

Project Title: Soccer Game Management System

Objective:

To design and implement a database system to manage and organize soccer games, including teams, players, matches, scores, and statistics.

Project Description:

The Soccer Game Management System is a comprehensive database designed to manage all aspects of soccer games. This system will help in organizing matches, tracking player performance, maintaining team records, and generating statistics. It aims to streamline the management of soccer games for clubs, leagues, and associations.

Entities and Relationships:

→ Teams:

- ◆ **Attributes:** TeamID (**Primary Key**), TeamName, CoachName, HomeGround, FoundedYear.
- ◆ **Description:** This table stores information about the teams participating in the league or tournament.

→ Players:

- ◆ **Attributes:** PlayerID (**Primary Key**), TeamID (Foreign Key), PlayerName, Position, Nationality.
- ◆ **Description:** This table contains details about the players, including which team they belong to.

→ Matches:

- ◆ **Attributes:** MatchID (**Primary Key**), Team1ID (Foreign Key), Team2ID (Foreign Key), MatchDate, Venue.
- ◆ **Description:** This table records the matches, including the teams playing, the date, and the venue.

→ Scores:

- ◆ **Attributes:** ScoreID (**Primary Key**), MatchID (Foreign Key), TeamID (Foreign Key), GoalsScored.
- ◆ **Description:** This table keeps track of the scores for each team in each match.

→ Statistics:

- ◆ **Attributes:** StatID (**Primary Key**), PlayerID (Foreign Key), MatchID (Foreign Key), Goals, Assists, YellowCards, RedCards.
- ◆ **Description:** This table maintains individual player statistics for each match.

SQL Queries:

1. Retrieve all teams:

```
SELECT * FROM Teams;
```

TeamID	TeamName	CoachName	HomeGround	FoundedYear
1	Team A	Ravi	Stadium A	1990
2	Team B	James	Stadium B	1985

2. List all players in a specific team:

```
SELECT * FROM Players WHERE TeamID = 1;
```

PlayerID	TeamID	PlayerName	Position	Nationality
1	1	Shankar	Forward	India
3	1	Karan	Midfielder	India
4	1	Rahul	Goalkeeper	India

3. Get match details including team names:

```
SELECT m.MatchID, t1.TeamName AS Team1, t2.TeamName AS Team2, m.Venue  
FROM Matches m  
JOIN Teams t1 ON m.Team1ID = t1.TeamID  
JOIN Teams t2 ON m.Team2ID = t2.TeamID;
```

MatchID	Team1	Team2	Venue
1	Team A	Team B	Stadium A

4. Player statistics for a specific match:

```
SELECT p.PlayerName, s.Goals, s.Assists, s.YellowCards, s.RedCards  
FROM Statistics s  
JOIN Players p ON s.PlayerID = p.PlayerID  
WHERE s.MatchID = 1;
```

PlayerName	Goals	Assists	YellowCards	RedCards
Shankar	1	0	0	0
William	0	1	1	0

Conclusion:

The Soccer Game Management System project provides a robust framework for managing soccer game data. It includes entities for teams, players, matches, scores, and statistics, ensuring comprehensive coverage of the essential aspects of soccer game management.