music Web Playback SDK or Embeds. If there is a limitation from Spotify for such use, we will figure out any similar music platform for embedding the Music Playback.

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