Database Structure

# Functional Dependencies:

**Teams:**

### Primary Key = Team\_ID

ID -> Team\_Name Full Functional Dependency

ID-> Country Full Functional Dependency

ID -> Home\_Stadium\_Id Full Functional Dependency

Team\_Name ->ID Full Functional Dependency

Team\_Name-> Country Full Functional Dependency

Team\_Name -> Home\_Stadium\_Id Full Functional Dependency

# Stadium:

### Primary Key = Stadium\_ID

Stadium\_ID -> Name Full Functional Dependency

Stadium\_ID -> City Full Functional Dependency

Stadium\_ID -> Capacity Full Functional Dependency

Stadium\_ID ->Country Full Functional Dependency

City -> Country Full Functional Dependency

Stadium\_Name -> Stadium\_ID Full Functional Dependency

Stadium\_Name -> City Full Functional Dependency

Stadium\_Name -> Capacity Full Functional Dependency

Stadium\_Name -> Country Full Functional Dependency

City,Capacity -> Country,ID,Name Full Functional Dependency

## Managers:

### Primary Key = ID

ID → First\_Name, Last\_Name, Nationality, DOB, Team\_Id Full Functional Dependency Last\_Name -> ID, First\_Name, Nationality, DOB, Team\_Id Full Functional Dependency DOB-> ID, First\_Name, Nationality, Last\_Name, Team\_Id Full Functional Dependency

## Goals:

### Primary Key = Goal\_ID

Goal\_Id -> Match\_Id, Pid, Duration, Assist, Goal\_Desc Full Functional Dependency

(Match\_Id, Pid,Duration) -> Goal\_ID,Assist, Goal\_Desc Full Functional Dependency

# Match:

### Primary Key = Match\_ID

Match\_ID -> Season, Date\_Time, Home\_Team\_ID, Away\_Team\_ID, Stadium\_ID, Home\_Team\_Score, Away\_Team\_Score, Penalty\_Shoot\_Out, Attendance Full Functional Dependency

(Date\_Time, Stadium\_ID) -> Season, Home\_Team\_ID, Away\_Team\_ID, Home\_Team\_Score, Away\_Team\_Score, Penalty\_Shoot\_Out, Attendance, Match\_ID Partial Functional Dependency

(Date\_Time, Home\_Team\_ID, Away\_Team\_ID) -> Match\_ID, Season Full Functional Dependency

# Players:

### Primary Key = Player\_ID

Player\_ID -> First\_Name, Last\_Name, Nationality, Dob, Team\_ID, Jersey\_Number, Position, Height, Weight,

Foot Full Functional Dependency

(First\_Name, Last\_Name, Nationality, Dob) -> Player\_ID,, Nationality, Team\_ID, Jersey\_Number, Position, Height, Weight, Foot Full Functional Dependency

**Normalization**

**Teams:**

1NF : Passed : All Attributes are Atomic

2NF : Passed : No Partial Functional Dependency

3NF : Passed : No Transitive Relations; no prime attribute determines another prime attribute.

**Stadium:**

1NF : Passed : All Attributes are Atomic

2NF : Passed : No Partial Functional Dependency

3NF : Failed City-> Country : Create new table with City and Country having City as FK

**Matches:**

1NF : Passed : All Attributes are Atomic

2NF : Failed : Date\_Time-> Season : Create New Table : Date\_Time, Season

Having Date\_Time as FK.

3NF : Failed City-> Country : Create new table with City and Country having City as FK

1NF : Passed : All Attributes are Atomic

2NF : Passed : No Partial Functional Dependency

3NF : Passed : No Transitive Relations; no prime attribute determines another prime attribute.

**Managers:**

1NF : Passed : All Attributes are Atomic

2NF : Passed : No Partial Functional Dependency

3NF : Passed : No Transitive Relations; no prime attribute determines another prime attribute.

**Goals:**

1NF : Passed : All Attributes are Atomic

2NF : Passed : No Partial Functional Dependency

3NF : Passed : No Transitive Relations; no prime attribute determines another prime attribute.