**CP: Object Oriented Programming**

PlaylistSys

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Submitted on:

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# **Data Model (Class Diagram)**

Song\_Genres\_ID {PK}

Genre\_ID\_fk

Song\_ID\_fk

Duration

**Song\_Genres**

Genre\_ID {PK}

Genre\_Description

**Genre**

Song\_ID {PK}

Artist\_Name\_fk

Song\_Title

Year

Chart\_Peak

Duration\_Mins

Duration\_Secs

Artist\_ID\_fk

Nation\_Of\_Artist\_fk

File\_Path

**Song**

Performed by

1🡪

11..\*

1🡪

Performs a

1.. \*

Artist\_ID {PK}

Artist\_Name

Nation\_Of\_Artist

**Artist**

1..\*

# **Relational Schema**

Artist (Artist\_ID {PK}, Artist\_Name, Nation\_Of\_Artist)

Genre (Genre\_ID {PK}, Genre\_Description)

Songs (Song\_ID {PK}, Artist\_Name\_fk, Song\_Title, Year, Chart\_Peak , Duration\_Mins, Duration\_Secs, Artist\_ID\_fk, Nation\_Of\_Artist\_fk, File\_Path)

Song\_Genre (Song\_Genres\_ID {PK}, Genre\_ID\_fk, Song\_ID\_fk)

# **Database Schema**

**Relation:** Artist

Attributes:

Artist\_ID int(7) UNIQUE NOT NULL

Artist\_Name varchar(2000) NOT NULL

Nation\_Of\_Artist varchar(50) NOT NULL

**Primary Key:** Artist\_ID

**Relation:** Genre

Attributes:

Genre\_ID int(3) UNIQUE NOT NULL

Genre\_Description varchar(255) NOT NULL

**Primary Key:**  Genre \_ID

**Relation:** Song

Attributes:

Song\_ID int(7) UNIQUE NOT NULL

Artist\_Name\_fk varchar(2000) NOT NULL

Song\_Title varchar(2000) NOT NULL

Year int(4) NOT NULL

Chart\_Peak int(3) NOT NULL

Duration\_Mins int(2) NOT NULL

Duration\_Secs int(2) NOT NULL

Artist\_ID\_fk int(7) UNIQUE NOT NULL

Nation\_Of\_Artist\_fk varchar(50) NOT NULL

File\_Path varchar(4000)

**Primary Key:** Song\_ID

**Foreign Key:** Artist\_ID\_fk (Artist)

**Foreign Key:** Nation\_Of\_Artist\_fk (Artist)

**Relation:** Song\_Genres

Attributes:

Song\_Genres\_ID int(7) UNIQUE NOT NULL

Genre\_ID\_fk int(3) UNIQUE NOT NULL

Song\_ID\_fk int(7) UNIQUE NOT NULL

**Primary Key:** Song\_Genres\_ID

**Foreign Key:** Genre\_ID\_fk (Genre)

**Foreign Key:** Song\_ID\_fk (Song)