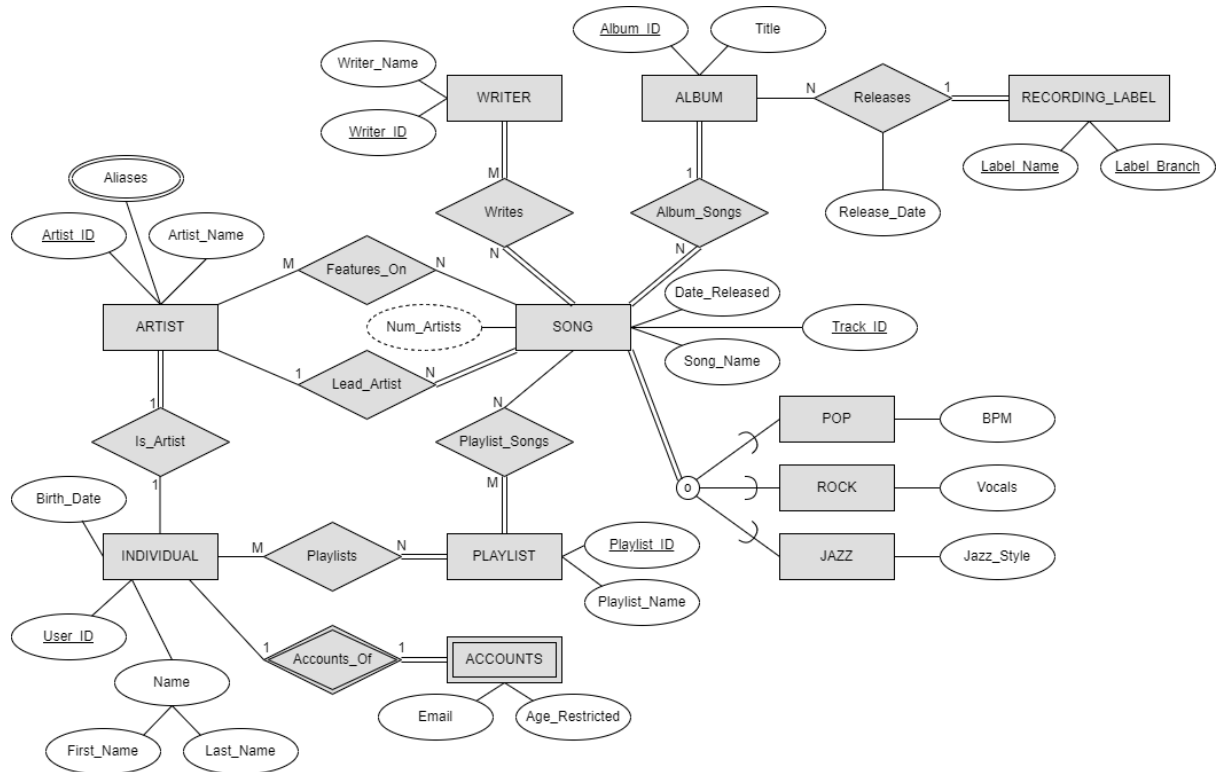# MySQL Database Revised

Revised ER Diagram

The ER from the first assignment was altered to better represent desired attributes, and include more relational features. Changes made include moving the birth_date attribute from the Account entity to the Individual entity, as well as making Account a weak entity by removing any identifying attributes and changing the participation constraints so that an Individual entity can have an Account entity. In this mini-world, the email is non-identifying and therefore not required to be unique. The Account entity also has a new attribute: age_restricted, that determines the language explicitness restriction on notifications shared. The purpose of the Account entity is to allow users to sign up for notifications, so that users may receive promotions and other such mail notifications.

Relational Schema
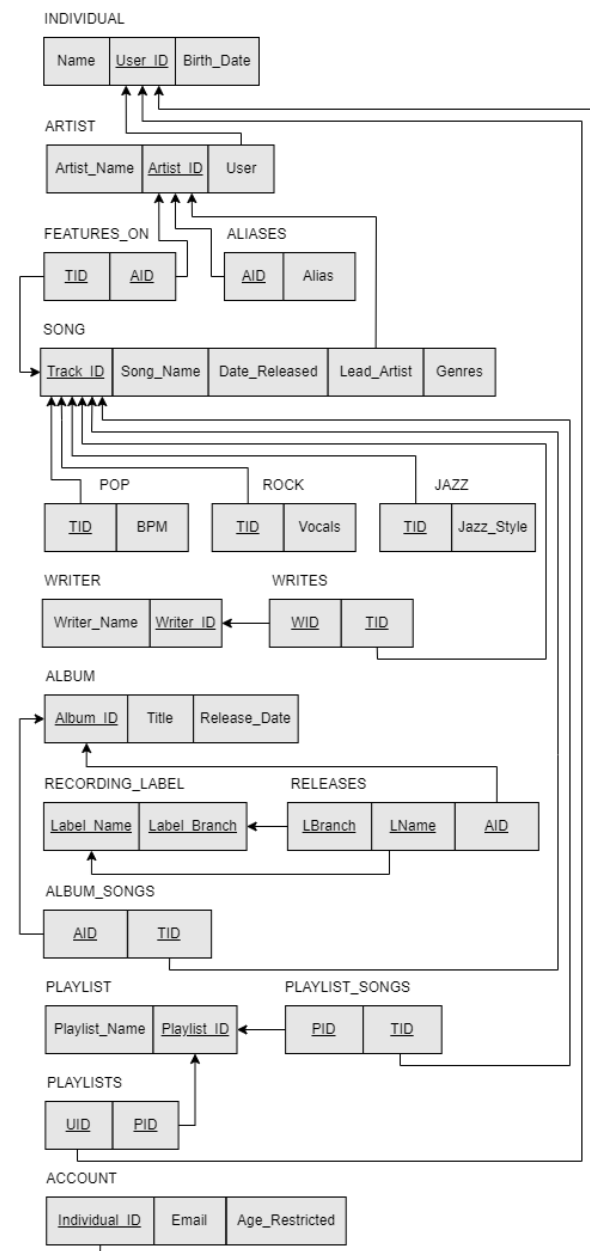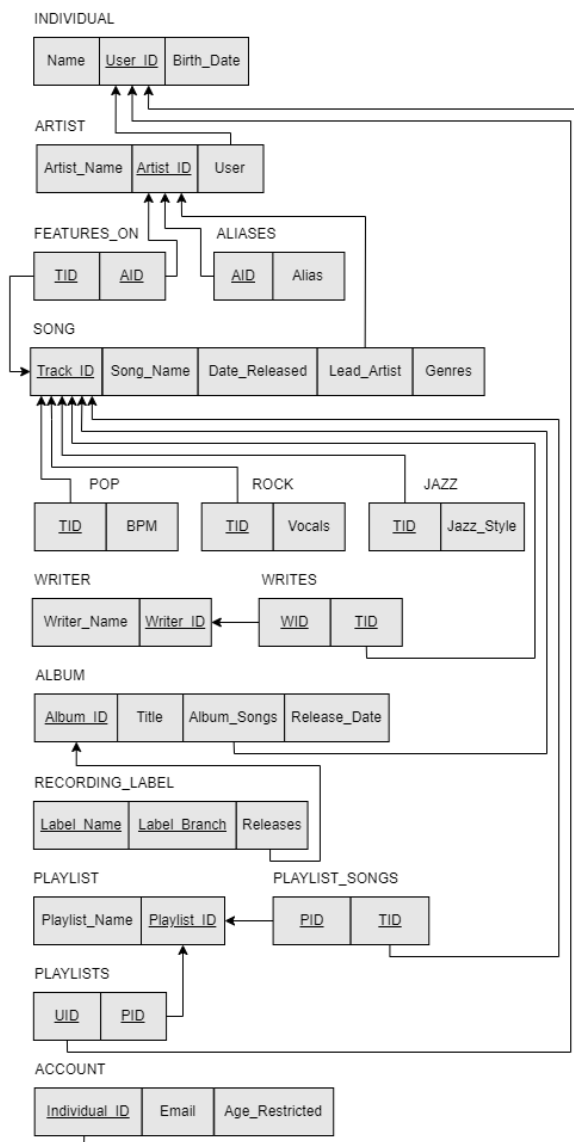
Normalisation

The first relational schema above (left) shows referential integrity constraints, and the other schema above (right), shows 1NF, while also coincidentally conforming to all defined levels of normalisation (as below).

- The original relational schema (left) was adjusted to 1NF through adjusting domains to include only atomic values and tuple attributes, so that they can only be single-valued. The album_songs attribute of the relation Album was transformed into its own relation, as was the releases attribute of the Recording_Label relation.

- Conforms to 2NF as every relation non-prime attribute is fully functionally dependent on the primary key of the relation.
- Conforms to 3NF as relations are in 2NF and no non-prime attribute is transitively dependent on the primary key.
- Conforms to BCNF as relations are in 3NF and every left-hand side of a functional dependency is a functional key.