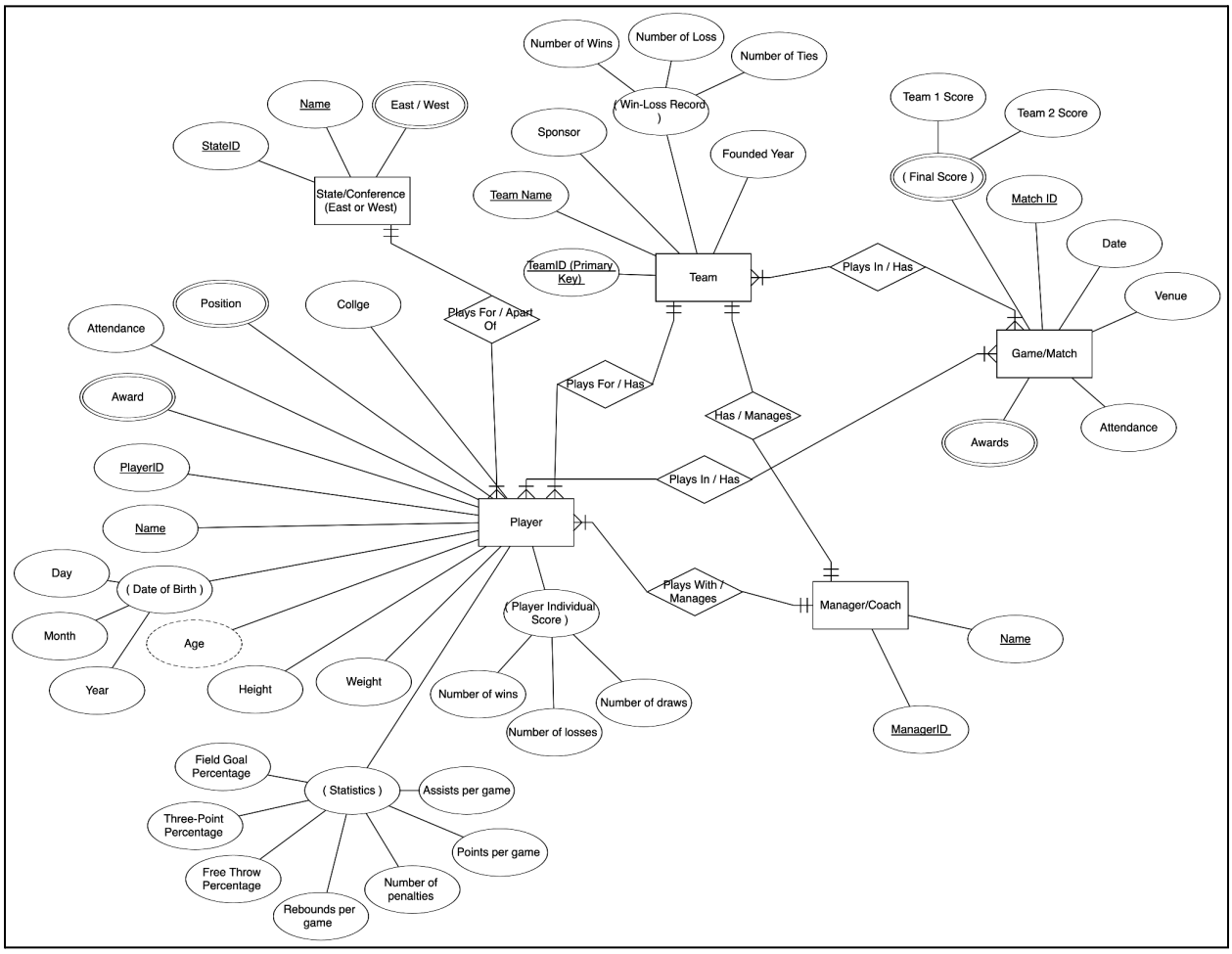
Difference between initial ER Diagram and XML Instance Document



Entities:

Player	
A single Basketball player's information like name, age, personal stats, etc.	
Initial ER Diagram	**XML Instance**
PlayerID (Primary Key)	<PlayerID></PlayerID>
Name	<Name></Name>
Age	<Age></Age>
BirthDate	<BirthDate></BirthDate>

Height	<Height></Height>
Weight	<Weight></Weight>
Position	<Position></Position>
College	<College></College>
Attendance	<Attendance></Attendance>
Awards	<Awards></Awards>
Number of wins	<NumberofWins></NumberofWins>
Number of losses	<NumberofLosses></NumberofLosses>
Number of draws	<NumberofDraws></NumberofDraws>
Field Goal Percentage	<FieldGoalPercentage></FieldGoalPercentage>
Free Throw Percentage	<FreeThrowPercentage></FreeThrowPercentage>
Three-Point Percentage	<ThreePointPercentage></ThreePointPercentage>
Number of penalties	<NumberOfPenalties></NumberOfPenalties>
Points per game	<PointsPerGame></PointsPerGame>
Assists per game	<AssistsPerGame></AssistsPerGame>
Rebounds per game	<ReboundsPerGame></ReboundsPerGame>
-	<TeamID></TeamID>
-	<StateID></StateID>

Every ER Diagram's entity has properly transitioned to the Player's XML scheme, which we observed above. We can notice a one-to-one effective translation when I compare the XML structure with the entity of the ER Diagram. The only difference is the addition of TeamID and StateID, to trace back the which team or state the player is a part of.

Team	
Represents a Basketball team's statistics such as the entire team score, number of Wins, Loss, Ranking, etc.	
Initial ER Diagram	**XML Instance**

TeamID (Primary Key)	<TeamID></TeamID>
Team Name	<TeamName></TeamName>
Sponsor	<Sponsor></Sponsor>
Founded Year	<Founded></Founded>
Win-Loss Record	<Record></Record>
Number of Wins	<Wins></Wins>
Number of Loss	<Losses></Losses>
Number of Ties	<Draws></Draws>
-	<Rank></Rank>

Similarly, the ER Diagram's entity has properly transitioned to the Teams's XML scheme, which we observed above. The only difference is the addition of the Team’s rank in the tournament.

Game/match	
Stores data regarding the current season's games between 2 teams	
Initial ER Diagram	**XML Instance**
GameID (Primary Key)	<GameID></GameID>
Date	<Date></Date>
Venue	<Venue></Venue>
Attendance	<Attendance></Attendance>
Final Scores	–
Awards	<Awards></Awards>

The ER Diagram's entity has properly transitioned to the Game's XML scheme, which we observed above. The only difference is the addition of the removal of the Final Score since that is irrelevant.

Coach/Manager	
Holds information regarding the manager's name that a player plays with or the name of the entire team managed by the coach.	
Initial ER Diagram	**XML Instance**
ManagerID (Primary Key)	<ManagerID></ManagerID>
Name	<Name></Name>

Every ER Diagram's entity has properly transitioned to the Player's XML scheme, which we observed above. We can notice a one-to-one effective translation when I compare the XML structure with the entity of the ER Diagram.

State/Division (east or west conference)	
Contains information regarding the name of the State a player can participate in and which conference (East/West) it falls under.	
Initial ER Diagram	**XML Instance**
StateID (Primary Key)	<StateID></StateID>
Name	<Name></Name>
Conference	<Conference></Conference>

Every ER Diagram's entity has properly transitioned to the Player's XML scheme, which we observed above. We can notice a one-to-one effective translation when I compare the XML structure with the entity of the ER Diagram.

Player_Game (Many-to-Many)	
Contains information regarding the PlayerID, corresponding to the GameID. *A player can play multiple games/matches and a single match has many players.*	
Initial ER Diagram	**XML Instance**
-	<PlayerID></PlayerID>
-	<GameID></GameID>

Game_Team (Many-to-Many)	
Contains information regarding the GameID, corresponding to the TeamID. Multiple teams participate in a game, and a team can play in multiple games. Similarly, a game involves multiple teams.	
Initial ER Diagram	**XML Instance**
-	<PlayerID></PlayerID>
-	<GameID></GameID>

In Conclusion, we added XML schemes called ***Player_Game*** and ***Game_Team*** which represent the Many-to-Many relationship of the entire database