Front-end APP UI (10-18hours):

-there should be a page where user can login in with their username and password

-login-in page should be able to direct new users to sign-up page where user can create their account

-user should be able to use the app as a guest, but can only search for limited amount of songs

-in the main page, user should be able to input a song name, and get a list of similar songs ranked based on their similarity

-when inputting song name, user should be able to see some possible song names suggested before they complete typing

-user should be able to listen to the recommended songs

-there may be an extra page where user can try out new comparing algorithms and functionalities

-user should be able to log out after they logged in with a log out button

Song Comparing Program (12-20 hours):

-we should be able to input two music files, and the program will return the similarity score of the two music files

-the program should be able to compare two songs in a reasonable amount of time

-if time allows, we will explore different ways of song comparison

Database (8-14 hours):

-there should be two main parts of database: user information, music information

-user information should store all the information of registered users, including user names and corresponding passwords

-music information should store the name of songs, the actual playable song files, and a matrix of similarity scores between songs

Java-backend (10-18 hours):

-should allow new user to register and store the information in database

-should be able to verify user based on database information

-when given an incomplete/incorrect song name, should be able to on some level suggest some possible song names

-when given a song name, should be able to search through the database and return list of similar songs very quickly

-should to able to play songs in the database

-should allow user to sign out

-for developers: should be able to call the song comparing program, and send the info and similarity score to database after comparing is done