```sql
create
table
Artist
        (
                artist_name varchar(50) primary key
        );

        create table Album
        (
                album_title varchar(50) primary key,
                artist_name varchar(50),
                released_on_date date,
                constraint album_fk_artist
                        foreign key(artist_name)
                 references Artist(artist_name)
        );

        create table Song
        (
                song_title varchar(50) primary key,
                artist_name varchar(50),
                release_date date,
                album_title varchar(50),
                constraint song_fk_artist
                        foreign key(artist_name)
                 references Artist(artist_name),
                constraint song_fk_album
                        foreign key(album_title)
                 references Album(album_title)

        );

        create table Single
        (
                song_title varchar(50),
            release_date date,
            constraint single_fk_song
                        foreign key(song_title)
             references Song(song_title)
        );

        create table Genre(
                genre_name varchar(50) primary key
```

```sql
);

create table Song_Genre
(
        song_title varchar (50),
        genre_name varchar(50),
    constraint song_genre_fk_song
                foreign key(song_title)
         references Song(song_title),
        constraint song_genre_fk_genre
                foreign key (genre_name)
         references Genre(genre_name)
);

create table MusicUser
(
        username varchar(50) primary key
);

create table Playlist
(
        username varchar(50),
        playlist_title varchar(50) primary key,
        created_date date,
    constraint playlist_fk_musicuser
                foreign key(username)
         references MusicUser(username)
);

create table PlaylistSongs
(
        playlist_title varchar(50),
    song_title varchar(50),
    constraint playlistsongs_fk_playlist
                foreign key(playlist_title)
         references Playlist(playlist_title),
        constraint playlistsongs_fk_song
                foreign key(song_title)
         references Song(song_title)
);

create table SongRating
(
```

```
        username varchar(50),
    song_title varchar(50),
        rating int,
    rating_date date,
    constraint songrating_fk_musicuser
            foreign key(username)
     references MusicUser(username),
      constraint songrating_fk_song
            foreign key (song_title)
     references Song(song_title)
);

create table AlbumRating
(
        username varchar(50),
    album_title varchar(50),
    rating int,
    rating_date date,
    constraint albumrating_fk_musicuser
            foreign key(username)
     references MusicUser(username),
      constraint albumrating_fk_album
            foreign key(album_title)
     references Album(album_title)
);

create table PlaylistRating
(
        username varchar(50),
    playlist_title varchar(50),
    rating int,
    rating_date date,
    constraint playlistrating_fk_playlist
            foreign key(username)
     references MusicUser(username),
      constraint playlistrating_fk_album
            foreign key(playlist_title)
     references Playlist(playlist_title)
);

------------------------------
-- Queries --
```

```sql
-- 1
SELECT g.genre_name AS 'genre', COUNT(s.song_title) AS 'number_of_songs'
FROM Song_Genre g join Song s
on g.song_title = s.song_title
group by g.genre_name
order by number_of_songs desc
limit 3;

-- 2


-- 3
select a.album_title AS 'album_name', avg(r.rating) AS 'number_of_song_ratings'
from Album a join AlbumRating r
on a.album_title = r.album_title
where rating_date >= '1990-01-01' and rating_date <= '1999-12-31'
group by a.album_title
order by rating desc
limit 10;

-- 4
select genre_name, count(sr.rating) as 'number_of_song_ratings'
from SongRating sr
left join Song_Genre sg on sg.genre_name = sg.song_title
union
select genre_name, count(sr.rating) as 'number_of_song_ratings'
from SongRating sr
right join Song_Genre sg on sg.genre_name = sg.song_title
where rating_date >= '1991-01-01' and rating_date <= '1995-12-31'
group by genre_name
order by number_of_song_ratings desc
limit 3;

-- 5

-- # 6
select username, sum(eng.MostEngagedUsers)
from
(
        select username, count(username) as MostEngagedUsers
    from SongRating
    group by username
    UNION ALL
```

```
    select username, count(username) as MostEngagedUsers from AlbumRating group by
username
)eng group by username
limit 5;


-- # 7
select s.artist_name, count(s.song_title) as number_of_songs
from Artist a join Song s
on a.artist_name = s.artist_name
where release_date >= '1990-01-01' and release_date <= '1999-12-31'
group by s.artist_name
order by number_of_songs desc
limit 10;


-- # 8
select song_title, count(song_title) as number_of_playlists
from PlaylistSongs
group by song_title
order by number_of_playlists desc
limit 10;


-- # 9
select sg.song_title, s.artist_name, count(sg.song_title) as number_of_ratings
from Single sg
        join Song s
                on sg.song_title = s.song_title
        join Artist a
                on s.artist_name = s.artist_name
        join SongRating sr
                on s.song_title = sr.song_title
        where sg.song_title = sr.song_title
    group by song_title;


-- # 10
select a.artist_name as artist_title
from Artist a
        join Song s
                on s.artist_name = a.artist_name
where s.release_date <= '1993-12-31'
group by s.artist_name;
```