Michael Catania

Section 1: Overview and Summary of the Project

My project uses a 339 line program that has the user make a few choices and gives an informative output.

- First, the user must select a genre based off of the options given (Rock, Pop, Disco or Country).
- Then, based off of the genre choice, the user must select a song out of five options within that chosen genre.
- After selecting the song, the program opens and reads a file that contains information about the song and three suggestions based on the choice.
- Finally, the program asks if the user would like to see the lyrics for the song. If they select yes, LyricGenius generates the lyrics to that song. If they select no, the program outputs "Okay."
- Any input that does not match up with an option, returns "This input is invalid".

At the end of this report, I will include photos of my program, as well as the user interface and a sample input/output

Section 2: Target Audience

My program is very useful for anybody who wants to learn more about music or get the lyrics for popular songs. The output information is very useful in learning about a given song, and the suggestions are good at showing similar works to the one chosen. Additionally, the program is also good for anyone who wants to see the lyrics to one of the option songs, as it gives the user an option to see them.

Section 3: Specific Programming Technique Used

One piece of my program that was very crucial was the LyricGenius library. The library was very crucial in generating the lyrics for each of the songs, without having to write all of them out. If the user chooses the yes option once they encounter the third choice (To see the lyrics or not), the LyricGenius library will find the lyrics based off of my imputed song title and artist.

Additionally, my program used Python techniques we learned in class. The program used multiple different self-created functions. I used separate functions for each song choice within each genre, as well as the choice to choose which genre the user would like to see. Within each function, my program relied heavily on if-elif-else statements.

Within the function artist(), I had an if-elif-else statement for each genre. Depending on the genre chosen, the program returned the corresponding genre function (rock(), pop(), disco(), country()). Within each of the genre functions, I had an if-elif-else statement that corresponded

to each song choice. Finally, I had an additional if-elif-else statement within each song choice that allowed the user to choose if they would like to see the lyrics or not.

Additionally, I used many strings, inputs and files within my program. The strings helped explain the different instructions for the programs. The inputs helped define a decision that would allow for the program to know how each choice corresponds. As for the files, they contained the information about the song, and were read within each if-elif-else statement for each song. Upon choosing a song, the corresponding file is read.

Section 4: Challenges

I encountered some challenges when developing my program. The program was very long and contained a lot of moving parts. Due to this, it was very delicate and required a lot of precision when looking at syntax and indentation. Additionally, I was dealing with some foreign devices that I had to teach myself as I went along. First of all, I had to import and learn LyricsGenius, as it was a big part of my program. It took a bit to learn the different uses of the library and how to call them. Once I learned them through trial and error (as well as the internet) , I found the library to be very useful in helping me reach the goal of my program.

Additionally, it was a bit difficult to coordinate new if-elif-else statements within each existing if-elif-else statement. It was better to create independent functions for the genre choice and each song choice, but that made little sense for the lyrics choice. Due to that, I had to create a new if-elif-else statement to choose whether the user wants the lyrics or not within the if-elif-else statement to choose which song they would like to see. It ended up being the best path to achieve my goal, but it was definitely tedious and difficult to coordinate the syntax and wording in the beginning.

Section 5: Future Extensions

I think there is infinite room for future expansion regarding my program. Since I had limited time to complete the program, I did not have enough time to create a vast musical library. It took me a lot of time to write out a file for each song, filled with the information. Additionally, it took me a lot of time to learn how to search for the lyrics to each song. Due to this, my program only contains 4 genres and 20 songs. Though that may not seem like much, the program took up 349 lines of code.

If I had more time to edit the program, I would try to add many more genres and songs. Additionally, I would add more information to the files for each song. By doing this, I could create an even more useful program that ranges further and appeals to more musical genres. THis would allow for an even better experience.

If I could research even more and devote a large amount of time to the project, I would try to learn how to use LyricsGenius and have the user input the song. It would be very difficult, as I would have to somehow find a way to provide information and suggestions based on every song ever made. Though it would be very hard to try and transition my program from a choice library to an infinite library, that would probably be the end goal of this program.

Photos

Below I will attach various photos of my program as well as sample inputs/outputs:

```
#This program gives information about musical artists and their songs
#It then suggests songs based off of user choices
import lyricsgenius
genius = lyricsgenius.Genius("BAszGOgQASyWG-uVXz6IYbafTy8oGP5JZfTIcnv7eXymXwX3guIdpXhr8QcbmUbR")
def rock():
    print("")
    print("Choose a song to view info, suggestions and lyrics:")
    print("")
    print("Choose 1 for Stairway to Heaven")
    print("Choose 2 for Smells like Teen Spirit")
    print("Choose 3 for Baba O'Riley")
    print("Choose 4 for Sweet Home Alabama")
    print("Choose 5 for Enter Sandman")
    print("")
    rch = int(input("Enter the number that corresponds to your choice:"))
    if rch == 1:
        print("")
        f = open("Rock_Stairway_to_Heaven .txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Stairway to Heaven", "Led Zeppelin")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rch == 2:
        print("")
        f = open("Rock_Smells_Like_Teen_Spirit.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Smells Like Teen Spirit", "Nirvana")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rch == 3:
        print("")
        f = open("Rock_Baba_O'Riley.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Baba O'Riley", "The Who")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rch == 4:
        print("")
        f = open("Rock_Sweet_Home_Alabama.txt", "r")
        print(f.read())
```

```
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Sweet Home Alabama", "Lynryd Skynyrd")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rch == 5:
        print("")
        f = open("Rock_Enter_Sandman.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Enter Sandman", "Metallica")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    else:
        print("This entry is invalid")
def pop():
    print("")
    print("Choose a song to view info, suggestions and lyrics:")
    print("")
    print("Choose 1 for Thriller")
    print("Choose 2 for Raspberry Beret")
    print("Choose 3 for Rolling in the Deep")
    print("Choose 4 for I Want it That Way")
    print("Choose 5 for Uptown Funk")
    print("")
    pch = int(input("Enter the number that corresponds to your choice:"))
    if pch == 1:
        print("")
        f = open("Pop_Thriller.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Thriller", "Michael Jackson")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif pch == 2:
        print("")
        f = open("Pop_Rasberry_Beret.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Raspberry Beret", "Prince")
            print(song.lyrics)
        elif lch == 2:
```

```
            print("Okay.")
        else:
            print("This input is invalid.")
    elif pch == 3:
        print("")
        f = open("Pop_Rolling_In_The_Deep.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Rolling in the Deep", "Adele")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif pch == 4:
        print("")
        f = open("Pop_I_Want_It_That_Way.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("I Want It That Way", "Backstreet Boys")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif pch == 5:
        print("")
        f = open("Pop_Uptown_Funk.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Uptown Funk", "Bruno Mars")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    else:
        print("This entry is invalid")
def disco():
    print("")
    print("Choose a song to view info, suggestions and lyrics:")
    print("")
    print("Choose 1 for Y.M.C.A")
    print("Choose 2 for Night Fever")
    print("Choose 3 for I Will Survive")
    print("Choose 4 for Funkytown")
    print("Choose 5 for It's Raining Men")
    print("")
    rach = int(input("Enter the number that corresponds to your choice:"))
    if rach == 1:
        print("")
        f = open("Disco_YMCA.txt", "r")
```

```
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Y.M.C.A", "Village People")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rach == 2:
        print("")
        f = open("Disco_Night_Fever.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Night Fever", "Bee Gees")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rach == 3:
        print("")
        f = open("Disco_I_Will_Survive.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("I Will Survive", "Gloria Gaynor")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rach == 4:
        print("")
        f = open("Disco_Funkytown.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Funkytown", "Lipps Inc.")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif rach == 5:
        print("")
        f = open("Disco_Its_Raining_Men.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Its Raining Men", "The Weather Girls")
            print(song.lyrics)
```

```
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    else:
        print("This entry is invalid")
def country():
    print("")
    print("Choose a song to view info, suggestions and lyrics:")
    print("")
    print("Choose 1 for The Gambler")
    print("Choose 2 for The Devil Went Down to Georgia")
    print("Choose 3 for Chicken Fried")
    print("Choose 4 for Jolene")
    print("Choose 5 for I Walk the Line")
    print("")
    coch = int(input("Enter the number that corresponds to your choice:"))
    if coch == 1:
        print("")
        f = open("DCounty_The_Gambler.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("The Gambler", "Kenny Rogers")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif coch == 2:
        print("")
        f = open("DCountry_The_Devil_Went_Down_to_Georgia.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("The Devil Went Down to Georgia", "Charlie Daniels Band")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif coch == 3:
        print("")
        f = open("DCountry_Chicken_Fried.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Chicken Fried", "Zac Brown Band")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif coch == 4:
```

```
        print("")
        f = open("DCountry_Jolene.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("Jolene", "Dolly Parton")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    elif coch == 5:
        print("")
        f = open("DCountry_I_Walk_the_Line.txt", "r")
        print(f.read())
        print("Would you like to see the lyrics to this song?")
        lch = int(input("Type 1 for Yes or 2 for No:"))
        if lch == 1:
            song = genius.search_song("I Walk the Line", "Johnny Cash")
            print(song.lyrics)
        elif lch == 2:
            print("Okay.")
        else:
            print("This input is invalid.")
    else:
        print("This entry is invalid")
def artist():
    print("")
    print("Pick a music genre:")
    print("")
    print("Enter 1 for Rock")
    print("Enter 2 for Pop")
    print("Enter 3 for Disco")
    print("Enter 4 for Country")
    gch = int(input("Enter the number that corresponds to your choice:"))
    if gch == 1:
        return rock()
    elif gch == 2:
        return pop()
    elif gch == 3:
        return disco()
    elif gch == 4:
        return country()
    else:
        print("This entry is invalid")
def main():
    print("This program allows you to pick a song from our library")
    print("And see information, lyrics and reccomendations")
    return artist()
main()
```

```
This program allows you to pick a song from our library
And see information, lyrics and reccomendations

Pick a music genre:

Enter 1 for Rock
Enter 2 for Pop
Enter 3 for Disco
Enter 4 for Country
Enter the number that corresponds to your choice:2

Choose a song to view info, suggestions and lyrics:

Choose 1 for Thriller
Choose 2 for Raspberry Beret
Choose 3 for Rolling in the Deep
Choose 4 for I Want it That Way
Choose 5 for Uptown Funk

Enter the number that corresponds to your choice:3

Name: Rolling in the Deep
Release Date: November 29, 2010
Artist: Adele
Album: 21
Length: 3:48

Suggestions based off of this song:

- Hello by Adele

- Somebody That I Used to Know by Gotye

- Skyfall by Adele

Would you like to see the lyrics to this song?
Type 1 for Yes or 2 for No:
```

```
Would you like to see the lyrics to this song?
Type 1 for Yes or 2 for No:1
Searching for "Rolling in the Deep" by Adele...
Done.
[Verse 1]
There's a fire starting in my heart
Reaching a fever pitch, and it's bringing me out the dark
Finally, I can see you crystal clear
Go ahead and sell me out, and I'll lay your shit bare
See how I'll leave with every piece of you
Don't underestimate the things that I will do
There's a fire starting in my heart
Reaching a fever pitch, and it's bringing me out the dark

[Pre-Chorus]
The scars of your love remind me of us
They keep me thinkin' that we almost had it all
The scars of your love, they leave me breathless
I can't help feeling

[Chorus]
We could've had it all
(You're gonna wish you never had met me)
Rolling in the deep
(Tears are gonna fall, rolling in the deep)
You had my heart inside of your hand
(You're gonna wish you never had met me)
And you played it to the beat
(Tears are gonna fall, rolling in the deep)

[Verse 2]
Baby, I have no story to be told
But I've heard one on you, now I'm gonna make your head burn
Think of me in the depths of your despair
Make a home down there, as mine sure won't be shared

[Pre-Chorus]
(You're gonna wish you never had met me)
The scars of your love remind me of us
(Tears are gonna fall, rolling in the deep)
They keep me thinkin' that we almost had it all
(You're gonna wish you never had met me)
The scars of your love, they leave me breathless
(Tears are gonna fall, rolling in the deep)
I can't help feeling

[Chorus]
We could've had it all
(You're gonna wish you never had met me)
Rolling in the deep
(Tears are gonna fall, rolling in the deep)
You had my heart inside of your hand
(You're gonna wish you never had met me)
And you played it to the beat
(Tears are gonna fall, rolling in the deep)
Could've had it all
Rolling in the deep
```