



Magic Music Matcher

Team: The Chosen Tarsiers:

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About

The Magic Music Matcher allows you to find similar popular songs from around the world. You will be able to diversify your playlist by getting unique songs from different areas of the world. Our unique algorithm 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. You will have the ability to choose from many countries and browse through their popular songs. 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

APIs

APIs & their uses

- Last.fm
 - Has songs sorted by country
 - Also, basically search by anything
- Musixmatch
 - "The world's largest lyrics catalog"
- Spotify
 - Has the actual songs that we will use
 - Contains info about the songs including: tempo, pitch, and timbre

Keys to Success:



<https://docs.google.com/a/stuy.edu/spreadsheets/d/1VjLIUk6cz4Rk5vxTWfFuvhsrncD5FI4GcCG2Pj30Y8M/edit?usp=sharing>

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
 - Initial Home page
 - Something that explains what the page does
 - Quick name search bar
 - Map search
 - Regular Home page
 - Quick name search bar
 - Map search
 - suggest button
 - Music player
 - Login/logout button
 - my songs page
 - Music player

Users can:

Map Search:

1. Clickable map of the world
2. Select country on map
3. Generate 5 songs from top music charts
4. Select one song to listen to and get more information [artist, release date, duration]
5. Using attributes of song [tempo, pitch, timbre], return a similar song within mathematically intricate threshold of similarity
6. Listen and learn more information about the suggested song
7. Have option to save either/both/all songs



Song Search:

1. Using search bar, type in song titles
2. Autofill song titles sorted by artists
3. Selected song will cause map to go to country of release
4. Get more information [artist, release date, duration]
5. Using attributes of song [tempo, pitch, timbre], return a similar song within mathematically intricate threshold of similarity
6. Listen and learn more information about the suggest song
7. Have option to save either/both/all songs

Country Search:

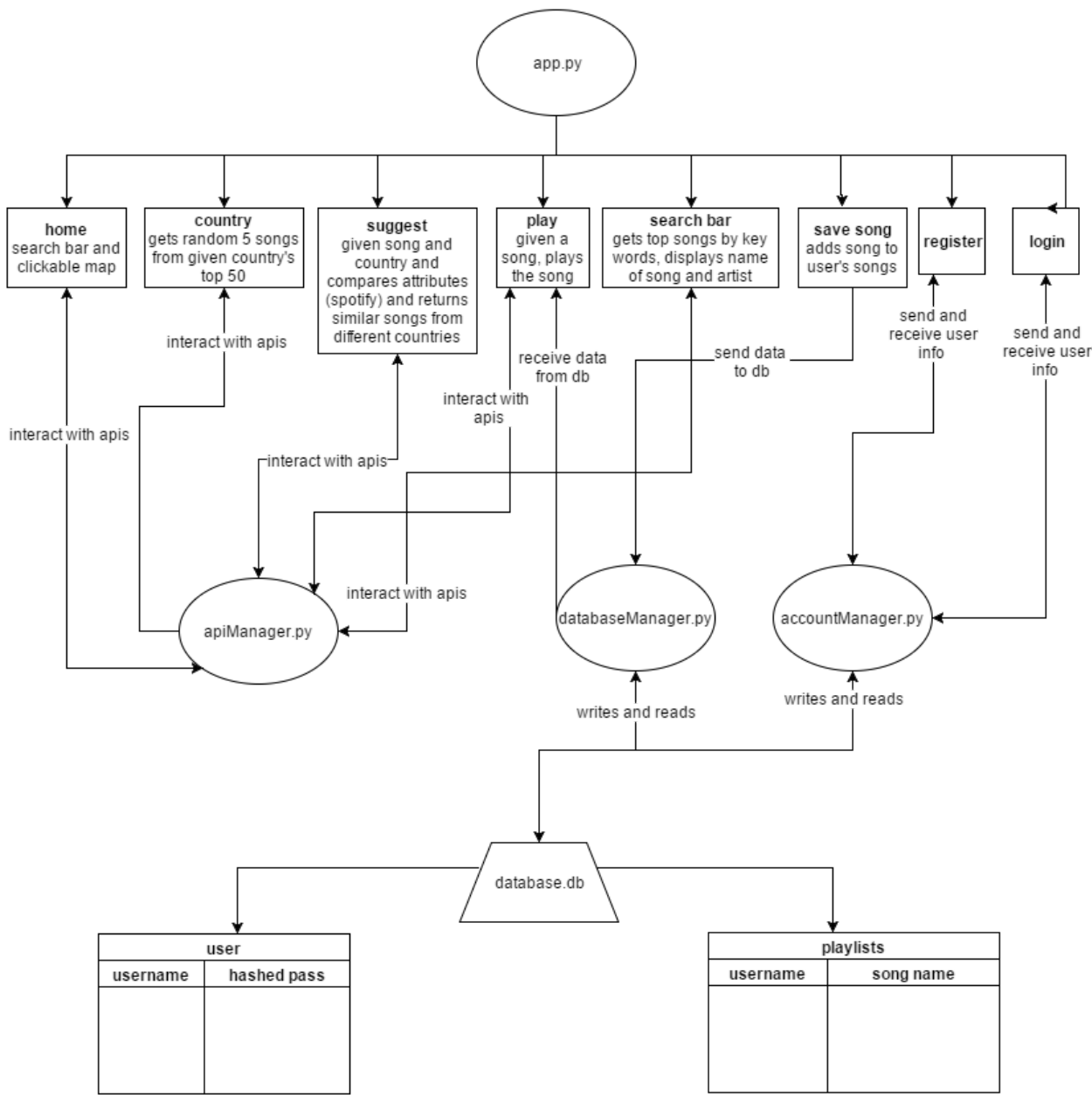
1. Using search bar, type in country
2. Select country on map
3. Generate 5 songs from top music charts
4. Select one song to listen to and get more information [artist, release date, duration]
5. Using attributes of song [tempo, pitch, timbre], return a similar song within mathematically intricate threshold of similarity
6. Listen and learn more information about the suggested song
7. Have option to save either/both/all songs

Playlist Creation:

1. Search for a specific song to use
2. Get a random song by selecting a country and choosing one of the song results
3. "Suggest song" generates a song that is similar in musical attributes
4. Save songs
5. Is given average tempo/timbre/pitch for all songs/playlists
6. Get suggestions based on saved songs
7. Shows song that's playing
8. Make playlists which will generate similar songs if you ask

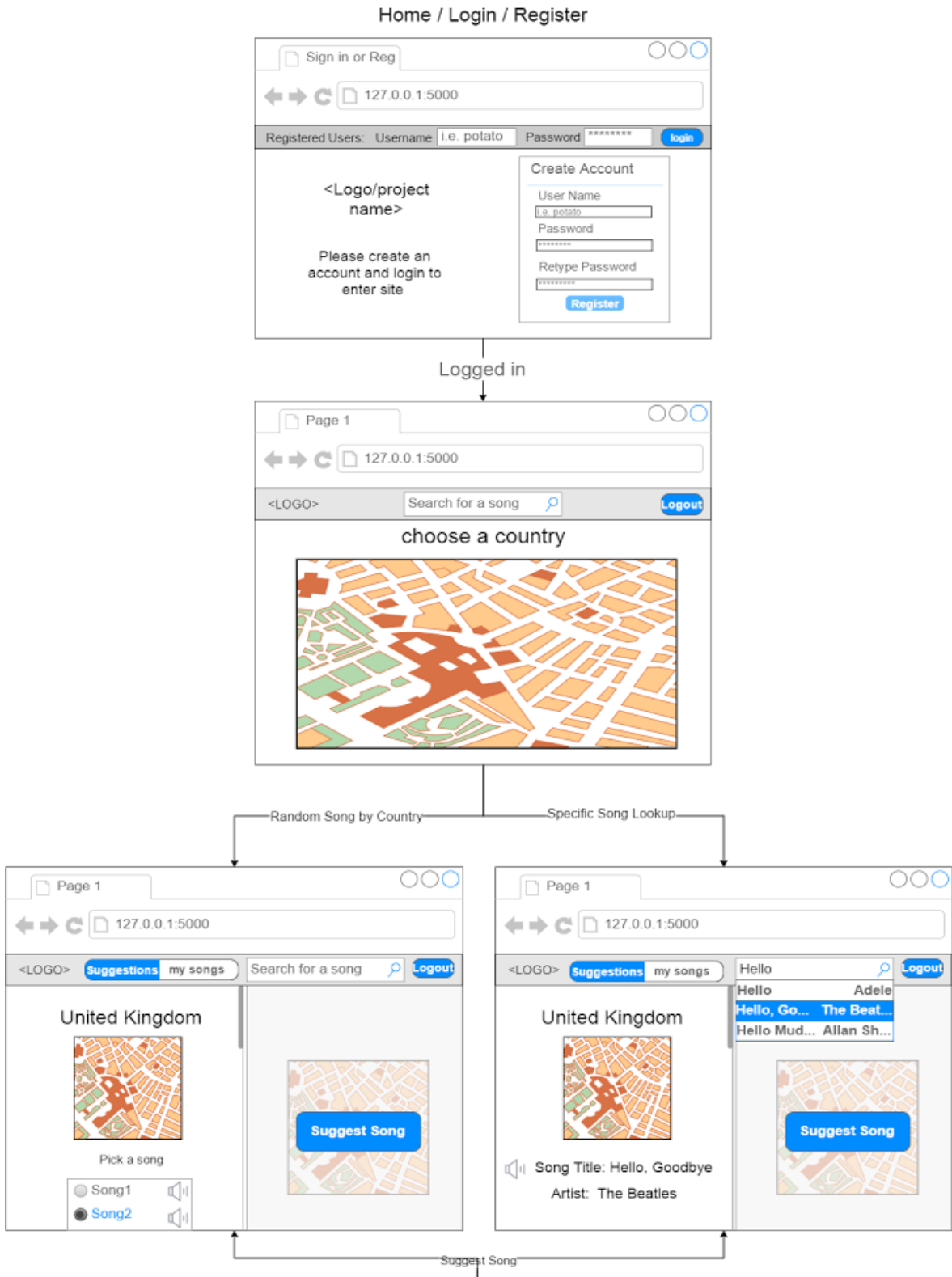


Component Map





Page Mockups





Future Explorations

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