

## Part 1 (Database Schema) – 50 Points

```
CREATE TABLE Artist(  
    artistID int NOT NULL,  
    artistName VARCHAR(30) NOT NULL,  
    PRIMARY KEY (artistID)  
);
```

```
CREATE TABLE Album(  
    albumID int NOT NULL,  
    albumName varchar(30) NOT NULL,  
    artistID int NOT NULL,  
    PRIMARY KEY (albumID),  
    FOREIGN KEY (artistID) References Artist(artistID)  
);
```

```
CREATE TABLE Song(  
    SongID int NOT NULL,  
    inAlbum boolean NOT NULL,  
    artistID int NOT NULL,  
    albumID int,  
    songName varchar(30) NOT NULL,  
    releaseDate date NOT NULL,  
    PRIMARY KEY (SongID),  
    FOREIGN KEY (albumID) REFERENCES Album(albumID),  
    FOREIGN KEY (artistID) REFERENCES Artist(ArtistID)  
);
```

```
CREATE TABLE Playlist(  
    playlistID int NOT NULL,  
    songID int NOT NULL,  
    PRIMARY KEY (playlistID, songID),  
    FOREIGN KEY (songID) REFERENCES Song(songID)
```

```
        PlaylistID int NOT NULL,  
        listtitle varchar(50),  
        playlist_date datetime,  
        PRIMARY KEY (PlaylistID)  
    );
```

```
CREATE TABLE PlaylistSongs(  
    PlaylistID int NOT NULL,  
    songID int NOT NULL,  
    FOREIGN KEY (songID) REFERENCES Song(SongID),  
    FOREIGN KEY (PlaylistID) References Playlist(PlaylistID),  
    PRIMARY KEY(PlaylistID, songID)  
);
```

```
CREATE TABLE Users(  
    username varchar(50) NOT NULL,  
    PRIMARY KEY (username)  
);
```

```
CREATE TABLE Ratings(  
    username varchar(50) NOT NULL,  
    rating_type varchar(10) NOT NULL, #playlist, song, album  
    rating int NOT NULL ,  
    PlaylistID int,  
    albumID int,  
    SongID int, #only type being rated not null  
    Primary Key(username, PlaylistID, albumID, SongID),  
    FOREIGN KEY (PlaylistID) References Playlist(PlaylistID),
```

```
        FOREIGN KEY (albumID) References Album(albumID),  
        FOREIGN KEY (SongID) References Song(SongID),  
        FOREIGN KEY (username) References Users(username)  
    );
```

```
CREATE TABLE Genre(  
    SongID int NOT NULL,  
    Genre VARCHAR(15) NOT NULL,  
    FOREIGN Key (SongID) References Song(SongID)  
);
```

## **Part 2 (Queries) – 50 Points**