\*\*\*Final Project Name: SpotiTube (not the catchiest name)

For this final project, I wanted to use one of my favorite things: listening to music and

discovering new music. This is something I enjoy doing in my free time, so I am excited to be able to do for my final project. There are many ways to listen and discovering new music, such as YouTube, Soundcloud, Spotify,Apple Music, etc... I wanted my final project to incorporate elements from the ones I use the most, Youtube and Spotify.

My idea is to make it convenient for the user to get recommendations from Spotify about artists and other songs similar to the user's current songs. If it all works, the user will not need to have an account in order to use it, since the authorization keys and requests would be handled through my account.

The main idea behind the project is to allow other people the opportunity to conveniently and easily discover and enjoy new music and artists similar to the music they already like.

\*\*\*How it works:

The user enters the url from the current song he/she is listening to, the program then uses BeautifulSoup to parse the HTML and extract the song title and artist (most music is formatted as "artist - track").Sometimes there are different formats, such as “artist | track”, so I could maybe use regular expressions and account for different formats, although for the majority of music it shouldn’t be a problem. The program then connects to the Spotify APIs (one for artist recommendations and another for song recommendations), and gives the user recommendations for different music.

To build this project I would need the spotify Python API, and I could connect to both APIs using the single web service. There are three main tasks: parsing the HTML, and connecting to either library. The first would be making sure that the HTML is parsed correctly, and the information retrieved accordingly. Next, getting the appropriate authorizations and connections to the APIs would require the most amount of time and effort; getting familiar with

the requests and parsing the returned information appropriately. After that it should be a straightforward process, making a request for each time the user enters a link. Another issue might be the fact that keys are required to connect. If those keys expire, I will need to find a way so that it might still work. Managing to successfully make the request I think will take some time, just because of the format and getting it to correctly connect.

If it is not allowed to use two APIs from the same website/service, then I would consider using the WikiMedia API to provide some sort of biography of the artists or something of that nature.

In the end, with only one url, the user will be allowed to discover and enjoy music he/she would otherwise not have found out, and does not need to create an account for it. The main purpose of this project is to make it more convenient for users and hopefully spread some good music along the way!

Estimated Timeline for completion:

