The Personalized Playlist Producer

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Summary:

Our project will be utilizing different datasets in Spotify in order to create a personalized playlist for each user. It will be a website in which the user can choose a specific genre, artist, song, and/or year, and choose how long they would like the playlist to be. Based on this personalized list, the application will make a list of songs for your use.

In addition to these requirements, we would have themes where people could choose what they want to make the playlist for. If someone is having a birthday party or trying to make a playlist for Valentine's Day, they can simply check those boxes and the application will query through the data for the word "birthday" or "love" in order to fit the theme. Another complex feature we would like to add is the idea of personalizing each new playlist to your friends interests. The user can input a friend and choose artists and genres their specific friend likes. The application can then save the friends information for a later date and when creating a playlist for events that specific people will come to, the user can simply click their friends name on the box to specify their preferences as well. There would also be an option to input songs of choice in case the user would like a specific song to be added to this playlist.

Description:

We would like to create a website for this application and use Spotify data to create these results. We would like to solve the problem of creating playlists. When creating a playlist for a specific event, we have often found that it is difficult coming up with a cohesive playlist that fits the "vibe". On top of finding the right vibe, it always takes a long time to go through each artist and remember each song you would like to add to the playlist. With this idea, the time used to create a playlist for an event would be cut in half, and the application would choose songs that would correctly fit the mood of your event.

Usefulness:

The application is useful as it provides a personalized playlist for any occasion based on user preferences. Generally, Spotify playlists have limited options. The user can use playlists by either creating one themselves or using one that has already been created by another user. Additionally, Spotify occasionally provides personalized playlists based on user listening trends, but users are not able to customize said playlists. Either way, users have to choose between spending time making their ideal playlist or settling for a playlist which may not fully satisfy them. With our idea, the user will be able to instantaneously generate playlists based on the exact criteria which they choose, including music genre, artists, occasion, playlist duration, etc. As a result, they receive the playlist they want while spending a minimal amount of time to get it.

Realness:

Our data is from Kaggle, which is a website with many Spotify datasets. This data includes a list of over a million songs with attributes such as the song's associated artist, album, and more song audio attributes such as danceability, energy, and loudness. We are also using data from Kaggle that pulls in the Spotify top charts since 2017. This data includes the song title, ranking, date, artist, artist nationality, and number of streams.

https://www.kaggle.com/datasets/rodolfofigueroa/spotify-12m-songs
https://www.kaggle.com/datasets/dhruvildave/spotify-charts
https://www.kaggle.com/datasets/tomigelo/spotify-audio-features
https://www.kaggle.com/datasets/akiboy96/spotify-dataset

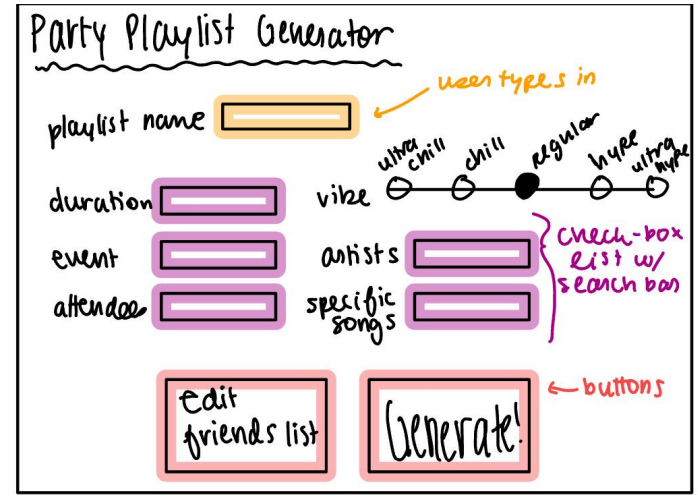
Functionality:

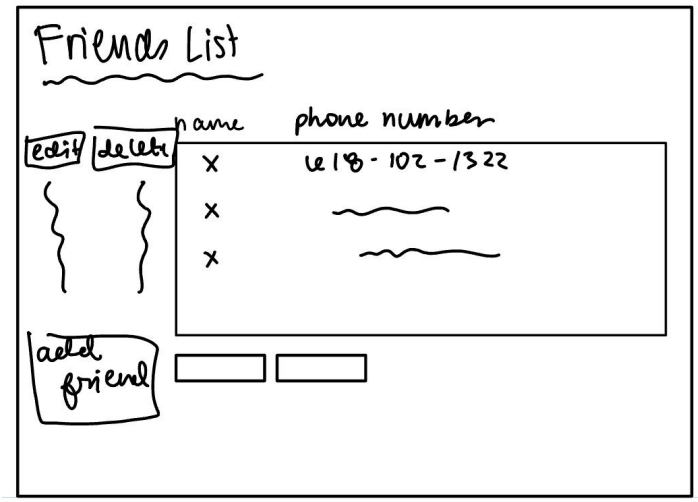
Our application would deliver the user a way to insert their preferences when it comes to a playlist, and in return they would receive a playlist that matches their party's vibe. We are going to create a "vibe scale", which will allow the user to choose whether the party they are looking to host is chill, lively, or somewhere in between. This "vibe scale" will require us to create a new column in our song table that is a sort of calculation of

factors like danceability, loudness, energy, and valence. Similarly, the user can choose how long their event will be, what type of event their party is for, specific songs they would like to hear, and specific artists they would like to hear. Deciding on all these different factors for the playlist will be where a lot of the different CRUD operations will come into play. For example, when the user is searching for a specific song or genre they would like in their playlist, this is where the search function will come into play.

Another important part of our functionality is the user's ability to insert their friends' information so that they are able to send the playlist to all the people attending the party once it is finished. Once a user adds friends to their "friends list", they are then able to pick which friends are coming to the party using the drop down menu on the homepage of the app. When the user is editing their friends list, this is where a lot of the create, delete, and update functionality will be included, considering the user may add, delete, or update their friend's information.

Low Fidelity UI Mockup:





Project Work Distribution:

Bhavana - in charge of implementing the tables needed for our database. In charge of transaction requirements, integration of advanced query into application with a specific focus on backend creation.

Anisha - Search operation, 1 advanced SQL query, UML diagram design, work on backend with Bhav

Miley - design database on GCP, 1 advanced SQL query, and update operation, design frontend application and work with Martina on implementation

Martina - Create, read, and delete operations, work on frontend design, help implement frontend designs