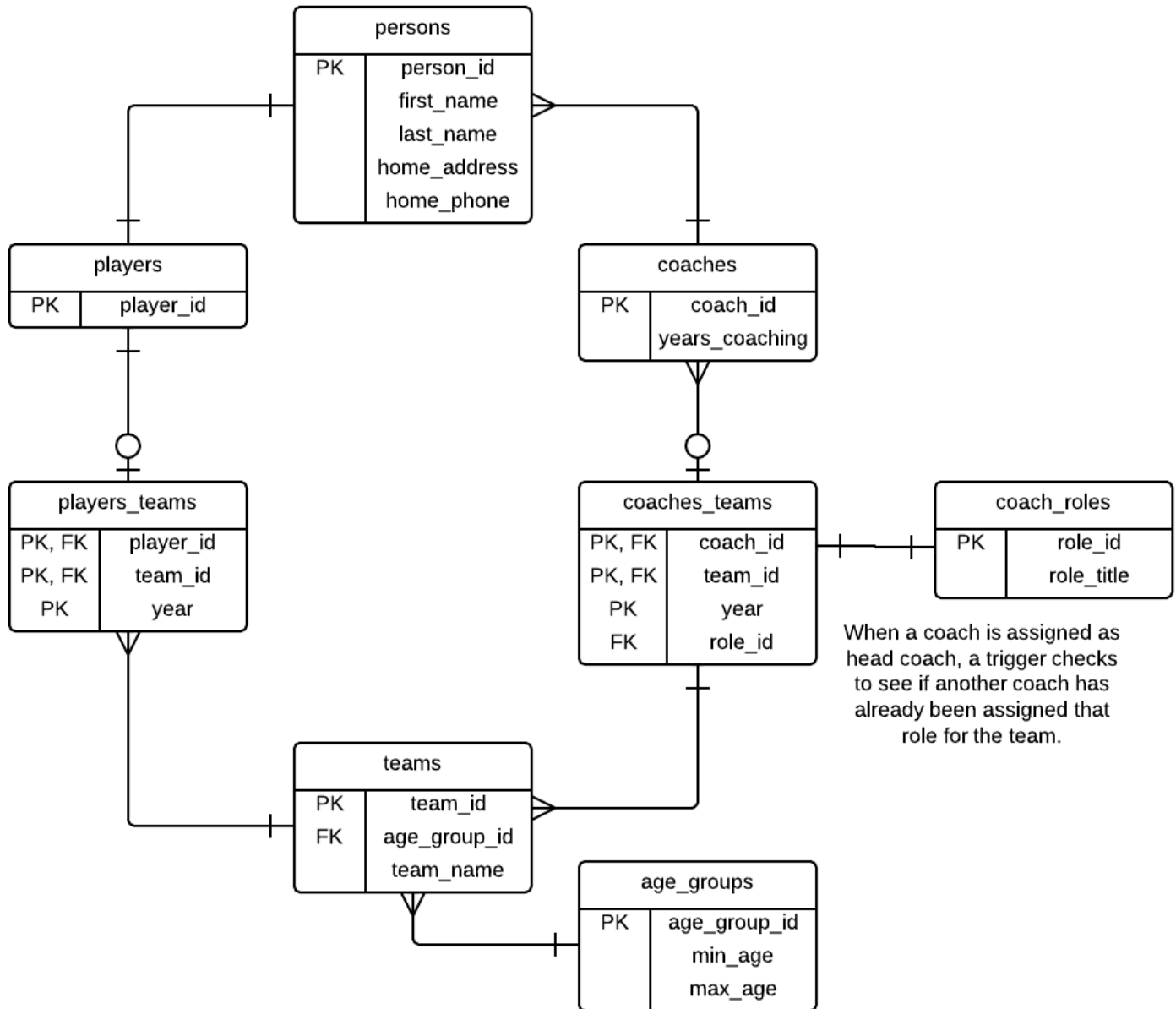


Liam Cain  
Normalization 3  
11/13/13

**E/R Diagram:**



## Functional Dependencies:

### Persons

person-id -> first\_name

person-id -> last\_name

person-id -> home\_address

person-id -> home\_phone

### coaches

coach\_id -> years\_coaching

### coaches\_teams

coach\_id, team\_id, year -> role\_id

### coach\_roles

role\_id -> role\_title

### teams

team\_id -> age\_group\_id

team\_id -> team\_name

### age\_groups

age\_group\_id -> min\_age

age\_group\_id -> max\_age

## 3<sup>rd</sup> Normal Form (3NF)

This database is in 3<sup>rd</sup> normal form because every attribute is associated with only one primary key. For tables with a composite key, each attribute describes the whole key and nothing but the key. An example of this can be found in the coaches\_teams table. This is because a coach can have a different role in different years. Therefore, the year attribute specifically describes a specific coach on a specific team in a specific year.

```
CREATE VIEW teams_10_14_age_group AS
SELECT t.team_id, t.team_name
FROM teams, age_groups a
WHERE t.age_group_id = a.age_group_id
AND a.min_age = 10 AND a.max_age = 14;
```