

CRICKET RATING MANAGEMENT SYSTEM

The **Cricket Rating Management System** is designed to manage and track cricket-related data, including players, teams, matches, and ratings. It serves as a digital database for cricket tournaments, helping administrators, analysts, and fans access performance insights efficiently.

Entities:

1. Player

- Player_ID (Primary Key)
- Name
- Jersey_Number
- Role (Batsman, Bowler, All-rounder, Wicketkeeper)
- Team_ID (Foreign Key)
- Matches_Played
- Runs
- Wickets
- Total_Sixes
- Total_Fours
- Highest_Score
- Strike_Rate
- Batting_Average
- Bowling_Average
- Rating

2. Team

- Team_ID (Primary Key)
- Team_Name

- Country
- Coach
- Captain (Player_ID as Foreign Key)
- Ranking

3.Match

- Match_ID (Primary Key)
- Date
- Venue
- Team1_ID (Foreign Key)
- Team2_ID (Foreign Key)
- Umpire_ID (Foreign Key)
- Match_Status (Ongoing, Completed)
- Result

4. Scoreboard

- Scoreboard_ID (Primary Key)
- Match_ID (Foreign Key)
- Innings_Played
- Total_Runs
- Total_Wickets
- Overs
- Extras
- Highest_Score
- Winning_Team_ID (Foreign Key)

5. Umpire

- Umpire_ID (Primary Key)
- Name
- Country
- Experience (Years)

- Date_of_Birth

6. Weather

- Weather_ID (Primary Key)
- Match_ID (Foreign Key)
- Forecast_Date
- Condition (Rainy, Clear, Cloudy, etc.)

7. Stadium

- Stadium_ID (Primary Key)
- Name
- Location
- Seating_Capacity

8. Equipment/Stocks

- Equipment_ID (Primary Key)
- Name
- Quantity_Available
- Quantity_Used (Per Match)

9. Schedule

- Schedule_ID (Primary Key)
- Match_ID (Foreign Key)
- Date
- Time

Relationships:

1. **Player - Team** → (*Many-to-One*)
 - A **Player** belongs to **one** Team.
 - A **Team** has **many** Players.
 - (**1 Team → M Players**)
2. **Team - Match** → (*Many-to-Many*)
 - A **Team** plays in **many** Matches.

- A **Match** involves **two** Teams.
 - (**M Teams → M Matches**)
3. **Match - Scoreboard** → (*One-to-One*)
- Each **Match** has **one** Scoreboard.
 - A **Scoreboard** belongs to **one** Match.
 - (**1 Match → 1 Scoreboard**)
4. **Match - Umpire** → (*Many-to-Many*)
- A **Match** is officiated by **one or more** Umpires.
 - An **Umpire** can officiate **many** Matches.
 - (**M Matches → M Umpires**)
5. **Player - Match** (via **Performance**) → (*Many-to-Many*)
- A **Player** plays in **many** Matches.
 - A **Match** has **many** Players.
 - (**M Players → M Matches**)
6. **Match - Stadium** → (*Many-to-One*)
- A **Match** is played in **one** Stadium.
 - A **Stadium** can host **many** Matches.
 - (**1 Stadium → M Matches**)
7. **Match - Weather** → (*One-to-One*)
- A **Match** is associated with **one** Weather forecast.
 - A **Weather record** belongs to **one** Match.
 - (**1 Match → 1 Weather forecast**)
8. **Player - Rating** → (*One-to-Many*)
- A **Player** has multiple Rating updates over time.
 - Each **Rating update** belongs to **one** Player.
 - (**1 Player → M Ratings**)
9. **Match - Schedule** → (*One-to-One*)
- A **Match** follows **one** Schedule.

- A **Schedule** is linked to **one** Match.
- **(1 Match → 1 Schedule)**

10. Match - Equipment → (Many-to-Many)

- A **Match** requires multiple Equipment items.
- Equipment is used in multiple Matches.
- **(M Matches → M Equipment)**

ER Diagram:

