

Team Bass Drop: Joel Ye (Lead), Anthony Chen, Mikhail Kotlik

Beat Central

APIs used

- LastFM : Music Information + Popularity Tracking
 - <http://www.last.fm/api>
- Spotify: Play the music
 - <https://developer.spotify.com/web-api/>
- MusixMatch: Music Lyrics + More info if needed
 - <https://developer.musixmatch.com/>

Overview

Welcome to Beat Central! Our site is a music hub with information about all the songs you may want information about. On the homepage, you can search for songs using various identifiers such as genre and artist, which will bring you to a page with extensive information provided by LastFM. You can also listen to these songs via Spotify!

Beat Central also features recommended music, and personalized user accounts for you to favorite songs and artists, and to follow other users, getting a feed from them on your homepage!

Work Division

Python Middleman + Some HTML - Joel
HTML/Bootstrap + Some python - Anthony
API implementation - Mikhail

Schedule

12/5 - Login system, search results skeleton (without results) (Joel)
12/6 - rest and lastFM modules completed, allowing for data retrieval (Misha)
12/6 - Display result page skeleton (Joel)
12/7 - Data retrieval/search backend done, ready for content gen. (Misha)

- 12/7 - User interaction (favorites) set up (Joel)
- 12/8 - Content (result page) generation from API data completed (Anthony)
- 12/9 - spotify module completed and plugin embedded (Misha)
- 12/9 - User following and feed (Joel)
- 12/10 - Styling finalization (Anthony)
- 12/11 - General debugging/polishing and stretch goals (All)

Site Map

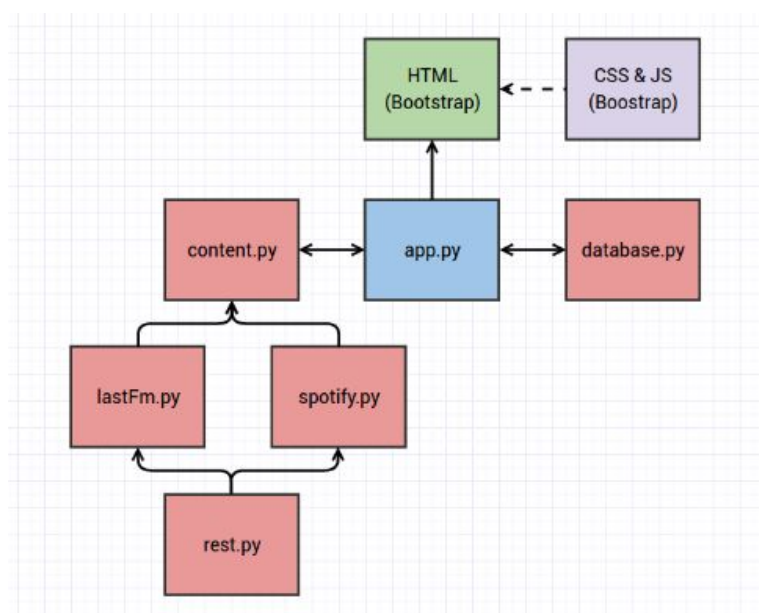
- Homepage (logged in or not) (search bar is separate)
 - ~/
- Search results page
 - ~/search?q=<QueryString>
- Results page
 - The variable <> values may be hashed for uniformity
 - ~/results/artist/<ArtistName>
 - ~/results/song/<SongName>
 - ~/results/album/<AlbumName>
- User page
 - ~/user/<Username>
- Settings page
 - ~/settings

Component Map

- Frontend Breakdown
 - Bootstrap CSS
 - HTML Templates - see Site Map
- Backend (see python file breakdown)
 - User account management (Separate page) (database.py)
 - Following/Unfollowing Others (database.py)
 - Information stored in databases, toggle on user page / feed
 - Homepage generation (content.py & database.py)
 - Search results generation (content.py, spotify.py, lastFm.py, rest.py)
 - Result page generation (content.py, spotify.py, lastFm.py, rest.py)

Python File Breakdown:

- app.py
 - Primary module. Deals with and evaluates requests, server settings, sessions and cookies, and server initialization.
- rest.py
 - Contains general request & API functions, used for both the spotify and Last.fm APIs.
- spotify.py
 - Obtains information and music plugin links from the Spotify API.
- lastFm.py
 - Obtains information from the Last.fm API.
- content.py
 - Content (homepage, search results, and result page) generation and formatting given API data, passed to app.py
 - Generation from database data
- database.py
 - Data retrieval/storage from database
 - User data management
- utils.py
 - Miscellany, would contain general purpose helper func.s for other modules (may not be made)
- Musixmatch.py (Stretch Goal)
 - Obtains information from MusixMatch



Databases

General Database

- Table AccountInfo:
username, hashedPass, userID
- Table UserInfo:
userID, following (String list), favSongs, favArtists, favAlbums
 - Each favorites entry is a tuple of (name, date added) stored as an SQL TEXT datatype. This allows a chronological favorites feed to be created.

