# Database Organization
Project Phase 1

Introduction:

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
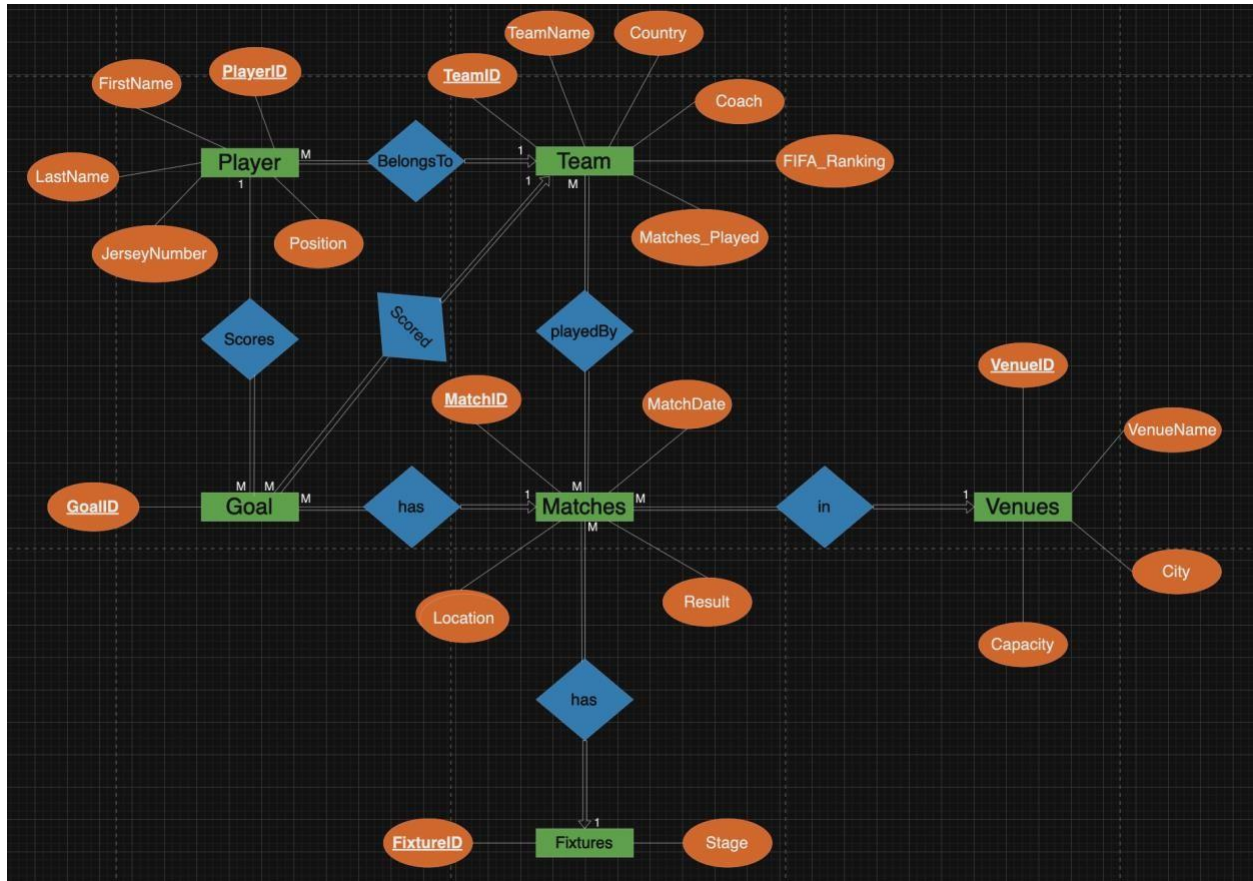
Business Rules:

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.