# Physical model and Data logistics

## Physical model

A screenshot of a computer

Description automatically generated

## Data logistics:

Entities:

Users: UserID, Username, Email, Country

AlbumCategories: CategoryID, CategoryName

Albums: AlbumID, Title, ReleaseDate, CategoryID

AlbumAudioTracks: AudioID, AlbumID, Title, Duration

Authors: AuthorID, Name, Country

AlbumAuthors: AlbumID, AuthorID

UserPlaylists: PlaylistID, UserID, Title, CreationDate

UserPlaylistsAudioTracks: PlaylistID, AudioID

UserFavorites: FavoriteID, UserID, AlbumID, AudioID

UserSubscriptions: SubscriptionID, UserID, SubscriptionType, StartDate, EndDate, PaymentStatus

Relationships**:**

|  |
| --- |
| **Users - UserPlaylists:** |
| Type: One-to-Many |
| Description: A user can create multiple playlists, and each playlist belongs to one user. |
| Foreign Key: UserPlaylists.UserID references Users.UserID. |
| **UserPlaylists -** **AlbumAudioTracks:** |
| Type: Many-to-Many |
| Description: A playlist can have multiple audio tracks, and each track can belong to multiple playlists. |
| Foreign Keys: |
| UserPlaylistAudioTracks.PlaylistID references UserPlaylists.PlaylistID. |
| UserPlaylistAudioTracks.AudioID references AlbumAudioTracks.AudioID. |
| **AlbumCategories - Albums:** |
| Type: One-to-Many |
| Description: Album categories can have multiple albums, and each album belongs to one category. |
| Foreign Key: Albums.CategoryID references AlbumCategories.CategoryID. |
| **Albums -** **AlbumAudioTracks:** |
| Type: One-to-Many |
| Description: An album can have multiple audio tracks, and each track belongs to one album. |
| Foreign Key: AlbumAudioTracks.AlbumID references Albums.AlbumID. |
| **Authors - AlbumAuthors:** |
| Type: Many-to-Many |
| Description: Authors can create multiple albums, and each album can have multiple authors. |
| Foreign Keys: |
| AlbumAuthors.AlbumID references Albums.AlbumID. |
| AlbumAuthors.AuthorID references Authors.AuthorID. |
| **Users – AlbumAudioTracks :** |
| Type: Many-to-Many |
| Description: Users can mark albums and audio tracks as favorites, creating relationships where a user can have multiple favorites. |
| Foreign Keys: |
| UserFavorites.UserID references Users.UserID. |
| UserFavorites.AlbumID references Albums.AlbumID. |
| UserFavorites.AudioID references AlbumAudioTracks.AudioID. |
| **Users - UserSubscriptions:** |
| Type: Many-to-Many |
| Description: A user can have multiple subscriptions, and each subscription belongs to one user. |
| Foreign Key: UserSubscriptions.UserID references Users.UserID. |