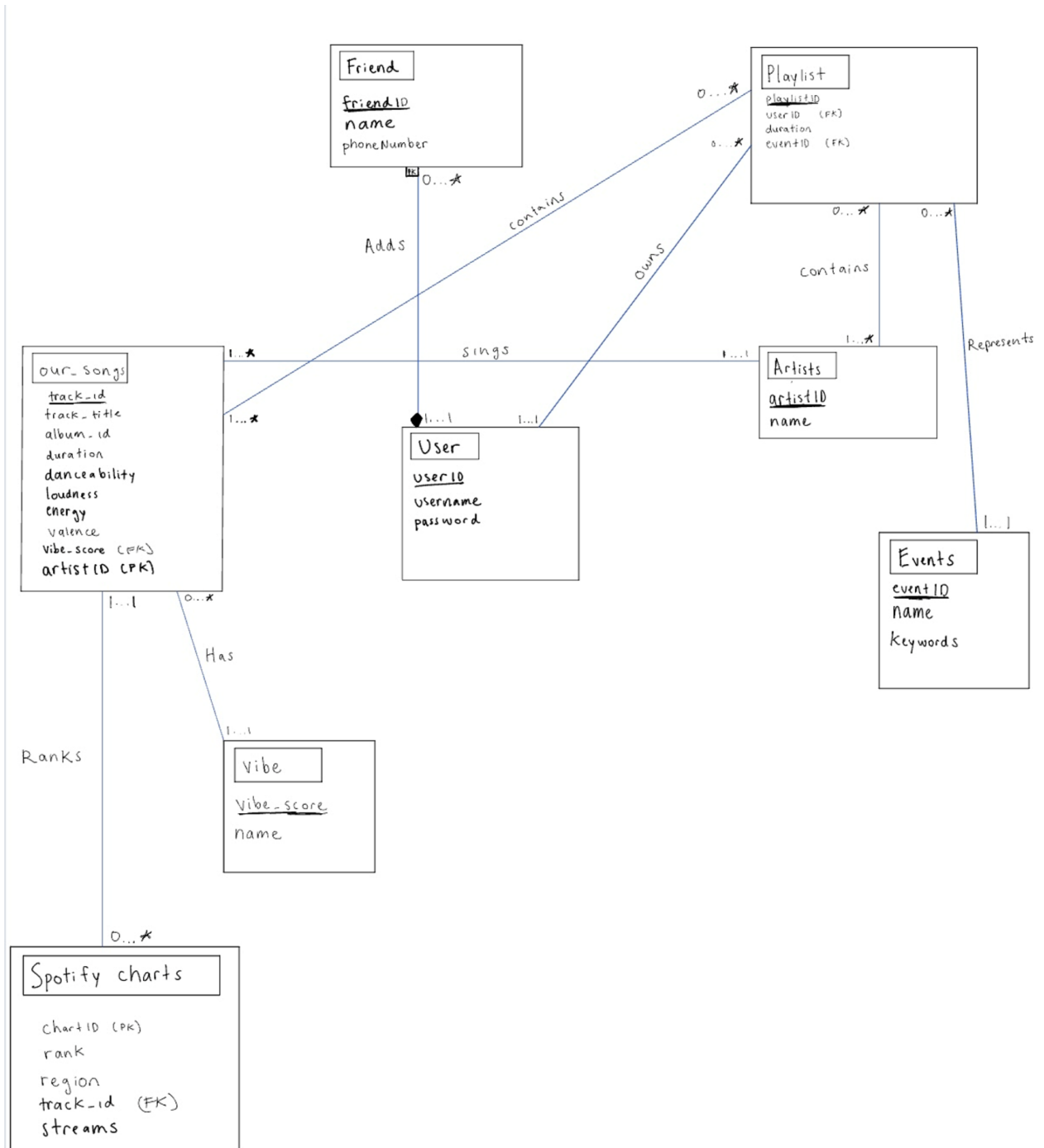


UML Diagram



Many to many relationship tables:

playlist_artist(playlistId, artistId) -> many to many relationships between playlist and artists in the playlist.

playlist_songs(playlistId, trackId) -> many to many relationship between playlist and songs in the playlist.

Relational Schema

Songs (track_ID: INT [PK], trackTitle: VARCHAR(50), albumID: INT, duration: REAL, danceability: INT, energy: INT, loudness: INT, liveness: INT, vibe_score: INT [FK to Vibe.vibe_score])

Events (eventID: INT [PK], name: VARCHAR(50), keywords: VARCHAR(70))

Vibe(vibe_score: INT [PK], name: VARCHAR(30))

Artists(artistID: INT [PK], name: VARCHAR(50))

SpotifyCharts(rank: INT [PK], region: INT [PK], track_ID: INT [FK to Songs.track_ID], streams: INT)

User(userID: VARCHAR(50) [PK], username: VARCHAR(20), password: VARCHAR(30))

Playlist(playlistID: VARCHAR(50) [PK], userID: VARCHAR(50) [FK to User.userID], trackID: VARCHAR(50) [FK to Songs.trackID], duration: REAL, eventID: INT [FK to Events.eventID])

Friend(friendID: INT [PK], User.userID: VARCHAR(50) [PK], name: VARCHAR(50), phoneNumber: REAL)

Descriptions of relationships:

- A Song can belong to 0 to many Spotify charts, and a Spotify chart can have 1 to many Songs.
- A song must have one vibe, but a vibe can belong to multiple songs.
- A song must have at least 1 artist and an artist must have at least one song.
- A song can belong to 0 or many playlists and a playlist can include 1 to many songs.
- A user has 0 or many playlists, but each playlist belongs to only one user.
- A playlist can have 1 or more artists and an artist can belong to 0 or more playlists.

- A playlist must belong to exactly one event, but one event can have 0 or many playlists.
- The Friend table has a weak dependency on the User table.

Assumptions:

- The user will input their data and preferences into the database. Each user will be given a unique userId, and username and password.
- The user is also able to input a friend list into the database, with the friend's name and phone number so that the playlist can be sent to the friends who are going to attend the party, if the user wishes to do so.
- The our_songs table is populated with the Spotify 1.2 Million Songs dataset
- The artists table is also populated by a Spotify dataset
- The spotify_charts table is populated by a Spotify charts dataset
- The vibe table was created by our group. It includes a vibe score and a vibe name.
- The events table was created by our group as well. This includes the eventId, name and keywords. Each playlist will have an event that the user chooses from a drop down bar. This could be for example "Christmas" or "birthday," and the keywords will be queried in song titles to see if they should be added to the specific playlist.
- The playlist table has the playlistId, the userId, duration, eventId, trackId, and artistId.