JAM-BOT

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What Inspired This Idea?

- ➔ While thinking about ideas for this hackathon and listening to my favorite music, I noticed that I mostly end up listening to the same songs over and over and don't really know what the current music scene offers.
- ➔ A quick search for similar music on the internet sent me on a long and tiring expedition without much fruit for my efforts.
- ➔ This program, brought to life by integrating it with a discord bot, hopes to solve this problem.
- ➔ Most of all, I did not want to create a project which just pulls and pushes data without working on it, for that one could just use google 😉.

What It Does?

- ➔ The main function of the bot is to find music from top songs of various categories which match one's taste.
- ➔ To do this, it makes use of the Spotify Web API and pulls relevant data of a song liked by the user.
- ➔ It then uses said data, like genre, popularity, artist, to find songs which, to some extent, resemble the music that the user likes and suggests them.
- ⇨ As an additional capability, the bot also uses Open-Weather API to provide weather information such as temperature (minimum, maximum, feel), pressure, humidity along with weather description.
- ⇨ This part of the program also uses database functionality, for which it uses replit (from replit import db), to create a favorite city list to which the user can add/remove cities and also to store a default city and save unit preferences (celsius, atm OR kelvin, hPa).
- ⇨ As another additional capability, the bot can also encode/decode a message using a simple Caesar cypher.
- ➔ As an Easter Egg (hidden feature), the bot can also tell you jokes 😋.

How Was It Built?

1.) After a couple of tutorials on YouTube, I felt motivated enough to try to make a project using APIs.
2.) I started understanding how different APIs have certain endpoints and how one can create the desired URL for different user inputs.
3.) Equipped with this, I began the project.
4.) The next step was to determine the logic for the cypher and what sort of comparisons to make for suggesting a song that indeed matches the user's taste.

➔ This program is written in python and uses certain modules (see documentation).
➔ During the course of this event, I got to learn a bit about databases and APIs, hosting a bot and various python modules.
➔ I also gained experience with Git and GitHub and how to use environment variables.

Challenges Faced:

1.) To generate the desired URL using the user query was the first hurdle I faced.
2.) As each API has a slightly different way of being used, it took me a while to figure them out.
3.) Learning Git and GitHub, as this was my first project which really made me understand the importance of version control.
4.) Implementing the logic which helps find songs that match the user's taste, which really is the heart of this project.

NOTE: For how to use, please refer to the documentation in the same repository.

DEMO:

- ⇨ THE ABOVE-MENTIONED DOCUMENTATION AS A VIDEO: https://youtu.be/3UPHX7psHN4
- ⇨ Link to invite bot: https://discord.com/api/oauth2/authorize?client_id=964568438825701437&permissions=397284736064&scope=bot

What Next:

- ➔ Write a proper documentation 😊.
- ➔ Add more capabilities to the bot, but not stuff that is already available elsewhere 😉.
- ➔ Improve UI/UX.
- ➔ Add the suggested songs to a user's playlist.
