

Flamengo FC Professional Team Database

Thiago Fernandes | Huntington University | CS 415 Database Management – Fall 2025 - Final Project

Overview

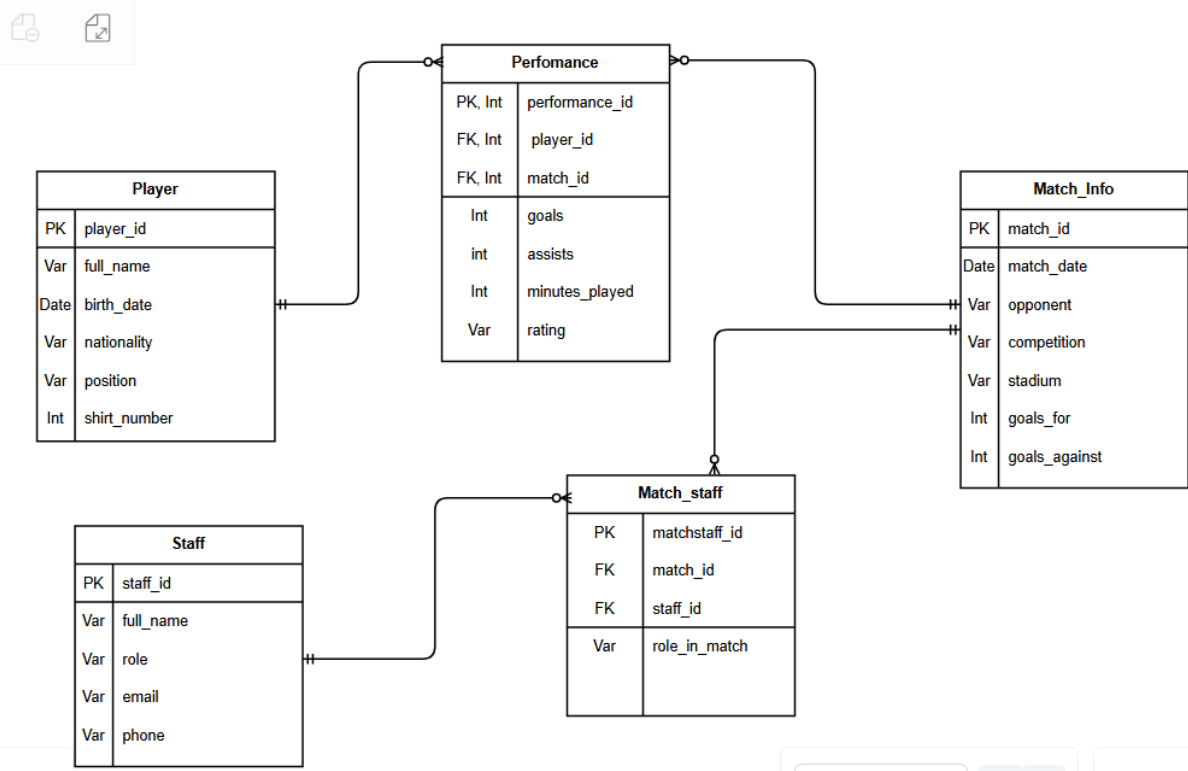
This database was created to manage and analyze information related to a professional soccer team. It is designed to store data about players, matches, staff members, and player performance. Coaches and analysts can use this system to monitor player contributions, evaluate performance over time, and make data-driven decisions for future matches.

Design

The database was designed following normalization principles up to Third Normal Form (3NF). Each table represents a single entity and all non-key attributes depend only on the primary key. This helps reduce redundancy and prevents anomalies. Relationships between entities were created using primary and foreign keys. The Performance table connects the Player and Match_Info tables, while the Match_Staff table acts as a bridge between Staff and matches to resolve a many-to-many relationship.

To maintain data integrity and performance, constraints, indexes, and appropriate data types were applied. ON DELETE and ON UPDATE CASCADE rules ensure consistency when parent data is modified.

ER Model



Data

Sample data includes real-world style soccer statistics such as goals scored, assists made, minutes played, and opponent information to simulate a realistic club management system and the team that I choose is the one that I support in Brazil and I divided my data like this:

Player - Stores information about each soccer player, including full name, nationality, position, and shirt number.

Staff - Contains data about coaching and support staff, such as their name and job role within the team.

Match_Info - Stores information about each match, including date and opponent.

Performance - Records the performance of each player per match, including goals, assists, and minutes played. This table connects **Player** and **Match_Info**.

Match_Staff - Links staff members to specific matches and describes their role in that match. This table resolves the many-to-many relationship between **Staff** and **Match_Info**.

Queries

Query 2 – Goal Contribution per Player

```
SELECT
    P.full_name,
    F.goals,
    F.assists,
    (F.goals + F.assists) AS total_contribution
FROM Performance F
JOIN Player P ON F.player_id = P.player_id;
```

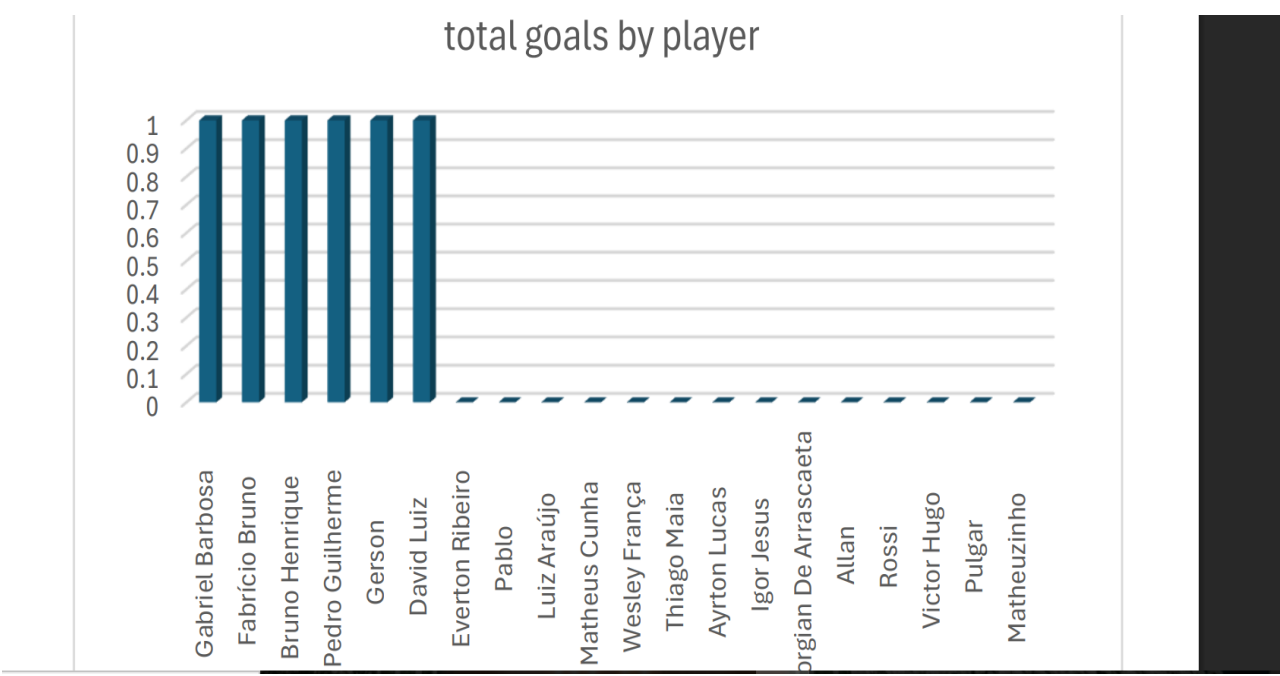
This query calculates each player's total goal contribution by adding goals and assists. It is used to evaluate how directly involved a player is in creating scoring opportunities.

QUERY 4 – High Impact Players

```
SELECT
    P.full_name,
    SUM(F.goals) AS total_goals,
    SUM(F.assists) AS total_assists
FROM Performance F
JOIN Player P ON F.player_id = P.player_id
GROUP BY P.full_name
HAVING SUM(F.goals) + SUM(F.assists) >= 5;
```

This query calculates the total goals and assists for each player and returns only players who made five or more contributions. This helps identify the most impactful players on the team.

Reports



This is my report where you can see the number of goals that the player scored in one match that they played.

Future Work

In the future, this database could be expanded to include training data, injury records, and real-time match statistics. A web or mobile application could also be developed to allow coaches and analysts to access information in real time.

Works Cited

Course materials – CS 415.
W3Schools SQL Tutorial.
MySQL Documentation – Oracle.
GeeksforGeeks SQL Articles.