ENSF 608 Lab 2

Scenario: Music Competition

The directors of an annual music competition have decided to organize their participants using a database. Music teachers may register as many students from their studio as they would like. Students must perform an approved piece of music for any competition category that they choose to enter. All competition categories have a maximum age range and are scheduled to run on a specific half-day. The results of each competition are recorded for later publishing.

1. Specify all the relationships among the records of the database.

1. A parent has volunteered to create a program handout. What information would be appropriate to show in their view of the data? What is a query that they might make?

1. The head judge is responsible for finalizing and publishing the results. What is an update operation that they might need to make? What is one query that they might apply?

1. What is one other view that might need to be used by a different user group?

1. At the last minute, Ivan Singh registered another student who is planning to play the Beethoven piece. What information will need to be updated in the database?

A screenshot of a music score

Description automatically generated

1. \*\*Specify all the relationships among the records of the database:\*\*

- The TEACHER entity is related to the STUDENT entity through the Teaching\_ID.

- The CATEGORIES entity is related to the RESULTS entity through the Category\_ID.

- The COMPOSITIONS entity is related to the PERFORMER entity through the Music\_ID.

- The TEACHER entity is related to the COMPOSITIONS entity through the Teaching\_ID.

- The PERFORMER entity is related to the RESULTS entity through the Competitor\_Number.

2. \*\*A parent has volunteered to create a program handout. What information would be appropriate to show in their view of the data? What is a query that they might make?\*\*

Information appropriate for the parent's view:

- Student's First Name and Last Name

- Student's Age

- Student's Instrument

- Competition Category (from CATEGORIES)

- Music Title (from COMPOSITIONS)

- Teacher's Last Name and Studio Name (from TEACHER)

Query: Retrieve a list of students, their instruments, and the music they will perform in the competition.

```sql

SELECT P.First\_Name, P.Last\_Name, P.Age, P.Instrument, C.Genre AS Competition\_Category, M.Title AS Music\_Title, T.Last\_Name AS Teacher\_Last\_Name, T.Studio\_Name

FROM PERFORMER P

JOIN CATEGORIES C ON P.Category\_ID = C.Category\_ID

JOIN COMPOSITIONS M ON P.Music\_ID = M.Music\_ID

JOIN TEACHER T ON P.Teacher = T.Teaching\_ID;

```

3. \*\*The head judge is responsible for finalizing and publishing the results. What is an update operation that they might need to make? What is one query that they might apply?\*\*

Update Operation: The head judge might need to update the scores for each competitor in the RESULTS table to finalize the results.

Query: Retrieve the results for a specific competition category.

```sql

SELECT R.Competitor\_Number, P.First\_Name, P.Last\_Name, C.Genre AS Competition\_Category, R.Score

FROM RESULTS R

JOIN PERFORMER P ON R.Competitor\_Number = P.Competitor\_Number

JOIN CATEGORIES C ON R.Category\_ID = C.Category\_ID

WHERE C.Category\_ID = '001'; -- Replace '001' with the desired category ID

```

4. \*\*What is one other view that might need to be used by a different user group?\*\*

A different user group, such as the event organizers, might need a view that displays the schedule of the competition. This view could include information such as:

- Competition Category

- Maximum Age for the Category

- Day and Time of the Competition

- List of Performers (by name) in that category

This view would help event organizers ensure that the schedule is well-organized and that there are no conflicts in terms of age groups and timing.

5. \*\*At the last minute, Ivan Singh registered another student who is planning to play the Beethoven piece. What information will need to be updated in the database?\*\*

To reflect Ivan Singh's registration of another student who will perform a Beethoven piece, the following updates need to be made:

- Insert a new record into the PERFORMER table with information about the new student.

- Update the RESULTS table if the new student is competing.

For example, if the new student's information is as follows:

- First Name: [New Student's First Name]

- Last Name: [New Student's Last Name]

- Age: [New Student's Age]

- Instrument: [New Student's Instrument]

- Teacher: [Ivan Singh's Teaching\_ID]

- Music\_ID: [ID of the Beethoven piece in COMPOSITIONS]

- Category\_ID: [ID of the competition category]

You would insert a new record into the PERFORMER table and, if applicable, insert a record into the RESULTS table with the new student's Competitor\_Number and Category\_ID.