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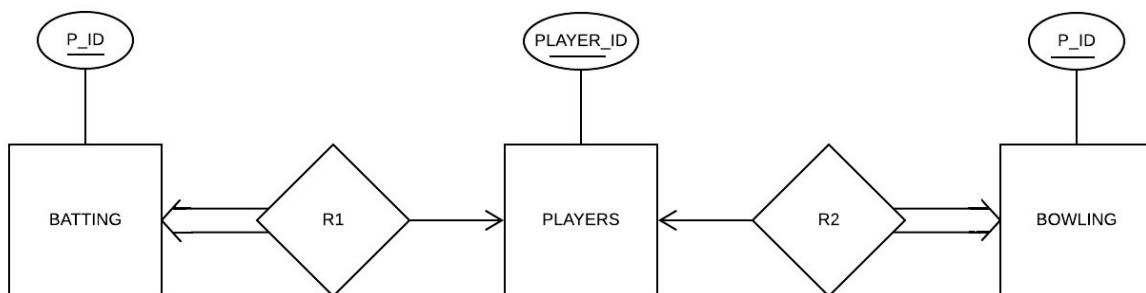
Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa campus
Database Systems (CS F212)
Midsemester Online Exam, 26/02/2020
Maximum marks : 20 Duration : 90 Minutes

INSTRUCTIONS:

1. This online exam contains nine questions, which are divided into Parts A and B. All questions are compulsory.
2. Download “db212midsem.sql” file from the course website.
3. Import the downloaded sql script from the command prompt. The sql script will create a database called “db212midsem”. Also, it will create three tables in db212midsem database.
4. You must submit two SQL files: StudentIdXXXXG_PartA.sql and StudentIdXXXXG_PartB.sql, which must contain the queries for Part A and Part B respectively.

Questions:

The tables in the db212midsem database are named: PLAYERS, BATTING and BOWLING. The PLAYERS contain details about cricket players. The BATTING and BOWLING tables contain the batting and bowling scores of the players. The player ID is the primary key in all the three databases.



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Part A

The queries for Part A must be saved in StudentIdXXXXG_PartA.sql file.

1. Write a query to add a column BOUNDARIES to the BATTING table. The default value of the BOUNDARIES column should be zero. (1 Mark)
2. Write a query to update the BOUNDARIES column (in the BATTING table) with the total number of fours and sixes (i.e. FOURS+SIXES). The value in the BOUNDARIES column must be updated for only those rows where the RUNS value is greater than 20. (1 Mark)
3. Alter the table definition(s) such that deletion of any player from PLAYERS table should not be permitted if it leads to inconsistent data. Also, any updates in PLAYER_ID (in PLAYERS table) should maintain data consistency across all table(s). Save the output of “show create table” for the tables PLAYERS, BATTING and BOWLING. (3 Marks)

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Part B

The queries for Part B must be saved in StudentIdXXXXG_PartB.sql file.

4. Write a query to display the players who debuted more than five years ago and have taken at least two wickets. (Note: Debut is the date on which a player played his/her first match.) (2 Marks)
5. Write a query to display the name of the player who scored the 2nd highest (batting) runs without using any aggregate functions and without using any LIMIT clause. (3 Marks)
6. Write a query to display the name of the Indian Player having 5th highest (batting) runs using only LIMIT clause(s). (2 Marks)
7. Write a query to display the TEAM whose overall batting Run_Rate is more than 7, where $\text{Run_Rate} = (\text{total no. of runs} * 6) \div (\text{total no. of balls})$. (2 Marks)
8. Write a query to display the Name, Nationality and Bowling Type of players who are either Indian or Right-arm Bowlers but NOT BOTH. Your query should not use the OR operator anywhere. (3 Marks)
9. Write a query using EXISTS/NOT EXISTS to display the Names and Fours scored by Allrounders of MI team who are either Indians or West Indians. (3 Marks)

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