Lesson 14 – Use Case In-class Exercise

**Objective**

Develop an information system that supports a music streaming service.

**Situation**

The music catalog contains songs which can be played. Each song may or may not be associated with a particular album. It is also associated with one or more performers, writers, producers, and labels. Songs can also be classified according to one or more genres. Metadata about each song includes the song’s release date and lyrics. The system assigns a unique identifier to each song.

Each genre has a unique name. One genre may be a sub-genre of another genre. Each album has a name, a release date, a cover art picture, and a unique identifier generated by the system. Albums are connected to at least one performer, writer, producer, and label each. Each performer, writer, and producer has a name, a picture, and a biography.

Subscribers have a unique username and password or authentication token, and may purchase streaming services for set time periods using payment providers (PayPal, Stripe, etc). Subscribers enter their own information to the system, which assigns a subscription begin and end date based on the date, method, and amount of payment. During their subscription periods, subscribers may search the catalog by genre, artist, album, or song, and may stream any song they like.

Subscribers can browse, search, or listen to playlists. They can also create, edit, and delete their own playlists. Playlists may be either public or private, and contain an unlimited number of songs in a certain order. Despite playlists having a defined order, subscribers can listen to a playlist in any order, including randomly shuffled, sorted by artist, sorted by genre, or sorted by song title.

Music label representatives and independent artists (or their agents) — all hereafter referred to as “content owners” — have unique usernames and passwords or authentication tokens, and may upload songs to the catalog. They may also view and edit all metadata about their uploaded content. Content owners can also create, edit, and delete their own playlists, either public or private.

Music catalog administrators can remove songs from the catalog. They can also create and edit genres. Administrators also update metadata regarding performers, writers, and producers.