National Institute of Technology Calicut

Department of Computer Science and Engineering

CS3095D DATABASE MANAGEMENT SYSTEMS LABORATORY

S5/S7 B.Tech. - Monsoon Semester 2022

Exercise-7 (11/11/2022)

(Relational Algebra)

SET B

(Max. Marks: 5, Time: 2 Hours)

(Note: (i) Please note that you can use the PPT and syntaxes file uploaded to eduserver. (ii) After tables creation display the data and take screenshots (Alt+print-Screen) and also for every answer take screenshot to make it convenient for evaluation.)

Create a database with the following tables.

1. *Students_seating* table with the following schema:

Id *Int(20), Primary key*	Name *Varchar(20)*	Bench-number *Varchar(20)*

Please ensure the following:

- There exists atleast one bench that has at-least two students.
- There exists atleast two students with same name but different Id.

2. *Benches_info* table with the following schema:

Bench-number Integer *(20), Primary key*	Type *Varchar(20)*	Color *Varchar(20)*

Please ensure the following:

- Bench number indicates the order in which they are present in the class.
- Benches_info table should contain atleast two rows.
- Please ensure that there exist atleast two students who are benchmates and their bench color is brown (or some particular color bench as entered in the database, to make it suit for question 3).

Based on the above database find the following using the RA tool:

1. Find the student Id pairs (x, y) for which name is the same but the Ids are different. [0.75 Mark]
2. Find the benches for which there are at-least 2 students. [0.75 Mark]
3. Find all the pairs (x, y) such that "x and y are benchmates who sit in brown (or any particular color present in the data entered) colored benches". [0.75 Mark]
4. Find the benchmate(s) of student with Id 2 (or you may consider any one Id that has benchmate(s) as per the data you have entered). [0.75 Mark]

[Viva carries 2 Marks.]