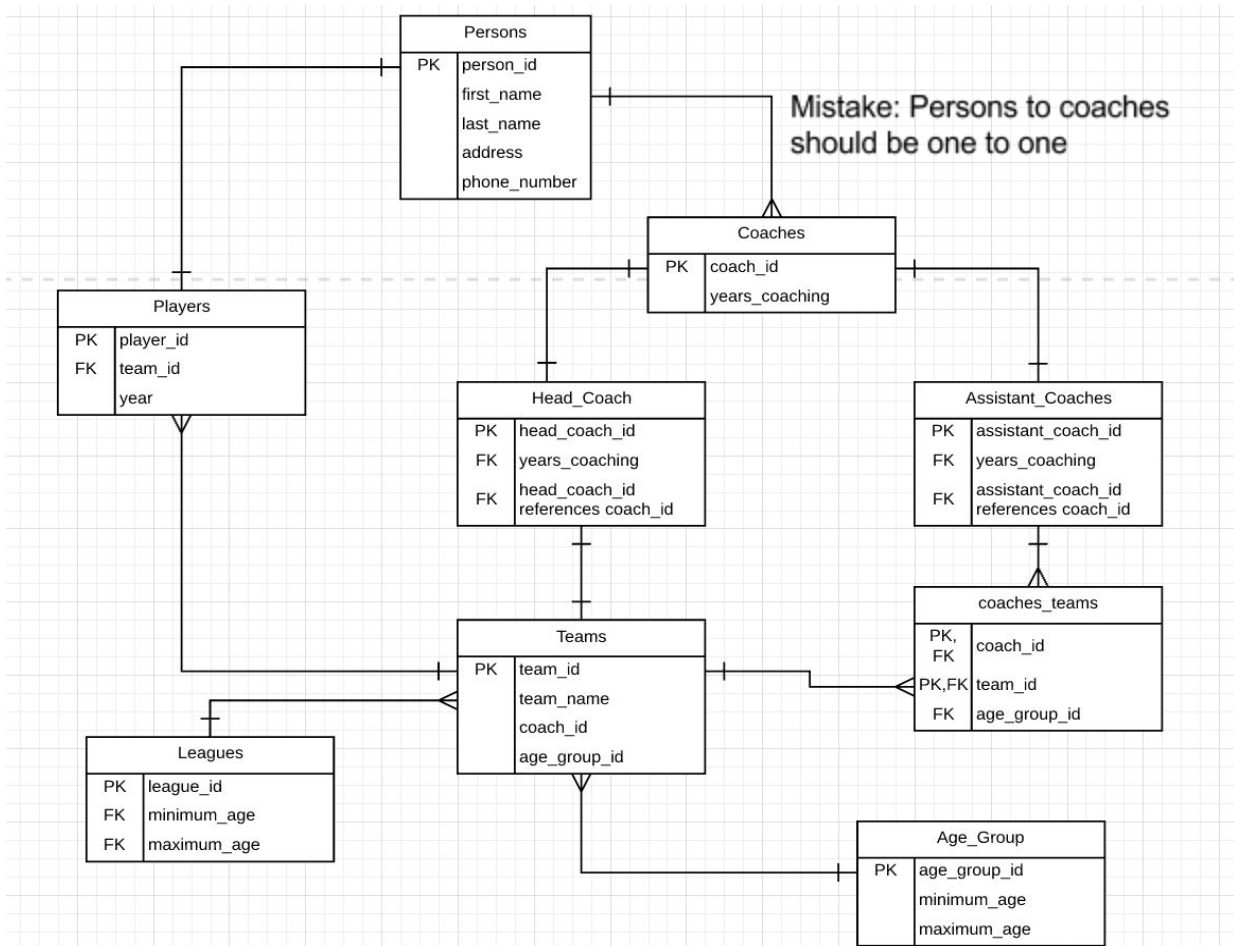


Database for the Belters Little League Sports Alliance on Ceres Station



Functional Dependencies:

Persons:

Person_id → first_name, last_name, address, phone_number

Coaches:

Coach_id → years_coaching

Head_coach_id → years_coaching

Assistant_coach_id → years_coaching

NOTE: head_coach_id references Coaches(coach_id)

NOTE: Assistant_coach_id references Coaches(coach_id)

Players:

Payer_id → team_id, year

Teams:

Team_id → age_group_id, team_name, coach_id

Leagues:

League_id → league_name, team_id

Age_Group

Age_group_id → min_age, max_age

How and Why is this data in 3rd normal form?

This database should be in third normal form because each attribute is associated with only ONE primary key. For tables containing composite primary keys, each attribute describes the whole key and nothing but they key. Additionally, it's in 3NF because it is also in 2NF (no partial key dependencies) and 1NF (atomization).

In the coaches_teams table, there is a composite primary key. This is because a coach can have a different role in different years of coaching. The year attribute specifically describes a **specific** coach on a **specific** team in a **specific** year.