CS 307- Project Backlog
Project name: <u>Harmony</u>

Team Number: 16

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Problem Statement:

With the advent of music streaming through platforms like Spotify and Youtube, the amount of music we consume as a society has drastically increased in the past decades. Furthermore, the internet has allowed people to listen to a variety of music, different from how it used to be when everyone listened to the same radio or TV channels with the same music. Harmony capitalises on this growing trend by incorporating a social aspect to how we experience and share music among our friends along with utilising the daily time-sensitive mechanic that BeReal popularised. We are trying to create a social media platform where people can share songs with their friends, chat with them, check out their own music analytics, and see their friend's music analytics as well.

Background Information:

Background of the Problem

People enjoy sharing things with other people, especially things they care about, and oftentimes music is one of those things that they care about. But in the digital age, most of the ways that have been created to do this are awkward or feel overlooked. This is why have chosen to tackle this problem

Audience

Our target audience is in the age range of 13 to 35 years old. This age range represents a vast majority of the people who engage with social media on a daily basis. Additionally, these demographics also grew up with the advent of music streaming, thus they tend to consume music with a higher frequency than previous generations. Despite this increase in music consumption, it is surprising that no major platform has been created to capitalise on the social aspect of music. It's as if its consumption is still being treated as a solo experience where people don't share their preferences. We seek to remedy this with Harmony.

Similar Applications

There is a similar application that is mildly popular called Kiwi, which is a music social media app. There is also a limited amount of social aspects to Spotify, as you can friend others and see what they are currently listening to. You can also create shared playlists.

Limitations

While other platforms are available for music-related content, we believe that none of them integrates a social aspect as to how we consume music. For example, Spotify shows recently played songs from your friends and recently added the ability to create shared playlists. Nonetheless, these remain minor features in the overall platform and are not core components of how users interact with Spotify. Another limitation of the Spotify app we seek to solve is the analytics that are displayed to the user. As it currently works, Spotify only provides analytics to its users at the end of each year with their famous "Spotify Wrapped". This limits a user's ability to analyze how they consume music, relegating this data to only a once-a-year novelty instead of a year-round feature.

We seek to address these problems with Harmony, adding a more robust social aspect. The two main features we seek to implement are a daily activity event and an analytics page for each user. We hope that these two features will enhance the social aspect and differentiate it from other platforms. On top of adding many other features, like the two listed above, we will build upon these features by creating dynamic joint playlists that are automatically generated according to the top songs listened to recently by the members of the playlist, and allowing users to see the song their friend is currently listening to.

Functional Requirements:

1. As a user, I would like to be able to register for a Harmony account
2. As a user, I would like to be able to sync with my Spotify account
3. As a user, I would like to be able to unsync with my Spotify account
4. As a user, I would like to see an analytics page for the music I listen to
5. As a user, I would like to be able to log in so that I can access my account and communicate publicly with a recognizable name
6. As a user, I would like to be able to edit my name within the profile settings
7. As a user, I would like to be able to change my profile picture within the profile settings (with certain preset images to choose from)
8. As a user, I would like to be able to change my email/password within the profile settings
9. As a user, I would like to be able to use my email to recover my password if I forget it.
10. As a user, I would like to see my friend's profile information such as their profile picture, recent songs, and favorite genres
11. As a user, I would like to see suggestions for people to befriend in Harmony

12. As a user, I would like to be able to access a list of my friends
13. As a user, I would like to be able to see songs that my friends and I listen too
14. As a user, I would like to have an autogenerated playlist based on songs that I and my friends listen to
15. As a user, I would like to be able to send friend requests to other users
16. As a user, I would like to be able to unfriend people or deny friend requests
17. As a user, I would like to be able to block people from seeing my account or contacting me
18. As a user, I would like to receive a notification when someone sends me a friend request
19. As a user, I would like to receive a notification when someone accepts my friend request
20. As a user, I would like to be able to download the app onto my Android phone
21. As a user, I would like to be able to download the app onto my Apple phone
22. As a user, I would like to be able to adjust my notification settings to allow/not allow for certain or all alerts
23. As a user, I would like to be able to receive messages from my friends within the app
24. As a user, I would like to be able to send messages to my friends within the app
25. As a user, I would like to receive notifications when I receive a message
26. As a user, I would like to be able to provide feedback on the app to the developers
27. As a user, I would like to report bugs to the developers in the app
28. As a user, I would like to be able to share a playlist with my friend through the app
29. As a user, I would like to be able to share an album with my friend through the app
30. As a user, I would like to be able to share an artist/band with my friend through the app
31. As a user, I would like to be able to share a song with my friend through the app
32. As a user, I would like to be able to share a snapshot of my profile on other social media platforms
33. As a user, I would like to be able to set my location for time zone purposes
34. As a user, I would like to be able to publicly rate a song
35. As a user, I would like to be able to publicly rate an album
36. As a user, I would like to be able to publicly rate an artist/band
37. As a user, I would like to receive recommendations on possible songs I would like based on my own tastes and my friend's taste
38. As a user, I would like to receive recommendations on new artists I may not be aware of
39. As a user, I would like to participate in a daily activity
40. As a user, I would like the daily activity to happen at a spontaneous moment of the day
41. As a user, I would like the daily activity to disappear after 24 hours
42. As a user, I would like to have a private history of my own submissions for the daily activity
43. As a user, I would like to see my friend's results from their daily activity
44. As a user, I would like to respond to my friend's results from the daily activity

45. As a user, I would like to receive a notification when it is time to participate in the daily activity

Non-Functional:

Architecture and Performance
We plan to develop applications using Flutter and AWS for Front End and Back End respectively. This will allow us to divide up the work into different parts to avoid any compatibility problems. AWS, or Back-End, will mimic SQL database, where we will be able to make get and post requests. For Front-End, we are using Flutter, where we will be using an MVC architecture. The application would be broken up into three parts: Service Files, UI, and Providers. Service files will handle all the communication between the app and the server. UI will contain pages and widgets. Provider files are going to serve as a middle man between the Service files and UI files. Instead of handling all the logic and writing functions inside the UI, we will put them inside the Provider files. This will make the app easier to navigate for the developers and make code more readable and understandable.

Security
Even though we will be working with public data, we are aggregating it in a way to make it more personal. This is why we will prioritize protecting the data for an account from being shared with anyone that isn't their friend in Harmony.

As a user, I do not want to watch my personal information which I used to sign in, i.e. email and password, accessible to people which I did not authorize

Usability
As this is a social media app made for casual use, it should be very easy to learn how to use. Furthermore, it should provide a social experience as much as possible when a user is on Harmony's app. Each page that the user navigates to should still feel like they are connected with the people on their friend's list.

As a user, I want to be able to navigate through the app easily and intuitively

Hosting/Deployment
The app (and website if time allows) will be accessible and functional 24/7 unless notified prior (ex. Server maintenance). We will deploy the app onto the Google Play store and the Apple app store as well as host the backend with AWS.