

- 1) User should be able to create an account with an email, username, and password
 1. This information will be stored in the users table in the lyricsense database
 2. This will be tested with a sample email address, username, and password.
 3. To test this feature, we will attempt to create an account on our local host while connected to the docker and see whether or not the site throws an error when we try to omit one of the required parameters above.
 4. If all of the parameters are filled, then the user should be able to create their account and be logged into the site. However, if one of these parameters is omitted, then the user will be shown a message stating that they are missing one of the required fields to create an account.
 5. Because this is primarily a check for functionality, we will be testing this feature ourselves. However, we may incorporate a few end-users to become testers to ensure that any error messages that they read are understandable.
- 2) User should be able to search for the song want an analysis on
 1. The user will use the search functionality to find the song they want analyzed. They may choose to save the analysis to their account if they like the result. No data is stored from searching for the song, but the analysis may be either saved already to the database to improve load times, or may be saved to the user's account if they choose to save it.
 2. This will be tested by searching with the name of any song that could be found on Spotify.
 3. To test this, one of us will be logged into an account and attempt to search for a song that we like to listen to. While the searching will be done on the local host, we rely on both the Spotify and ChatGPT APIs to fetch the results and analysis, and the database to store the analysis. The database will store the analysis only if the user chooses to save it.
 4. If the search is successful, then the user will be shown a list of songs with that name sorted by their popularity/relevancy. If the user cannot find the song, then it may not be a song that is not on Spotify. A message will be displayed if the search returns no results for the user that the song may not be part of Spotify.
 5. End-users will be the primary testers for ease-of-use, functionality, and whether or not the layout makes sense from the user's perspective who has not worked on this application.
- 3) User should be able to add friends who are also registered
 1. The user will be able to add a friend based on their username. The user will search for the friend based on their username and, if that friend does exist, then the user can send a friend request. After having their friend request accepted, those two users will be able to see each other's songs that they have had analyzed by the API. Although not implemented yet, the friends would likely be stored in the database under either the users table or a new table to link users together.
 2. Two different users will be logged in where one user attempts to add the other user by searching for their username.
 3. When testing this, two users will be running on the local host. Because this application is not being hosted on a site, one user will search for the other user by their username

which will then be checked with the database. If the user exists, then a request is made to the second user to be their friend. If the friend accepts, then both users should have an entry in the database that links them as friends. After this, the users will relaunch the application and see if they can now view the other's songs that they have had analyzed.

4. If the test is successful, then both users should be able to see each other's songs. However, a failure can occur in a few ways. If the user does not exist, then the app should return a message stating that either the user does not exist or was typed incorrectly. If the user sends a friend request but the other user does not accept it, the user who sent the request will not be notified due to privacy consistent with other websites (Not notifying users if their friend request was denied). We may display a message if one of the users has not yet saved any song analyses so that their friend knows the app is working correctly.
5. We will be testing primarily for functionality in the database and on the pages for viewing each other's songs. However, we will also have end-users test to make sure that the friend searching, adding, accepting, and viewing process is clear to understand.