### List of Inputs, Outputs, and Processing Required

INPUTS

* Title
* Artist
* Release date
* Playback length
* Genre
* Cost to download
* File size (in MegaBytes)
* File path to cover image
* Playlist name
* Name of playlist creator
* Date the playlist was created
* File path for populating and saving playlists

OUTPUTS

* The user’s playlist and MP3 files

PROCESSING

* Converting user information into a playlist with mp3 files

### Identification of Classes and Their Responsibilities

**Class name:** **MP3**

Responsibilities:

* Getting and setting the information that the user input
* Generating a default file that can be overridden with user information
* Converting the user’s input into a string

**Class name:** **Playlist**

Responsibilities:

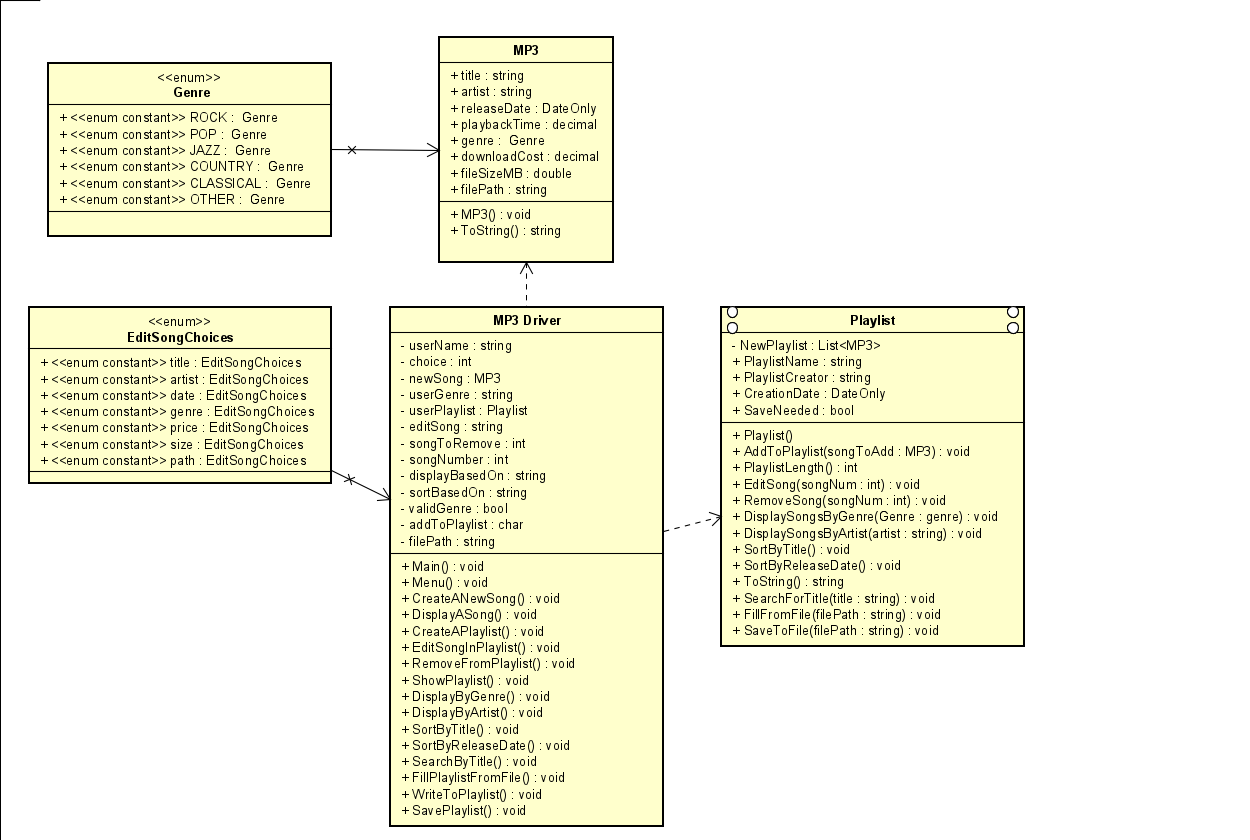
* Getting and setting the information that the user input
* Generating a default playlist that can be overridden with user information
* Adding songs to a list of MP3s when the user requests
* Getting the indexed position of the son the user wants to edit
* Getting the indexed position of the son the user wants to delete
* Displaying all songs of a specific Genre or artist
* Sorting all songs by title or release date
* Converting the user’s input into a string
* Populating playlists with information from the file provided by the user
* Saving playlists to files specified by the user

**Class name:** **MP3Driver**

Responsibilities:

* Welcoming the user and storing their name for later
* Giving the user a friendly menu to navigate
* Letting the user create a new MP3 object
* Letting the user create a new playlist object
* Prompting the user for information when needed
* Displaying the user’s MP3
* Displaying the user’s playlist
* Getting the file path to the file the user wants to read/write to
* Containing all the methods used in the main method that effect the playlist
* Thanking the user when they close the program

### UML Class Diagram

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Example Test Case for MP3 class

|  |  |
| --- | --- |
| Inputs | Expected Result |
| Set title to NEXUS  Set artist to Hiroyuki Sawano  Set release date to May 24, 2019  Set playback time to 229 seconds  Set genre to Other  Set download cost to $0.00  Set file size to 4.29 MB  Set file path to C:/Users/Scotty/  Downloads/CoverImage.png  Press 2 with no existing MP3 file | A string displaying all of the input data in the correct order  A prompt telling the user no MP3 exists and that they need to create a new one |

Example Test Case for Playlist class

|  |  |
| --- | --- |
| Inputs | Expected Result |
| Select 4 to try to display a playlist before making one  Select the third option to create a playlist, input the name Funky tunes and the current date  Select 1 and input 7 songs  Song 1:  Title: NEXUS  Artist: Hiroyuki Sawano  Release Date: 5/24/2019  Playback time: 229 seconds  Genre: other  Download Cost: 1.29  File Size: 4.29 MB  filePath: C:/Users/Scotty/  Downloads/CoverImage.png  Song 2:  Title: Clair De Lune  Artist: Claude Debussy  Release Date: 1/1/1905  Playback time: 314 sec  Genre: classical  Download Cost: 0.00  File Size:3.76 MB  filePath: C:/Users/Scotty/  Downloads/CoverImage.png  Song 3:  Title: Dare  Artist: Stan Bush  Release Date: 7/16/1986  Playback time: 241 secs  Genre: Rock  Download Cost: 0.99  File Size: 1.29 MB  filePath: C:/Users/Scotty/  Downloads/CoverImage.png  Song 4:  Title: Cantina Band  Artist: John Williams  Release Date: 5/25/1977  Playback time: 164 seconds  Genre: Jazz  Download Cost: 2.29  File Size: 3.26 MB  filePath: C:/Users/Scotty/  Downloads/CoverImage.png  Song 5:  Title: Somebody That I Used To Know  Artist: Gotye  Release Date: 7/5/2011  Playback time: 243 second  Genre: Pop  Download Cost: 0.99  File Size: 3.46 MB  filePath: C:/Users/Scotty/  Downloads/CoverImage.png  Song 6:  Title: In the Shadow of the Valley  Artist: Don Burnham  Release Date: 7/26/2020  Playback time: 227 second  Genre: Country  Download Cost: 0.00  File Size: 2.64 MB  filePath: C:/Users/Scotty/  Downloads/CoverImage.png  Song 7:  Title: Who’s Ready For Tomorrow  Artist: RATBOY  Release Date: 12/11/2020  Playback time: 116 seconds  Genre: Alternative  Download Cost: 1.29  File Size: 1.97 MB  filePath: C:/Users/Scotty/  Downloads/CoverImage.png | A prompt telling the user no playlist exists and they need to make one  An output saying the playlist was created  Songs 1-6 should output normally since they have valid input  Song 7 will continue prompting the user until a valid genre that is accepted by the program is input |

Example Test Case for New Playlist Class Functions

|  |  |
| --- | --- |
| Inputs | Expected Result |
| Use the option to fill the playlist with information from a file and input the path to that file  Modify the playlist and try to save it to a file  Try saving the playlist when it has already been saved  Try to exit without saving the file/create a new playlist without saving | Even if some songs are formatted improperly, the program will take the information from the first line, set the playlist equal to those values, skip a line, and copy each song from the file to the playlist  The playlist will be properly copied over to the desired file with the correct formatting  The program will prompt the user that they do not need to save the file  Program will remind the user they have not saved and ask if they really want to quit/make a new playlist |

Text

Description automatically generated

Creating a new playlist

Text

Description automatically generated

Adding songs with valid inputs

Text

Description automatically generated

Trying to add a song with an invalid genre

Text

Description automatically generated

Displaying every song

Text

Description automatically generated

Displaying songs based on their genre or artist

Text

Description automatically generated

Playlist alphabetically sorted by title

Text

Description automatically generated

Playlist sorted by release date

Text

Description automatically generated

Both sorting methods refusing invalid information

Text

Description automatically generated

An empty playlist currently exists, choose to fill the playlist with information from a file

Text

Description automatically generated

fills all playlist information with information from the file, changes invalid genres to OTHER

Text

Description automatically generated

Choose to make a new song

Text

Description automatically generated

Save the new song to the playlist

Graphical user interface, text

Description automatically generated with medium confidence

Song(s) gets added to the desired file

Text

Description automatically generated

If the playlist has not been modified, will say it does not need to be saved

Text

Description automatically generated

Attempting to create a new playlist without saving the program

Text

Description automatically generated

Trying to quit the program without saving the playlist first