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Product Backlog

Problem Statement

Google Drive is now a widely used application to store documents and files, and also it includes functionality to use these files, such as playing music. However, the music player in Google Drive only provides the function to open a music file and then play it. Focusing on the music playing experiences, we want to create a more functional music player with a straightforward user interface which will be easier for users to get to music files and create playlists of music in Google Drive. This will save the time to download music from the cloud drive to play it in local music players and provide a more complete experience when playing music in Google Drive.

Background Information

Audience:

Google Drive is a popular cloud storage platform. People can store and extract their favorite music or sound recording on Google Drive. However, Google Drive users do not have a good experience of managing and playing their audio files. When Google Drive users want to play their audio files, rather than put audio files into a playlist, they have to click the audio files to

start. The lack of management of audio files and poor design of audio player function motivate our ideas of making a cloud music player.

Similar Platform:

There are several existing music application like Spotify, Apple Music, etc. These music players allow users to browse and explore different music. In addition, these applications can post up recommended playlist according to users' recently listening.

Limitation:

Even though many of these applications are useful, their limitation is that users may not necessarily listen to what they want to listen to. These music players cannot ensure to have copyright of every song in the market. Therefore, people will seek to find the audio files that they need from different sources and store them. Google Drive provides a good platform for people to store the music or audio files. Due to the poor music experience that Google Drive provides, we are devoted to help Google Drive users to manage and play their audio files with a more friendly user experience.

Functional Requirements

1. As a user, I would like to log in with my Google account
2. As a new user, I would like to be able to view my Google Drive directory after login
3. As a returning user, I would like to be able to view the music interface after login

4. As a user, I would like to be able to navigate and browse all my Google Drive file directories
5. As a user, I would like to be able to only select mp3 files
6. As a user, I would like to be able to view all of the mp3 files that I selected while I am browsing for music
7. As a user, I would like to be able to one click selecting all the mp3 file I have in my Google Drive while I am browsing for music
8. As a user, I would like to be able to go to the music interface after I finish selecting music files from Google Drive
9. As a user, I would like to be able to view all the playlist names I created on the left side of the screen
10. As a user, I would like to be able to click the playlist name to expand and view the entire playlist
11. As a user, I would like to be able to left click on a song, play the song, and highlight the currently playing song in the playlist
12. As a user, I would like to pause and resume a song as long as the application is not closed.
13. As a user, I would like to adjust the volume of the playing song.
14. As a user, I would like to have a button to mute the sound on click.
15. As a user, I would like to be able to create a separate favorite playlist.
16. As a user, I would like to be able to delete songs from playlist.

17. As a user, I would like to be able to switch listening mode of the playlist like random, single, or in order.
18. As a user, I would like to be able to switch songs in the playlist by clicking “left arrow” and “right arrow” buttons beside the “play” button.
19. As a user, I would like to be able to see the song’s name, singer name, and album name in the player interface.
20. As a user, I would like to be able to see the song image in the player interface.
21. As a user, I would like to share my music and playlist to social media like facebook, twitter, etc.
22. As a user, I would like to logout my Google Account when I want to do it.
23. As a user, I would like to hide the playlists on the left when the screen size of the browser gets small.
24. As a user, I would like to be able to click a button on the top of the screen to expand and show the playlists from the left.
25. As a user, I would like to be able to be prompted about file not existing if the song I play from playlist no longer exists
26. As a user, I would like to be able to have a button in the music panel to add the currently playing song to a different playlist
27. As a user, I would like to be able to right click on a song in a playlist to show more options
28. As a user, I would like to be able to add the selected song to a different playlist on the right click panel

29. As a user, I would like to be able to select multiple songs in a playlist to add the songs into a different playlist (if time allows)
30. As a user, I would like to be able to change the progress of a song by dragging the progress bar.

Nonfunctional Requirements

1. Users must be able to use this app on most of the mainstream browsers, and the browsers we need to guarantee its performance and usability are Chrome, Firefox, Microsoft Edge, and IE 11
2. The interface should be easy and straightforward so that no specific knowledge is required for users
3. Must be able to work in most of the common scenarios
4. Must be able to respond immediately except for extreme situations such as too many files in Google Drive or network connection is too weak
5. Must only allow one user to access his or her own music files
6. Must not upload any user token to server for privacy purposes, only allow the application to store user token to localStorage
7. Must not allow to modify contents of Google Drive in the application. Files should not be deleted from the cloud drive when they are deleted from the playlist.
8. The frontend will be hosted in a Heroku, and a separate developing server will also be hosted in Heroku to make sure the application works in Heroku environment