Magic Music Matcher

Team: The Chosen Tarsiers

Magic Matchers: Rodda John, Anya Keller, Jason Mohabir, and Bayle Smith-Salzberg

About

The Magic Music Matcher allows you to diversify your playlist. You may click on any country and will be given a popular song from that country. You can then click on the compare button and you will be given 5 more similar songs from a different country. Our unique algorithm for comparing the songs takes into consideration aspects of songs, such as timbre, tempo, and pitch to suggest musically similar, but geographically different songs for you to listen to. On top of having access to modern popular songs, you can search for your personal favorite tunes and look for similar songs using the same matching algorithms. Music is a major key to success, and The Music Thing will find you all the keys.

Roles

- Bayle: *Prime Minister*
- Rodda: *Interior Minister*
    - API connections
- Anya: *Communication Minister*
    - Front end and beautifying in general
- Jason: *Foreign Minister*
    - Database manager and app.py

APIs

APIs & their uses

- Music graph
    - Has artists and their countries of origin and their tracks, with spotify IDs
- Spotify
    - Has the actual songs that we will use
    - Contains info about the songs including: acoustability, instrumentalness, dancibility, and energy, which will be used to compare the songs


Components

Files

- README.md - md
- API keys
- Flask routes - py
- API handler(s) - py
- Something to generate the new songs when the compare button is clicked - py
- Database - db
- Database managers (for accounts and saving songs) - py
- Frontend
    - Main Jinja template
    - Big js file - js for cool map things especially
    - Login/Register
    - Home page after login/register
        - Something that explains what the page does
        - Quick name search bar
        - Map search
        - suggest button
        - Music player
        - Save song button
    - Login/logout button
    - my songs page
        - Music player
        - Saved songs

Users can:

Map Search:

1. Clickable map of the world
2. Select country on map
3. Generate a song from that country
4. Listen to that song
5. Using attributes of song (acoustability, instrumentalness, dancibility, and energy), return five similar songs within mathematically intricate threshold of similarity
6. Listen and learn more information about the suggested songs
7. Have option to save either/both/all songs

Song Search:

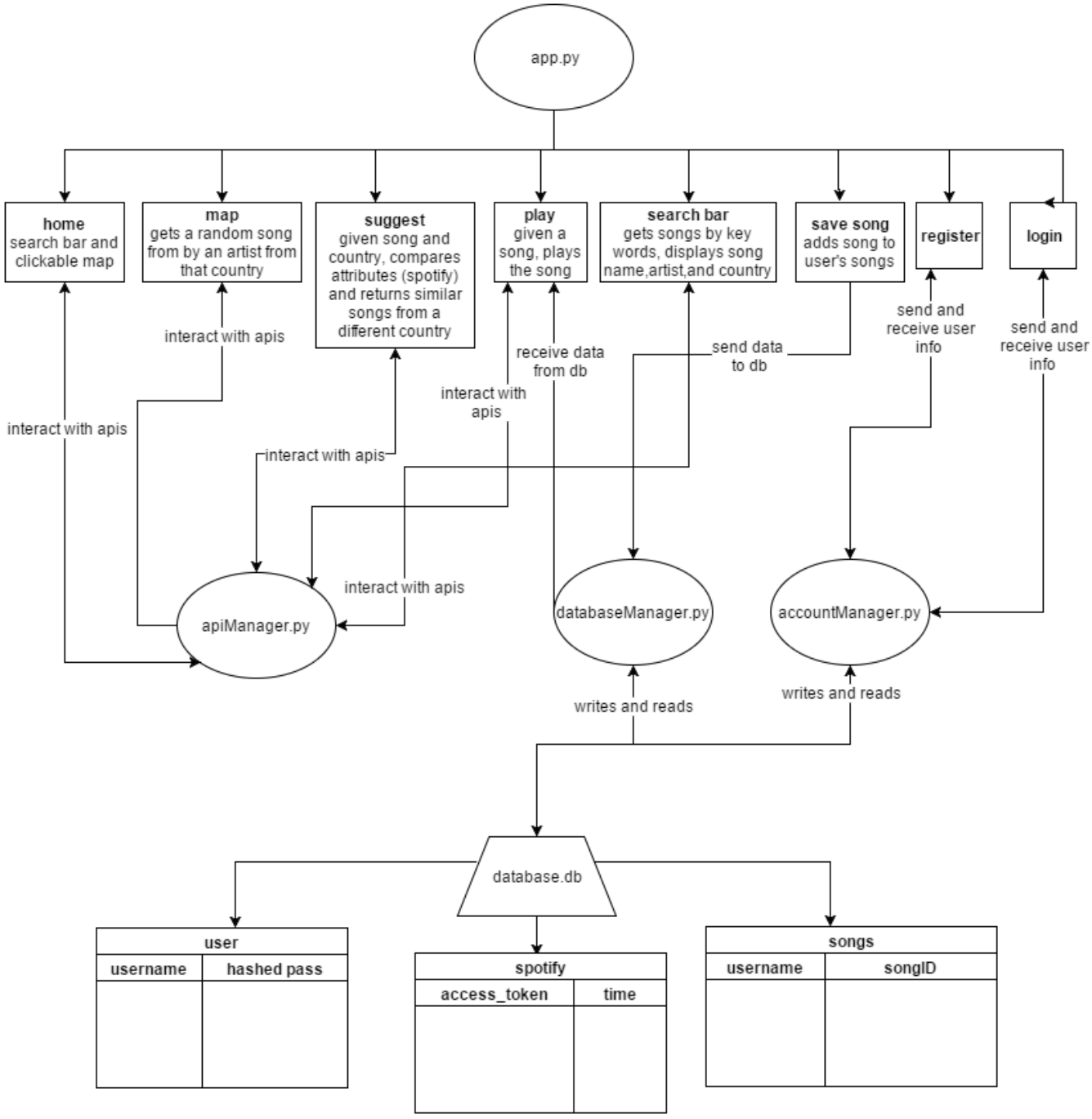
1. Using search bar, type in song titles
2. Get 10 results which include artist, song name, and country


3. Selected song will cause map to go to country of origin of artist
4. Using attributes of song (acoustability, instrumentalness, dancibility, and energy), return five similar songs within mathematically intricate threshold of similarity
5. Listen and learn more information about the suggest song
6. Have option to save either/both/all songs

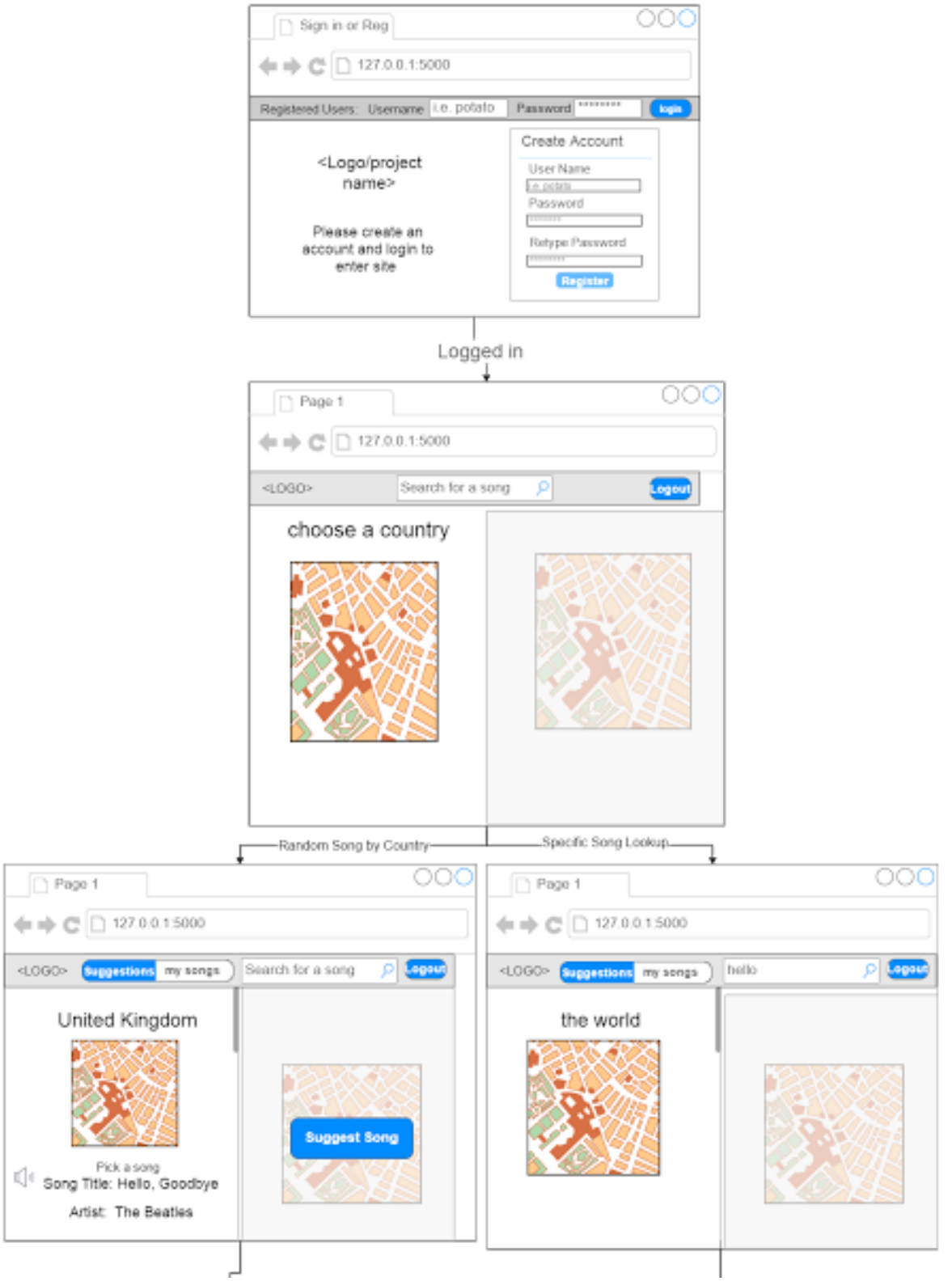
Saved songs:

1. List of songs you saved, the artists and countries of origin
2. Can click on any of the songs to play them

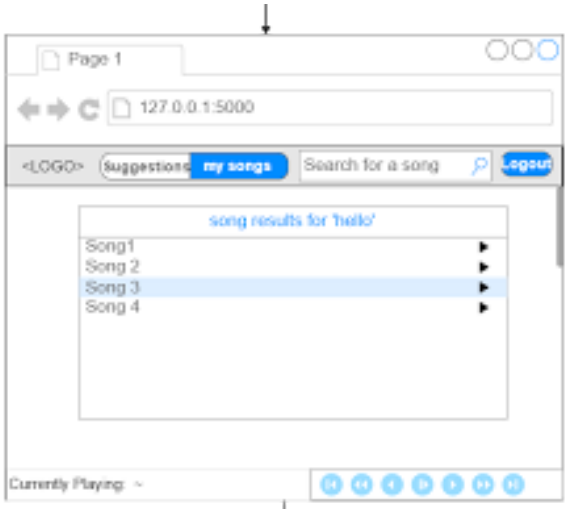

Component Map

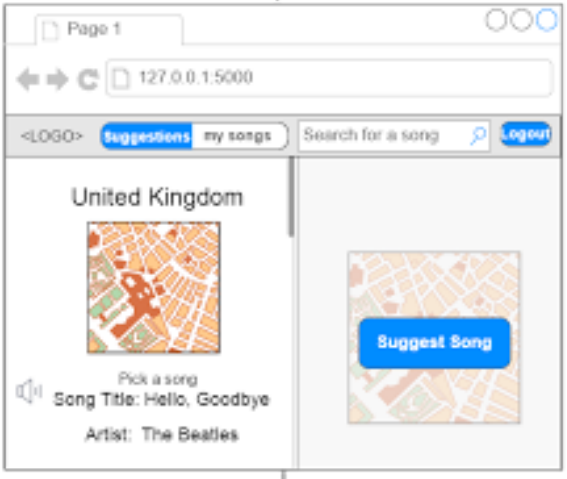


Website Mockups




Page 1
127.0.0.1:5000
<LOGO>
Suggestions
my songs
Search for a song
Logout
United Kingdom
Song Title: Hello, Goodbye
Artist: The Beatles
Save Song
Cool Stats
more cool stats
Not The UK
Song Title: iefjsldkm
Artist: asfkljasjdl
Save Song
Cool Stats for comparison
more cool stats
Currently Playing: Hello, Goodbye


Page 1
127.0.0.1:5000
<LOGO>
my songs
Search for a song
Logout
song results for 'hello'
Song1
Song 2
Song 3
Song 4
Currently Playing:


Page 1
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<LOGO>
Suggestions
my songs
Search for a song
Logout
United Kingdom
Pick a song
Song Title: Hello, Goodbye
Artist: The Beatles
Suggest Song


Page 1
127.0.0.1:5000
<LOGO>
Suggestions
my songs
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Logout
United Kingdom
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Artist: The Beatles
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more cool stats
Not The UK
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Artist: asfkljasjdl
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Cool Stats for comparison
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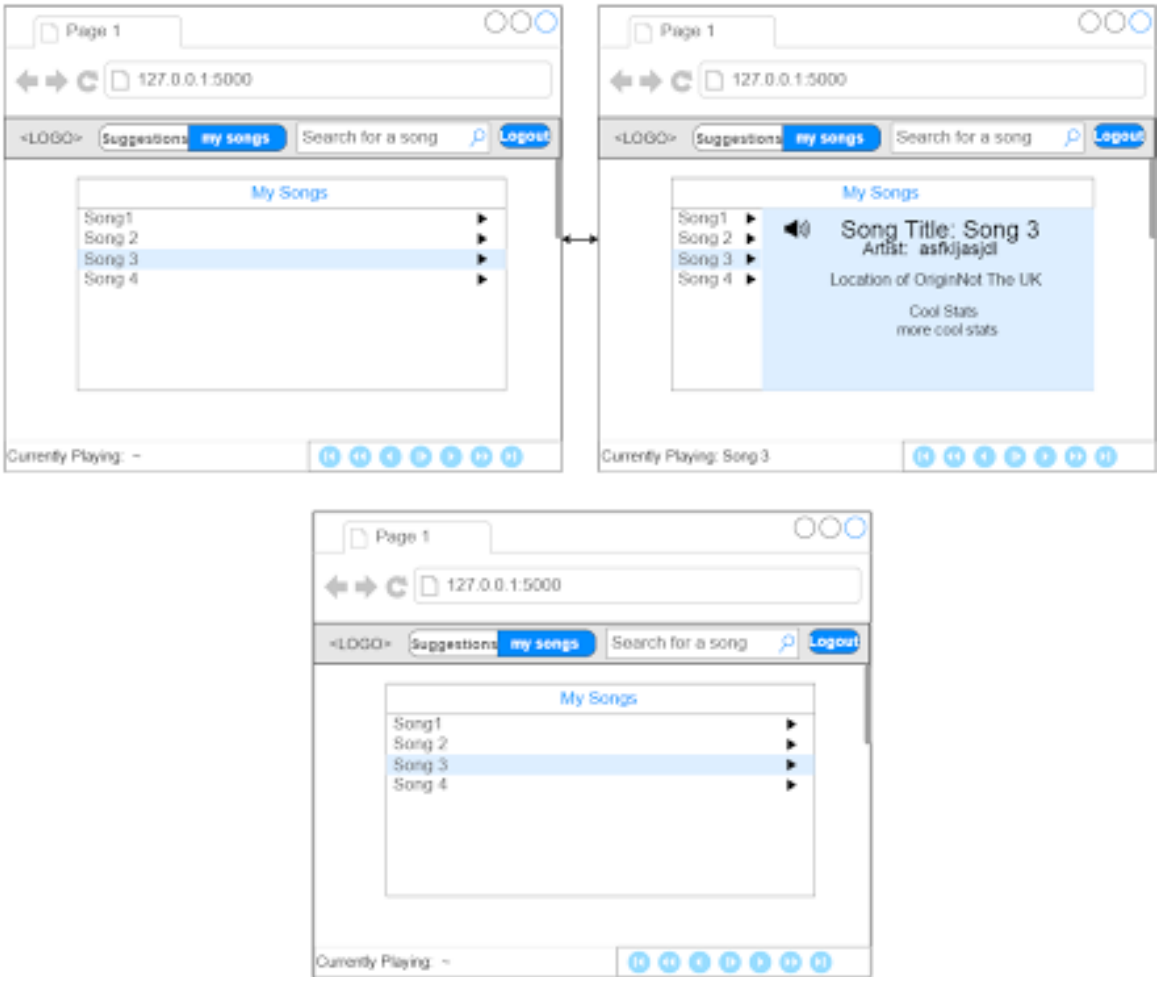

Future Explorations

- Looks at your location and plays most popular song in your area from outset
- Add playlists
- Using machine learning, determine what kind of music you would like
- Genre classifications