

# Database Organization

## Project Phase 1

### Group members: (Group 12)

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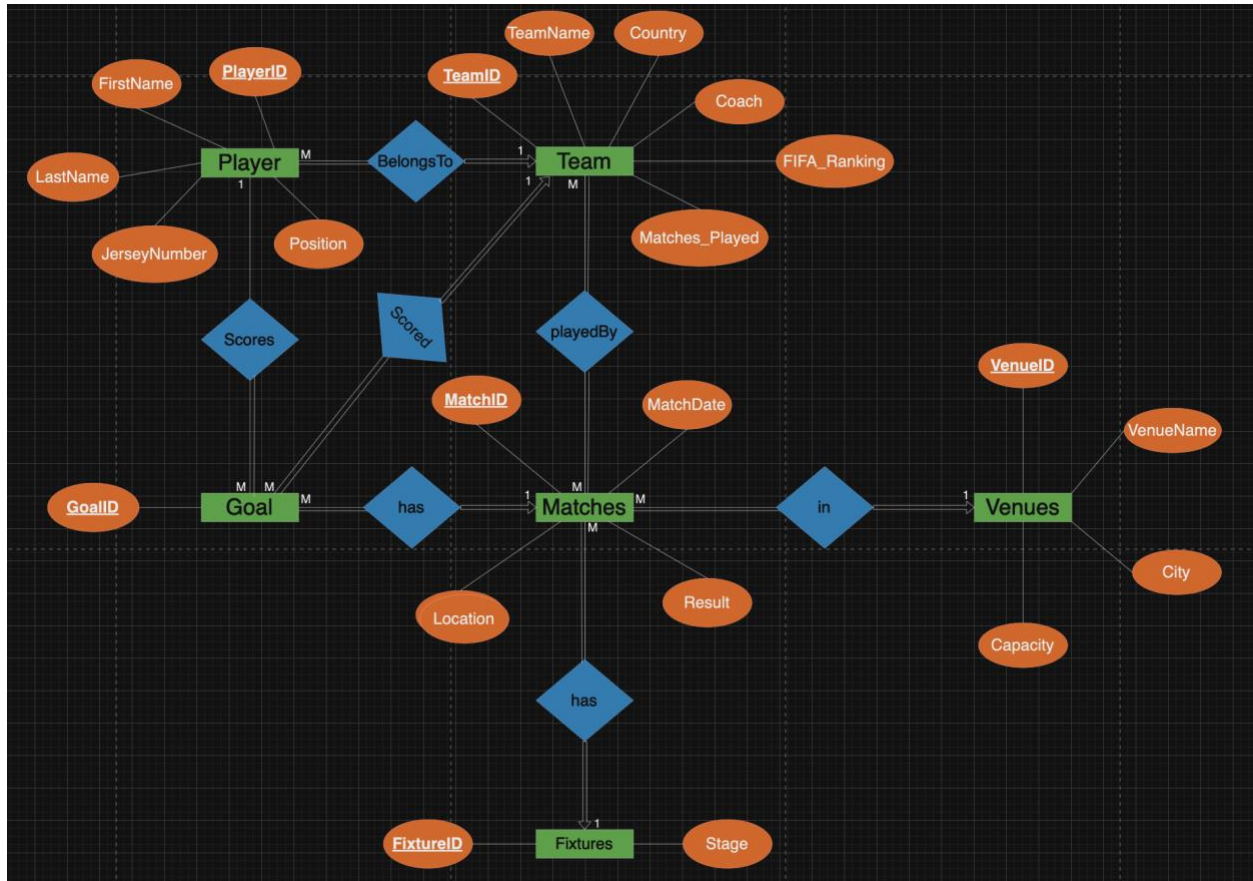
### Introduction:

Our project's primary goal is to create a web application with a database to manage Women's FIFA tournament statistics. As part of Deliverable 1 we have explored the website (<https://www.fifa.com/fifaplus/en/tournaments/womens/womensworldcup/australia-new-zealand2023>) and have identified the essential information and designed the Entity Relationship Diagram (ERD). In our case we have totally 7 Entities and have also provided the business rules with respect to it.

### Relational Schema:

1. Team (TeamID, TeamName, Country, Coach, FIFA\_Ranking, Matches\_Played)
2. Player(PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)
3. Matches(MatchID, Match\_Date, Location, TeamID\_1, TeamID\_2, Result, VenueID)
4. Venues(VenueID, VenueName, City, Capacity)
5. Goal(GoalID, MatchID, PlayerID, ScoredforTeamID)
6. Fixture(FixtureID, MatchID, Stage, Location)
7. PlayedBy(TeamID\_1, TeamID\_2, MatchID, Match\_Date)

## ER Diagram:



## **Business Rules:**

### **One-To-Many Relationships Between Player & Team:**

- Each player can be associated with one, and only one team.
- A team can have one or multiple players.

### **Many-to-Many relationship between Team & Matches:**

- A team can participate in one or more matches.
- A match can involve multiple teams.

### **One-to-Many relationship between Player & Goal:**

- A player can score one or more goals.
- A goal can only be scored by one player.

### **One-to-Many relationship between Goal & Matches:**

- One goal can be scored in one match.
- A match can have zero or more goals.

### **One-to-Many relationship between Matches & Fixture:**

- A fixtures can consist of multiple matches.
- A match can be played under one fixture.

### **One-to-Many relationship between Matches and Venues:**

- One or more matches can be played at one venue.
- Each match can be played at one venue only.

### **One-to-Many relationship between Team and Goal:**

- A team can score many goals.
- Each goal can only be assigned to one team.