**Discography Tool**

**Group Members:**

44. Udatta Bhattacharya

47. Vipul Prakash

29. Palak Aggarwal

**Introduction:**

A discography tool can be used to browse through or explore the details of recorded audio media. However, it does not act as a media player. It has the capability to display the details regarding a particular recording or track in broader terms of the album it is a part of, the artist that composed and recorded it and the genre it belongs to. It gives the user an interface through which artists, genres, albums and songs can be sifted through using a choice based mechanism.

The user is given a choice whether to browse by artist or genre, and depending on it, a catalogue of information is provided by the tool in the subsequent views. It also enables the user to gather information about an artist as to the number of albums composed by them, the names of the albums and the content of the albums. For instance, if the user has forgotten the name of a song, but can recall the name of the artist, then the tool enables the user to look for that artist and browse through the works of that artist.

It also provides some additional information pertaining to the albums or tracks. In case of albums, it provides the year of release and the track count (the number of tracks that the album contains) and in case of a single track, it provides its length or duration as well.

**Implementation and Schema:**

The discography tool can be represented using a systematic and structured way of storing data and hence it is stored in a database and is implemented using a DBMS. The querying on it is performed using SQL and the interface provided to the user is command based which is developed using Python.

The various significant entities of data in the tool are stored as separate tables or relations and are linked to each other based on the entity relationships (refer to E-R Diagram). The relations are as follows:

**Artist**: Contains the information about the artist such as the name of the Artist, and the unique ID assigned to it for reference.

**Genre**: Contains the information about the genre such as the name of the Genre, and the unique ID assigned to it for reference.

**Album**: Contains the list of albums with information such as the name of the album, the unique ID assigned to it, the ID of the artist for reference, the year of its release, the number of tracks it contains, and the sequential number of the album with respect to the year of release.

**Track**: Contains a list of tracks with information such as the name of the track, the unique ID assigned to it, the ID of the album it is a part of, the ID of the Genre it belongs to, the length of the track and the song number in sequence.

**E-R Diagram**

Track

1 N

ARTIST

COMPOSED

BY

ALBUM

BELONGSTO

NAME

GENRE

FOLLOWS

1

1

1 N