National Institute of Technology Calicut

Department of Computer Science and Engineering

CS3095D DATABASE MANAGEMENT SYSTEMS LABORATORY

S5/S7 B Tech - Monsoon Semester 2022

Mid-Term Exam 1	Part B (14 Marks)	Date: 7/10/2022

Evaluation- II- Set B

Consider the relational schema of a music recording company database as below.

Unit(UID, UName, Ucity, MgrID)
Employee(EID, FirstName, LastName, EmpRole, Salary, DOB, UID, MgrID)
Albums(AlbID, AlbName, Year, Rating, UID, ArtID) /* Year stands for the year of release of the album.*/
Artist(ArtID, ArtistName, PhoneNum)
Tracks(TID, Title, Length, AlbID) // Length stands for duration of song.
Works(ArtID, TID, ArtRole) // Artist works on a track.
Makes(ArtID, AlbID) // Artist makes albums.
Concert(CID, Venue, Date, UID, ArtID)
Booking(BID, TypeOfPass, Price, CID)

Primary key for each relation is underlined. Foregin key is defined as follows:
MgrID in Unit and MgrID in Employee references Employee.
UID in Employee, UID in Concert and UID in Albums references Unit.
ArtID in Albums, ArtID in Works, ArtID in Concert and ArtID in Makes references Artist.
AlbID in Tracks and AlbID in Makes references Albums.
TID in Works references Tracks.
CID in Booking references Concert.

Answer the following,

1. Creation of all relations (1 Mark)
2. Set primary keys for each relation (1 Mark)
3. Set foreign key constraints. (1 Mark)
4. Find the distinct year of releases of albums. (0.5 Mark)
5. Find the track titles that start with the alphabet ‘m’. (0.5 Mark)
6. Display the title and rating of albums that has duration greater than 4 min and released after 1997. (0.5 Mark)
7. The company has decided to give a hike of 3% to all the employees on the occasion of its 10th anniversary. Update and display the Employee relation accordingly. (0.5 Mark)

8. Display the artist ID and name of the artists who have performed in Mumbai, Koch or Hyderabadi but not in Delhi. (1 Mark)

9. Count the number of concerts held in the last one month starting today. (1 Mark)

10. Give the correct interpretation of the query: (1.5 Mark)

```
SELECT CID, Price
FROM Booking;
Where (CID, Price) IN (SELECT CID, MIN(PRICE) FROM Booking
GROUP BY CID)
```

11. Display the details of artists who made albums and performed in concerts using INNER JOIN. (1.5 Mark)

12. Find out the employees who are also managers using independent subquery. (1 Mark)

13. Please justify (using Queries) the following constraints with suitable relation example (1.5 Mark)
    (i) CHECK (ii) DEFAULT (iii) FOREIGN KEY

14. Display the EID of second highest salaried employee using correlated subquery (without using TOP and LIMIT) (1.5 Mark)

********All the Best*********