# Project Phase 3

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## ER to Relational model

### Strong entities

- Created users table for the user entity with id as the primary key
- Created label companies table for the record label company entity with name as the primary key
- Created songs table for the song entity with id as the primary key
- Created creators table for the creator entity with id as the primary key, also made separate tables artists and bands for the artist and band subclass of creator

### Weak entities

- Created albums table for the album entity with creator id as an extra attribute and using using (name, creator id) as primary key
- Created playlist table for the playlist entity with user id as an extra attribute and using (name, user id) as primary key

### Relations

- Created worked on table for the works on relation with (created id, song id) as the primary key
- Created listens table for listens relation with (user id, timestamp) as primary key
- Created belongs table for belongs relations with artist id as primary key
- Created edit access table for Has edit access relation with (playlist name, creator user id, editor user id) as primary key
- Created release information table for CSAL relation with song id as primary key
- Created playlist songs table for USPU relation with (playlist name, creator user id, song id) as primary key

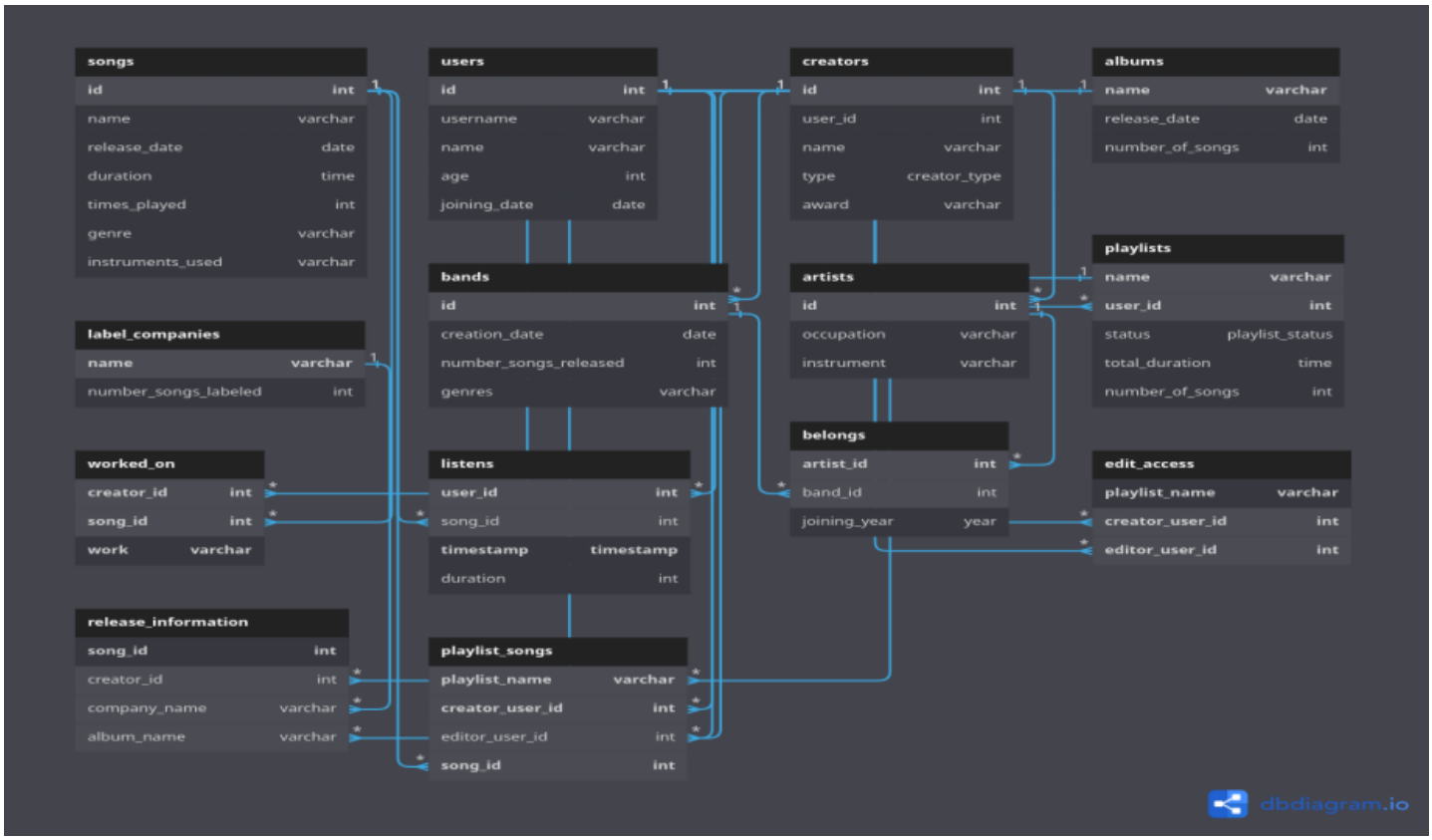


Figure 1: Relational model from ER diagram without any normalization

# 1st normalization (1NF)

## Multivalued Attributes

- Created creator awards table for the multivalued attribute award
- Created artists instruments table for the multivalued attribute instrument in the artists table
- Created band genres table for the multivalued attribute genre in the bands table
- Created song instruments table for the multivalued attribute songs table
- Created song genres table for the multivalued attribute genre in the songs table

# 2nd and 3rd normalizations

As there are no functional dependencies in our relational model apart from the ones with primary or candidate keys, so the 2nd and 3rd normalizations will be the same as 1st normalization.

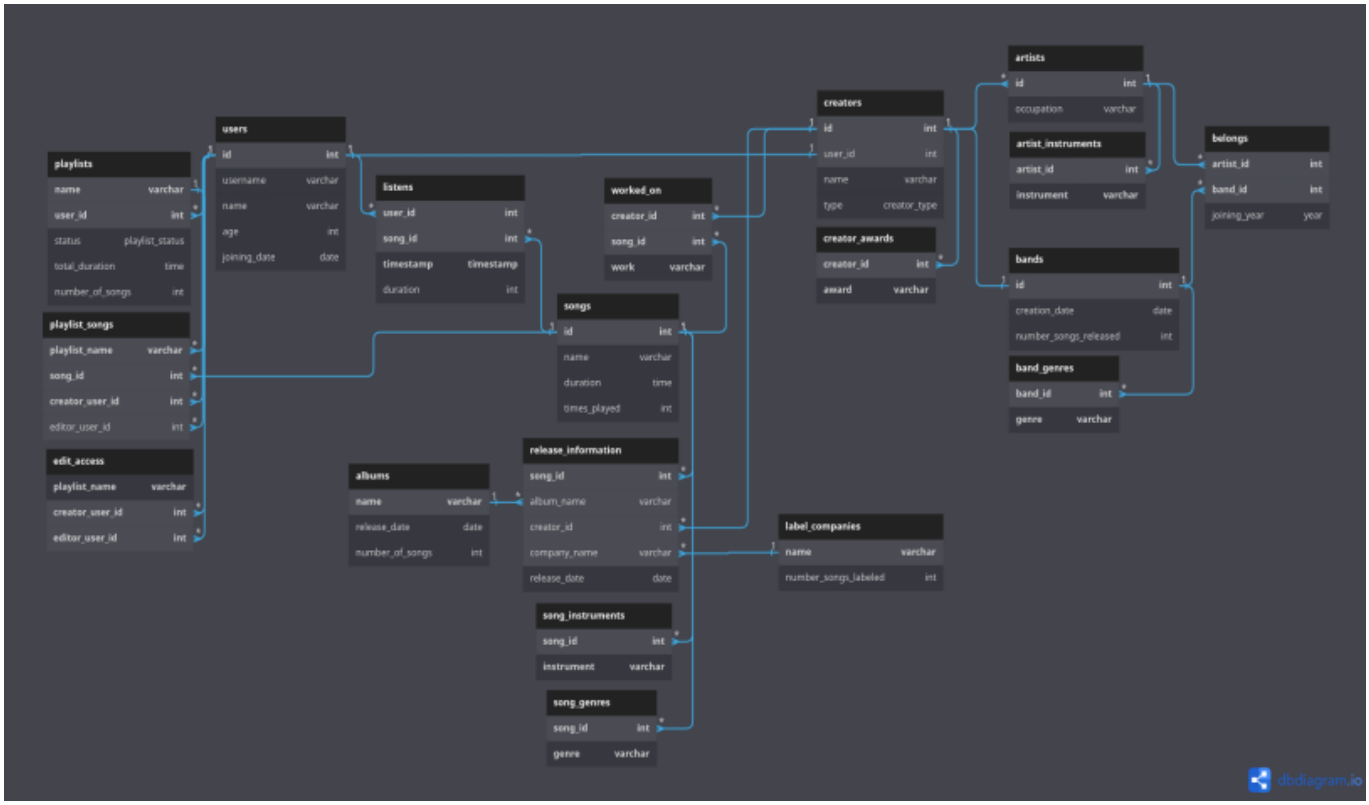


Figure 2: Relational model after normalization