FINAL PROJECT REPORT

HarmonyHub!!

Introduction:

'The end of a journey means the start of another one,'. At the time of proposal I really had the idea to continue with a program that would help people with currency exchange and rate rise and drops to keep up with the ever changing world but was doomed as the API key I was trying to use was not updated frequently and was proved to be half-baked, this led me to explore more things I was fond of, MUSIC, nothing like it , I tested out few music apps and found that none of them had a simple process or step that would let me sort my songs based off of just a simple keyword and hence I got the idea of trying to do it on my own.

OVERVIEW:

My WebApp the Harmony-Hub! Create your custom playlists with ease by choosing a keyword. Our user-friendly interface transforms your favorite songs into a personalized experience. Enjoy the simplicity of crafting playlists that match your mood. Harmony-Hub offers a laid-back approach to musical exploration. Your playlists, your way—let the musical journey unfold gently. My source code involves python packages such as

- Json
- Requests
- Request
- Render template
- Session
- Flask

BASIC INFORMATION:

Project name: HarmonyHub

Student name: Omyaasree Balaji

Student ID: 20720638

Course: CS110

Online host: https://exuberant-pointy-pastry.glitch.me

Background and Motivation:

My reason for choosing to working on a music webapp comes from my deep in music as a singer and guitarist it always comes short to finding the right song. I also wanted to polish my skills on front end development as I found it interesting but was not able to have many programs based on it this semester.

Project Objectives:

1- Develop a web application that can retrieve detailed information about songs, artists and albums from a single keyword
2- API integration: successfully integrate the chosen music API into the webapp, ensuring proper handling of the API
3- Trying to retrieve updated information form the API key **API:**

Currently, I am using the API key from Last.fm
API key: 6e807c90d0ed6e1e41356e734ac382c3
APP_SECRET_KEY: 473b63bd33c2a50762c546dcf126f2c8

- Getting the name of the song which has that keyword
- Getting the name of the artist with the keyword and his/her song
- Getting the popularity or the number of plays of that song (updated frequently)

Features:

- Get an organized top list of all songs with the click and search of a simple keyword
- Create your own playlist without the hassle of choosing only 1 song at a time with aesthetic backgrounds throughout the webapp

Project Schedule:

November 28 (Project Proposal)

- Brainstorm and finalize the concept and ideas about the working of the app.
- Try to decode between the two ideas (1) Currency&Price webapp (2)Music webapp
- Develop a project plan with clear objectives and project schedule which would be similar for both projects

December 1 (Alpha Status)

- Get the Base code ready which would work on the things that could be retrieved ny the API for the user
- Develop the core functionalities of the feature: data retrieval, and data manipulation for the results page

- Conduct testing locally on the computer to see if I was successfully getting the information and requesting (no formatting though).

December 5 (Beta Release)

- Take note of bugs and issues
- Conduct further testing to ensure the app is functioning properly locally.

- Try to get all the input files ready with definite app routes.
- Refine the user interface based on testing results and prepare for official release

December 14 (Final Submission)

- Address any remaining bugs or issues identified during beta testing
- Finalize the user interface and host it online with global access.
- Complete the presentation, Demo video and report for submission
- Clean the code and add comments of the source code which would help the 3rd party to understand the flow of the code

- Gather user data and testing the limit of the number of API calls that can be made (if there is any)

APPROACH:

Features Implemented with Screenshots:

1. 

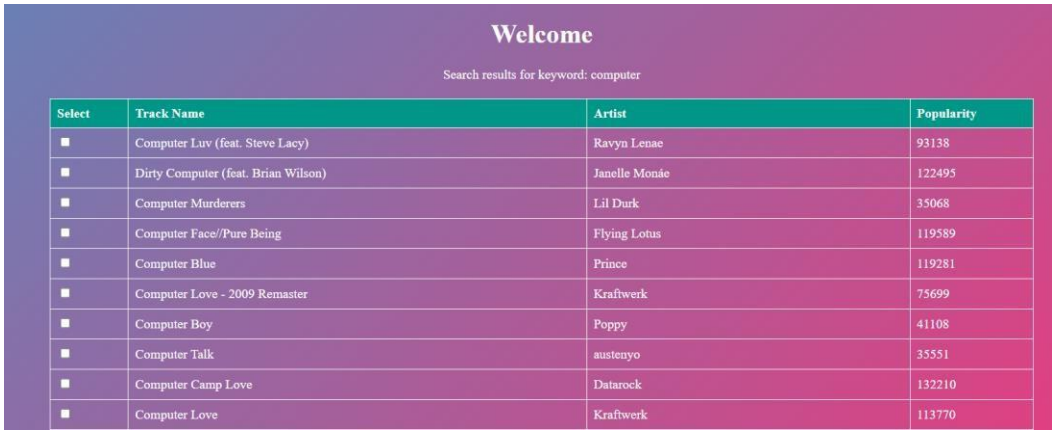
-Introducing the webapp to the user with a homepage which they can comeback to from any point of the function.

2. 

-A place for the user to enter the keyword or reference they are looking for

3. 

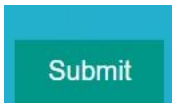
-Pieces of information for the user to know the webapp and the developer and the intent of the WebApp

4. 

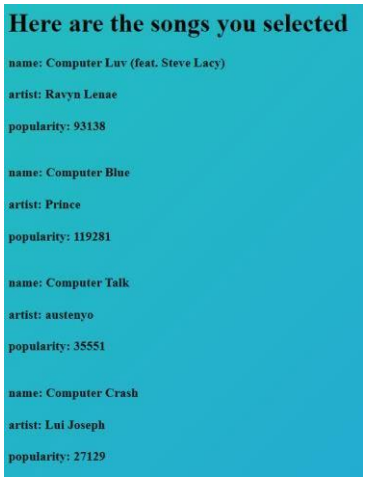
-Getting an organized table of the list of songs which is most suitable with the reference keyword

5. 

-Checkbox feature which allows the user to select more than one song at a time for their own customization of playlist

6. 

-Submit key which will direct you to the final page with the list of songs and their information.

7. 

-An organized playlist of the songs you selected

8. click to start again

-A link to go back to the main page if u missed something on your way or to start a new journey all over

THANK YOU

Thank you for using HarmonyHub!!

Roadblocks faced

- The roadblocks I have faced are primarily are taking the input from the checkboxes and directing them to give output in the next page
- Another challenge has been trying to code in a language I am not very proficient at and being able to apply different concept to the code
- Hosting the Webapp online was a big roadblock to my project as glitch did not have few python packages that were need for this program to function
  It has been resolved and been hosted online with flying colors

Instructions to run your programs:

- Online webapp link: https://exuberant-pointy-pastry.glitch.me
  There is no need for the user to input any personal information or ID to run the program. To visit the Webapp online please use the Online webapp link provided above.

Conclusion:

I successfully achieved my goal of creating a visually appealing web app that generates top tracks and artist recommendations based on user-provided keywords. Though time-consuming, the project was enjoyable and a continuous learning experience. I take pride in applying the skills gained throughout the course and look forward to enhancing the web app with additional features in the future.