Tables:

1. user demographics details
   - a. user_id   int, primary key
   - b. name   string
   - c. gender   int
   - d. date_of_birth   datetime
   - e. country   string
   - f. language   string
   - g. race   string
   - h. premium_user   bool

2. song basic info
   - a. song_id   int, primary key
   - b. name   string
   - c. genre   string
   - d. subgenre   string
   - e. artist_id   int, foreign key
   - f. language   string
   - g. country   string
   - h. album   string
   - i. image   string

3. song - features
   - a. song_id   int, primary key, foreign key
   - b. artist_id   int, primary key, foreign key

4. author info
   - a. artist_id   int, primary key
   - b. name   string

5. song recommendation info
   - a. song_id   int, primary key, foreign key
   - b. likes   int
   - c. dislikes   int
   - d. minutes_listened   int

      e. number_of_plays   int
      f. month   int, primary key
      g. year   int, primary key

6. user playback behavior
      a. user_id   int, primary key, foreign key
      b. song_id   int, primary key,foreign key
      c. event_type   int
         i. event_type = like, start_play, end_play, dislike, skip,
      d. timestamp   datetime

7. ad distribution data
      a. song_id   int, foreign key
      b. ad_campaign   int, primary key, foreign key
      c. genre   string
      d. language   string
      e. month   int
      f. year   int

8. trends
      a. genre   string, primary key
      b. language   string, primary key
      c. country   string, primary key
      d. song_id   int, primary key, foreign key

User Interface - Front-End:

I. Artist Dashboard
    A. Published songs list
    B. Song Dashboard (opened by clicking a listed song)
        1. show basic information about the song - for regular user:
            a) name of the song
            b) artist name
            c) feature artist list
            d) genre
            e) subgenre

        f) language
        g) country
        h) album name / single if not part of an album
        i) image

2. show total performance information - for song artist
    a) number of likes
    b) number of dislikes
    c) number of minutes listened to
    d) number of plays

3. show monthly performance graphs / information - data analyst
    a) number of likes
    b) number of dislikes
    c) number of minutes listened to
    d) number of plays
    e) month
    f) year
    g) list of active ad campaigns for that month, including the genre and language of the ad campaign
    h) comparison with previous month and next month on all shown data(likes, dislikes, minutes listened, number of plays)

II. User For You Page

A. Most recently played songs ~ 9 songs
B. Song Recommendation:
1. based on the user's preferred genre ~ 3 genres with 3 songs each
    a) user's preferred genre is ordered descending by number of likes of songs grouped by their genre
2. based on the user's country and language ~ 6 songs randomly picked from trends table
3. based on the user behavior on previous listens ~ 9 songs
    a) user behavior is determined by previous song listens - ranked by minutes listened
C. Advertised songs
1. based on the currently active campaigns, that match the user language, country and preferred genre ~ 6 songs. This songs will be replace with 6 randomly picked songs from trends base on country and language, if the user is a premium user

III. Data Analyst Dashboard

A. Pie Chart / Graph with most played (by total minutes listened) Genre - by month and year
B. Pie Chart / Graph with most played (by total minutes listened) Subgenre - by month and year
C. Female/Male Top 3 played (by total minutes listened) Genre and Subgenre - by month and year
D. Top 3 played (by total minutes listened) Genre and Subgenre based on race - by month and year

E. Top 5 Genre and Subgenre by Country based on number of plays and total minutes listened - by month and year
F. Top 5 Genre and Subgenre by Language based on number of plays and total minutes listened - by month and year

Every year in the month of december, a new tab will appear - "End of year recap", the user will be able to see:
- their top 5 most listened songs
- for the most played song, they will see in which percentile they rank among other fans
- for the most played artist, they will see in which percentile they rank among other fans
- their total listened minutes across all songs
- personal top 5 genres
- 5 new genres discovered during the year
- a fun personalized card showing their "listener personality" which is picked from a set of 4 : adventurer (listens to new and different music mostly), replayer (listens to mostly familiar music), specialist (listens to the same genre on average), fanclubber (listening behavior is dominated by a single artist).

Personalized playlists based on top 5 user genres:
- 10 previously songs listened from said genre
- 10 songs never before listened from said genre