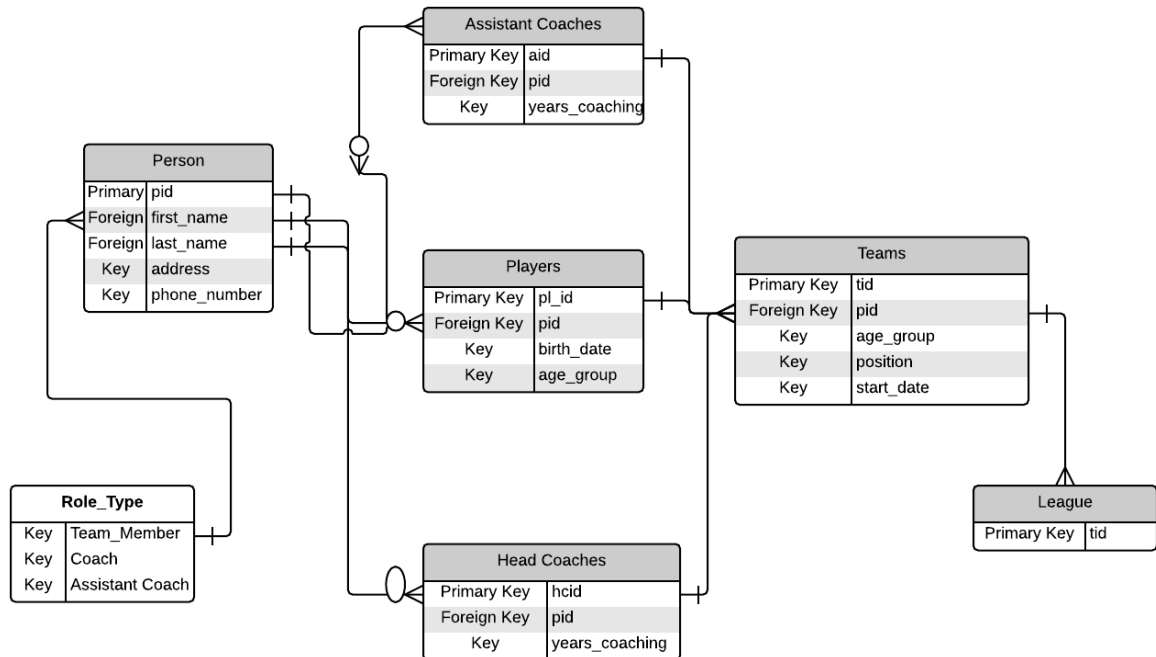Vallie Joseph

Database Management

Pablo Rivas

4/25/2016

Lab 9

Entity Relationship

Functional Dependencies

Pid→	first_name, last_name, address, phone_number
Aid→	years_coaching
pl_id→	birth_date, age_group
hcid→	years_coaching
tid→	age_group,position, start_date

3NF Proof:

In order for a database to be in third normal form, it must first be in second normal form and then by necessity in first normal form.

The tables are in first normal form because no two rows of data may be alike- due to the unique primary id of each table.

The tables are then in second normal form because there are no partial dependencies throughout the tables. While *players, assistant coaches,* and *head coaches* all require pid, the primary key is a composite of pid and the appropriate table id, the other columns still depend on the primary key.

Finally, the tables are in third normal form because all non primary attributes depend on the primary key, which breaks down the database to create more tables that are then used as foreign keys (such as role_type and age_group in Roles and Teams).