



### **Music Store**

The Adyar Music Store has decided to store information on various albums performed by different artists, and musicians in a database. The company has wisely chosen you as a database designer. The following are the different entities with its attributes that are observed from the company requirements:

- a) The Musician has ID, name, birthplace.
- b) The Album has its name, ID, the year of release, number of tracks, the studio where recorded, genre, also records the musician who scored the music.
- c) The Song contains album ID, track number, name, length, and genre.
- d) An Artist has ID, name.
- e) The SungBy contains the album ID, artist ID, track number, recording date.
- f) The Studio has details about name, address, phone.

Consider the following assumptions while creating the database:

- # The music for each album is scored by a musician.
- # Each album is produced by a studio.
- # An album has many tracks / songs.

-----  
Create the database with the following constraints:

- 1) The genre for Album can be generally categorized as CAR for Carnatic, DIV for Divine, MOV for Movies, POP for Pop songs.
- 2) The genre for Song can be PHI for philosophical, REL for relationship, LOV for duet, DEV for devotional, PAT for patriotic type of songs.
- 3) The artist ID, album ID, musician ID, and track number, studio name are used to retrieve tuple(s) individually from respective relations.
- 4) Ensure that the artist, musician, song, sungby and studio can not be removed without deleting the album details.
- 5) A song may be sung by more than one artist. The same artist may sing for more

than one track in the same album. Similarly an artist can sing for different album(s).

- 6) It was learnt that the artists do not have the same name.
- 7) The number of tracks in an album must always be recorded.
- 8) The length of each song must be greater than 7 for PAT songs.
- 9) The year of release of an album can not be earlier than 1945.

There are some changes and additions in the requirements that have been identified in due course of practice. As a database designer accommodate the following changes in your design:

- 10) It is necessary to represent the gender of an artist in the table.
- 11) The first few words of the lyrics constitute the song name. The song name do not accommodate some of the words (in lyrics).
- 12) The phone number of each studio should be different.
- 13) An artist who sings a song for a particular track of an album can not be recorded without the record\_date.
- 14) It was decided to include the genre NAT for nature songs.
- 15) Due to typo-error, there may be a possibility of false information. Hence while deleting the song information, make sure that all the corresponding information are also deleted.

### **Learning outcomes:**

After the completions of this assignment, students are able :

1. To understand the problem requirements and define the database.
2. To create the database with appropriate constraints.
3. To alter / change the database definition.

### **Submission guidelines:**

1. Schema Diagram with constraints
2. Demo script file – violate each constraint with appropriate values.
3. The SQL statements should follow the standard format – should be readable.
4. Use the naming conventions while creating the database.
5. Add the question to your script file before every query by using REM.

