ENSF608 · Music_competition
DATABASES Assignment 4

1. Retrieve the first and lastname of each competitor.

$\pi_{FName, LName}(COMPETITOR)$

2. Retrieve the first and last name of all competitors under the age of twelve who play the oboe

$\pi_{FName, LName}(\sigma_{Age<12 \text{ AND } Instrument='Oboe'}(COMPETITOR))$

3. Retrieve all competitor ID numbers and the name of the music studio that they belong to.

$\pi_{CompetitorID, StudioName}(COMPETITOR \bowtie_{Teacher=TeacherID} TEACHER)$

4. Retrieve the first name and score earned by each competitor.

$\pi_{FName, Score}(COMPETITOR \bowtie_{CompetitorID=CompetitorID} PERFORMANCE)$

SEQUENCE of RELATIONAL ALGEBRA EXPRESSIONS

5. Retrieve the titles of all compositions that will performed during categories scheduled for 1:00pm

$\sigma_{CompTime='13.00'}(CATEGORY \bowtie_{CategoryID=CategoryID} PERFORMANCE \bowtie_{MusicID=MusicID} COMPOSITION)$

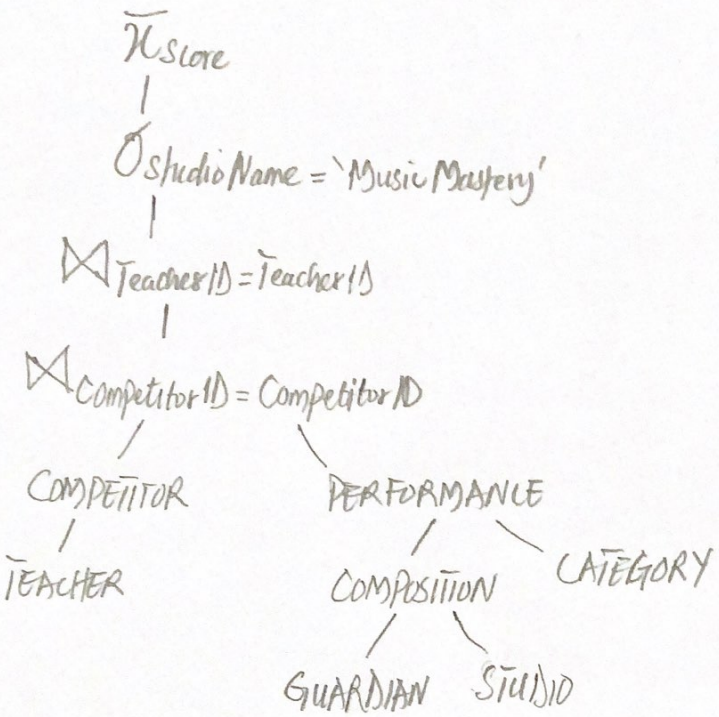
6. Retrieve the titles of all compositions that have not been selected by any performers

$\pi_{Title}(COMPOSITION - \pi_{MusicID}(PERFORMANCE))$

7. Queries and trees: Retrieve a list of all Score values that were earned by competitors belonging to the Music Mastery studio

$\pi_{Score}(\sigma_{StudioName='MusicMastery'}(TEACHER \bowtie_{TeacherID=TeacherID} COMPETITOR \bowtie_{CompetitorID=CompetitorID} PERFORMANCE))$.

Query Tree


π_{Score}
$\sigma_{StudioName = 'Music Mastery'}$
$\bowtie_{TeacherID = TeacherID}$
$\bowtie_{CompetitorID = CompetitorID}$
COMPETITOR
TEACHER
PERFORMANCE
COMPOSITION
GUARDIAN
STUDIO
CATEGORY