SuggestMe Music

ENSE 374 TEAM DATA:REPORT

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INITIAL PROJECT IDEA AND REASON BEHIND SuggestMe Music

As a group, we planned to create a web-based platform which will help users/customers to find artists (specifically with a similar Genre, Artist) according to their personal interests and preference rather than just their listening history.

Why are we creating this?

As most music lovers are, finding new music is always at the back of your mind. However, the biggest problem with streaming platforms' recommendation algorithm is it never asks you if you liked the recommendations and it keeps giving you recommendations based on all the songs you listened to. A better situation would be getting recommendations only on what you've liked, not just all the music you've listened to.

What did we want to create?

As a first Minimum Viable Product(MVP) we decided to make a functional website that gives users, artist recommendations based on other artists they have searched for, or liked on our website. For a second MVP, we decided to attempt to make a fully functional website that gives user music recommendations based on their account liked history and searches. This will be a fully functional website that will store users' data.

How (solution)

The creation process:

PROJECT DOCUMENTATION

After the decision-making process, then the team decided to attempt to create a solution to this problem using various documentation tools including

- Business Case- This document was used to explore the business opportunity, options and cost/ benefit analysis
- Project Charter- This document showcases the goals, objectives, milestones and risks involved in this project
- Project Requirements Document- This shows the functional and technical requirements of the solution
- Project Roles and Responsibilities-This document just showed the roles and titles for every team member
- Project Scope Statement- This document explores all project deliverables and descriptions
- Stakeholder Register-This document showcased all the stakeholders for this project and their level of interest and support

- RACI chart- This document explores the people involved in a project activity including people Responsible, Accountable, Consulted, or Informed for the corresponding task, milestone, or decision.

From the project roles and responsibilities document, our team's roles were defined as:
Amandip Padda -Back-end developer
Mubarak Abiola Keshiro- Front-end developer
Swarnim Kumar- Quality assurance and supervisor
In our business case document, we looked at various options of the execution of our project, the following is excerpted from this document

Option 1: The yearly financial cost to own a domain name and host the website is approximately 60 dollars. It will take approximately 3 months for a team of 3 to build a functioning website. The risks of having it built internally are lack of proper experience, lack of proper technology and delay in the project due to time management. The lack of proper experience and technology can lead to reduction in quality. The benefits of this option are that it is much cheaper to build rather than hire and it can generate continuous ad revenue.

Option 2: The financial cost to hire a 3rd party vendor to build a website is about 239 dollars and the yearly cost to own a domain name and host the website is approximately 60 dollars. The assumed overall time to build the product is about 2 months and to test the product is about 1 month (Assumption is made due to uncontrolled variable: 3rd party vendor). The risks of having it built externally are delay in execution of the testing phase, potential user data leakage and possible business idea theft. The benefits of this option are improved quality due to experienced developers and it also can generate continuous ad revenue. This option could also increase utility because it could provide a better user experience compared to option 1.

Option 3: This could potentially have no financial cost because we don't have to build the idea. The financial cost can be the traveling cost to present the idea for sale. The time is a definite cost and it could be infinite because there is no guarantee of a sale. The risk of trying to sell is that it can be stolen by a team that rejected our proposal, another risk is the potential loss of increased profit if the tool becomes more successful after sale. built internally are lack of proper experience, lack of proper technology and delay in the project due to time management. The lack of proper experience and technology can lead to a reduction in quality. The benefits of this option are that it is much cheaper to build rather than hire and it can generate continuous ad revenue. The benefit
of selling the idea is a guaranteed one-time profit once sold and no need for continuous management of the software.

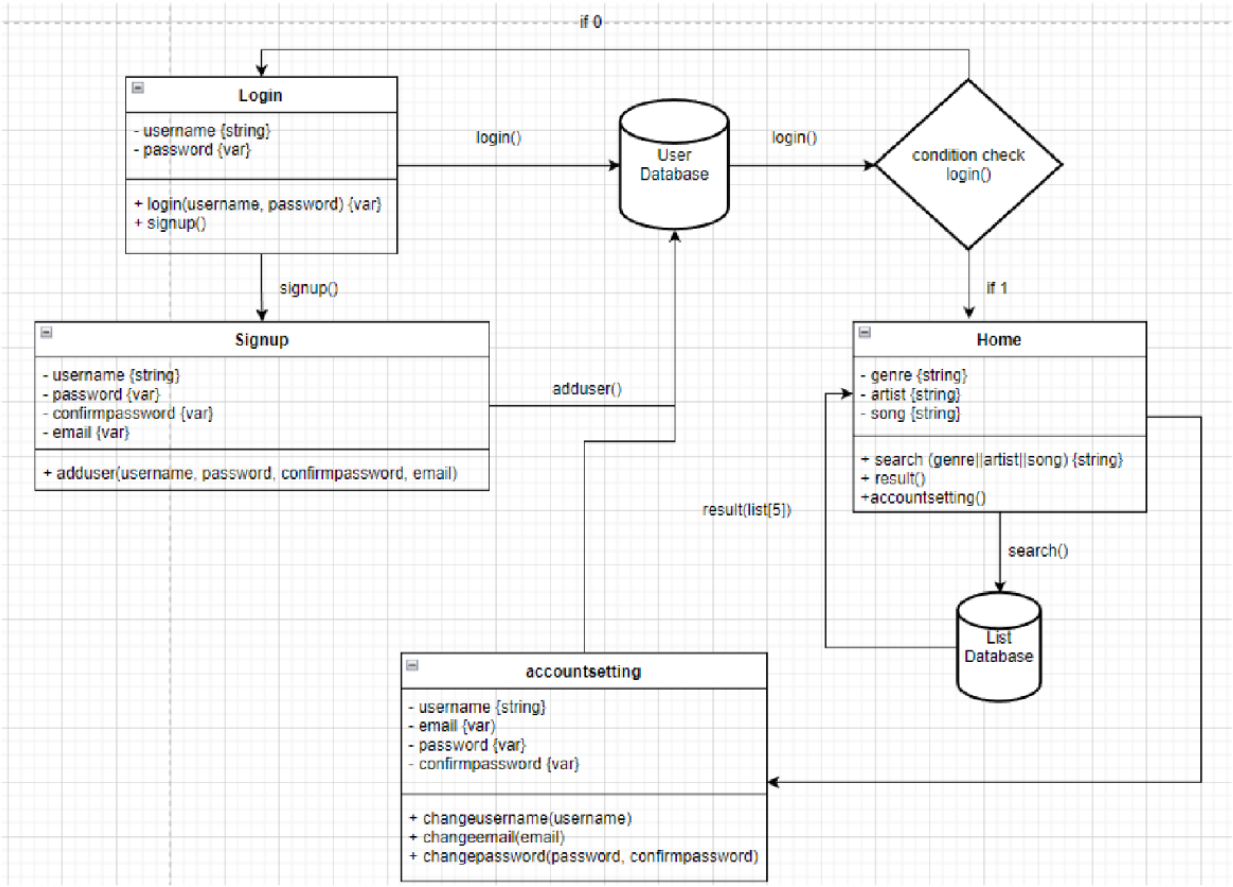
Option 4: This option has no costs, no risks and no benefits.

From our project requirements documents, these were the requirements we thought our project needed for full the second MVP execution:
Functional Requirements
-User account profile for sign up and log in
- Section to search for artists and genres
- User feedback from recommendations
Technical/Performance Requirements
- Server to host website(Hosting service)
- Visual studio code to build website or website builder
- Web development expertise
- Time management skills
- Algorithm with the ability to give accurate output based on input.

Here is our RACI chart below:

SuggestMe Music	Abiola	Amandip	Swarnim
Create working webpages	R	I	C
Ensure search function outputs similar artist	C	R	I
Ensure liked and disliked sections are functioning	R	A	C
Check website is fully functioning	I	I	R

PROJECT ARCHITECTURE
The next step of our execution phase was to create envisions prototypes and diagrams that display how the logic of our web application is to work. We used Unified Modelling Language(UML) -a set of diagrams, developed to help developers specify, visualize, construct, and document the artifacts of software systems.

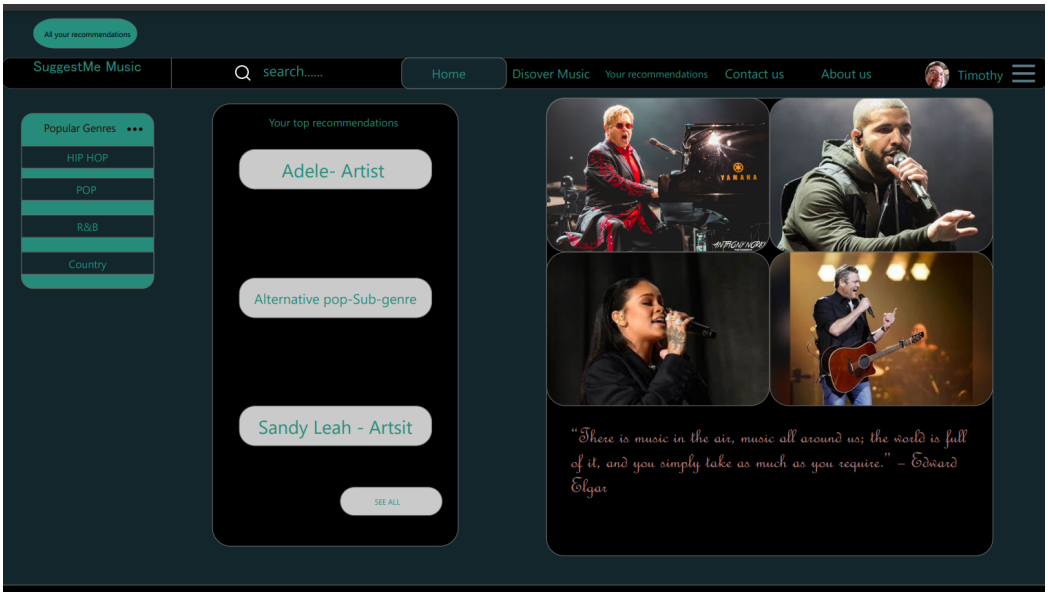


UML Diagram

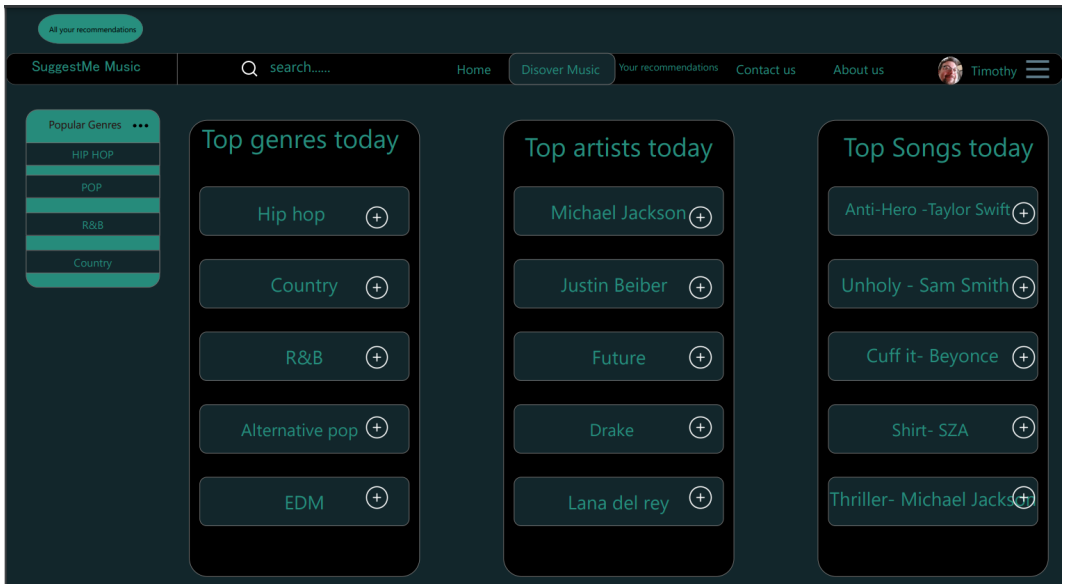
In this UML diagram, the idea is that the user will log in which would check the user's database for credentials. If the credentials are true then the user will be able to access the home page. If the credentials are false, the user will get an error message that would push them to sign up. The user would sign up and get access to the home page. The user can search for an artist and the algorithm would show related artists. Users can access account settings where they can change information.

Prototype

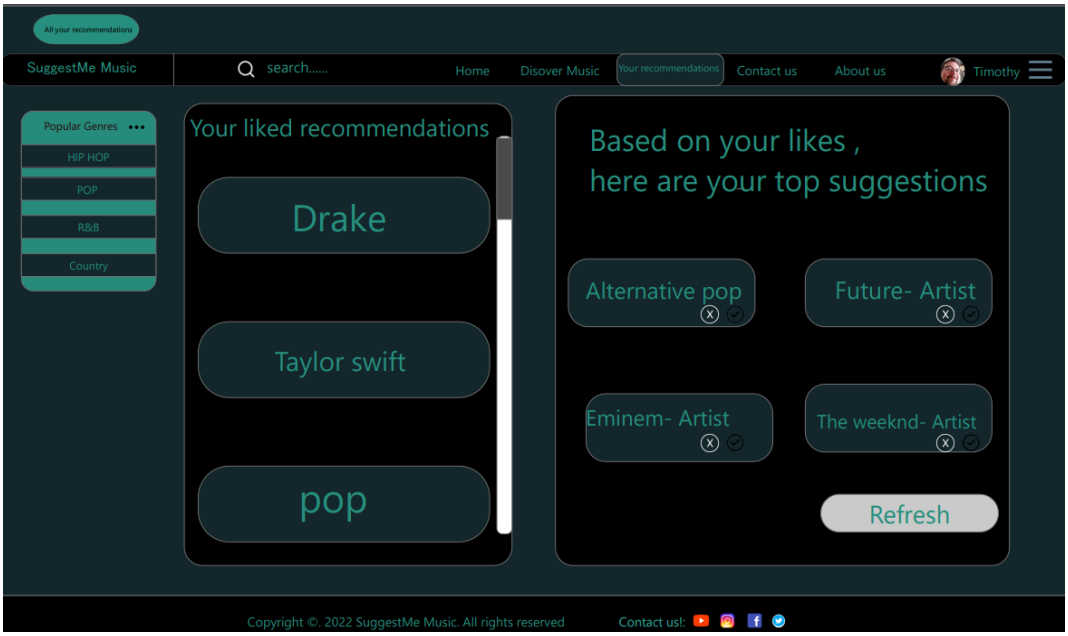
For our prototype, we had various pages like one that showed the user's top recommendations, a page to discover artists(which would display the most searched artists based on website traffic) and a profile storing the user's data. Screenshots of some pages from our prototype are shown below;



Main page



Discover Music

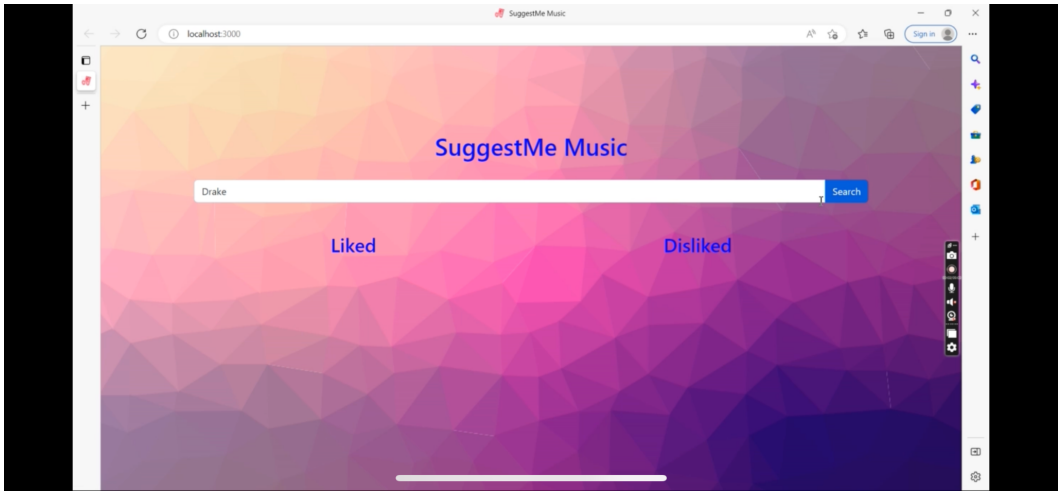


Recommendation

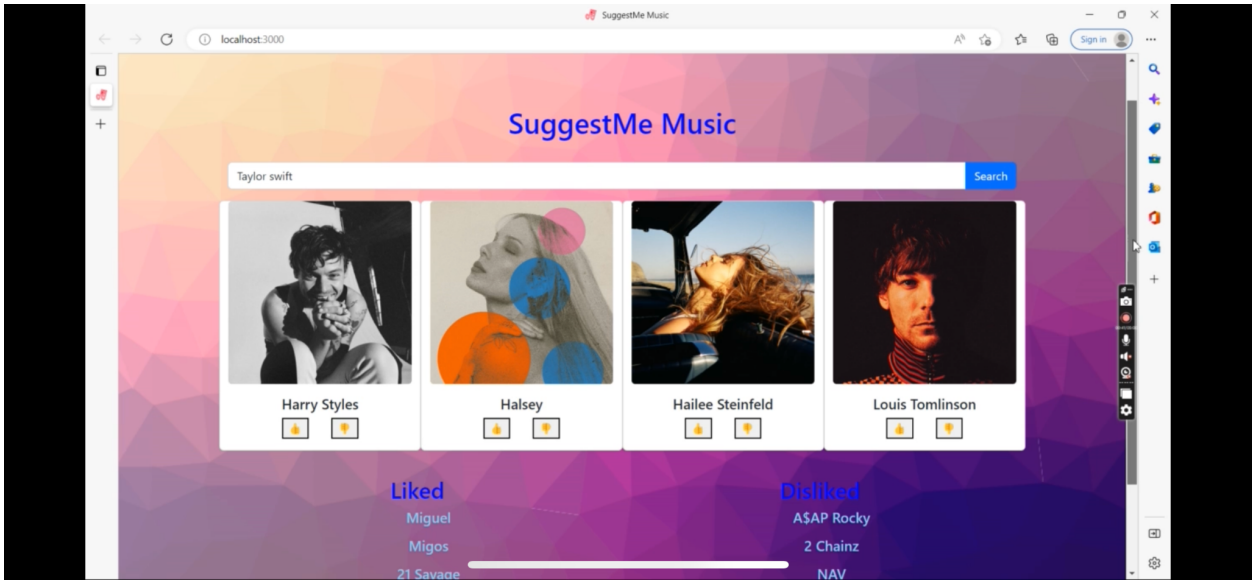
EXECUTION OF FINAL WEB APPLICATION

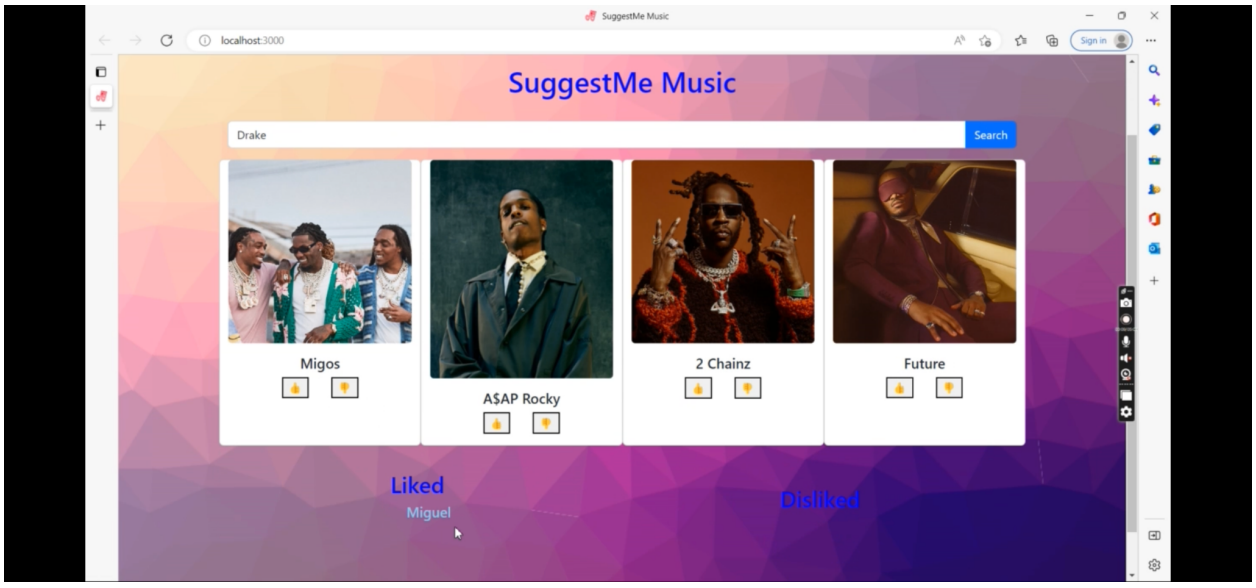
After iterating through various options and methods of execution, we decided to just focus on our first MVP- which lets users search for an artist and they get a couple of similar artists similar to the search input and they can either like or dislike the suggestions. Our web application now lets users input an artist's name and they get results of similar artists, they also get an option to like or dislike any artist suggestion they get. We used Html and React(a javascript library), and we also included an Application Programming Interface(API) from Spotify to get the artist's data.

Here are screenshots of our website:

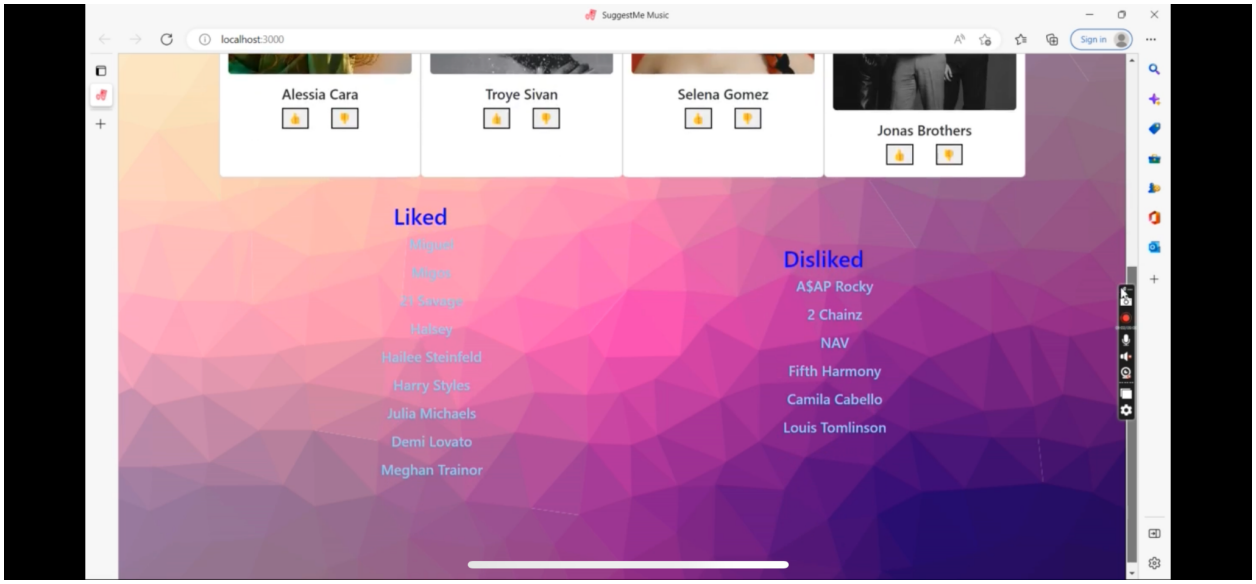


This just shows the landing page, with a search feature, where you can search any artist





These two show how results are displayed that are similar to your search. There is also a like or dislike for each artist.



This screenshot shows how our website displays all your liked and disliked artists.

How our website uses the MVC architecture

The MVC architecture is a design pattern created for developing web applications. Our website uses the Model View Controller- Which can be broken into bits. The user views the website and inputs an artist's name and presses the button. With the press of a button, the controller handles the data and passes it to the model for searching the database. The model searches the database and passes the query back to the controller. The controller then connects with the view and asks to render this specific page, if it's available.

Overall Feeling of the whole team

The whole team is very excited that we got to achieve our MVP as it was very confusing and challenging to achieve.We appreciated the importance of planning before execution, and hope to utilize this process a lot more in the future.