SCS1309 Database Management

Lab Sheet - MySQL 03 & 04

The University of Colombo is hosting the Annual Inter-Faculty Sports Event of 2025. The event involves multiple teams from various departments and faculties, each participating in a series of sports competitions.

You have been tasked with creating and managing a database to store information about the participants, teams, events, and the results of the sports competitions. The database will help in tracking the performance of each faculty and provide a detailed overview of the event's progress.

1. In a schema called AIFS create the following tables with corresponding records given below

   Faculties Table

faculty_id (PK)	faculty_name	faculty_location	contact_info
1	School of Computing	Colombo	computing@ucsc.edu.lk
2	Faculty of Engineering	Colombo	engineering@uom.edu.lk
3	Faculty of Arts	Colombo	arts@arts.edu.lk

   Sports Table

sport_id (PK)	sport_name	sport_type
1	Football	Team Sport
2	Basketball	Team Sport
3	Cricket	Team Sport
4	Volleyball	Team Sport

   Teams Table

team_id (PK)	faculty_id (FK)	sport_id (FK)	team_name	captain_name
1	1	1	UCSC Football Team	Dimuth Karunaratne
2	1	2	UCSC Basketball Team	Lavishka Perera
3	2	3	UOM Cricket Team	Angelo Mathews
4	3	4	Arts Volleyball Team	Chathurika Perera

Players Table

player_id (PK)	team_id (FK)	player_name	player_role	age
1	1	Kumar Sangakkara	Forward	30
2	1	Lasith Malinga	Defender	34
3	2	Thisara Perera	Guard	33
4	2	Nuwan Kulasekara	Forward	34
5	3	Mahela Jayawardene	Batsman	34
6	3	Suranga Lakmal	Bowler	29
7	4	Chamari Athapaththu	Outside hitter	36
8	4	Ruwin Peiris	Setter	30
9	1	Angelo Perera	Midfielder	28
10	2	Dimuth Karunaratne	Center	29

Matches Table

match_id (PK)	sport_id (FK)	team1_id (FK)	team2_id (FK)	match_date	team1_score	team2_score
1	1	1	2	2025-01-10	3	2
2	2	2	3	2025-01-11	78	65
3	3	3	4	2025-01-12	250	200
4	4	4	1	2025-01-13	25	30
5	1	1	3	2025-01-14	1	1

Awards Table

award_id (PK)	match_id (FK)	winner_team_id (FK)	award_type	award_description
1	1	1	Best Team	UCSC Football Team won by 1 goal
2	2	2	MVP Player	Dinesh Chandimal of UCSC Basketball Team was awarded MVP
3	3	3	Best Batsman	Mahela Jayawardene scored the most runs for UOM Cricket Team
4	4	4	Best Team	Arts Volleyball Team won by 5 points
5	5	1	Best Defense	Lasith Malinga's defense played a key role in the football match draw

I. Write a SQL command to ensure that the age column in the Players table always contains values greater than or equal to 18 by enforcing a CHECK constraint.

II. You have identified that there could be duplicate entries for player_name in the Players table. Write a SQL query to add a unique constraint on the player_name column to ensure that no two players have the same name

III. Write a SQL query to modify the Players table to add a new column player_nationality (VARCHAR(50)) to store the nationality of each player.

IV. Write an SQL command to insert a new player into the Players table with the following information:

player_id: 11 , team_id: 2 , player_name: "Kusal Perera" , player_role: "Wicketkeeper" , age: 29

V. You want to add a record to the Matches table where match_id is 6, sport_id is 2, team1_id is 1, team2_id is 3, the match_date is "2025-01-15", and the score for both teams is "50-45". Write the SQL query for this.

VI. Update the team_name in the Teams table where team_id is 3, changing the name to "UOM Advanced Cricket Team".

VII. Write an SQL query to update the player_role for the player with player_id 1 to "Goalkeeper" in the Players table.

VIII. Write a SQL command to delete the player record with player_id 10 from the Players table.

IX. Write a SQL command to delete all records from the Matches table where the match_date is before "2025-01-10".

X. Write a SQL query to retrieve the names of all players in the Players table whose age is greater than 30, sorted by their names in alphabetical order.

XI. Write an SQL query to get the average age of players in each team_id in the Players table. Group the results by team_id.

XII. Retrieve the `team_name` and `coach` from the `Teams` table, sorted first by `faculty_name` in ascending order, and then by `team_name` in descending order.

XIII. Write a SQL query to retrieve the names of all teams that played in the match with match_id 1, along with the score of each team. Display the results in descending order of team1_score.

XIV. Write an SQL query to select distinct sport_name from the Sports table, sorted by the sport_name in ascending order.

Important Note : Ensure that you save the database carefully after completing all tasks. You will need this database for the next session, as it will serve as the basis for advanced queries and further exercises. Use appropriate tools to export or back up your database and verify that it is stored securely.