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Lab 9

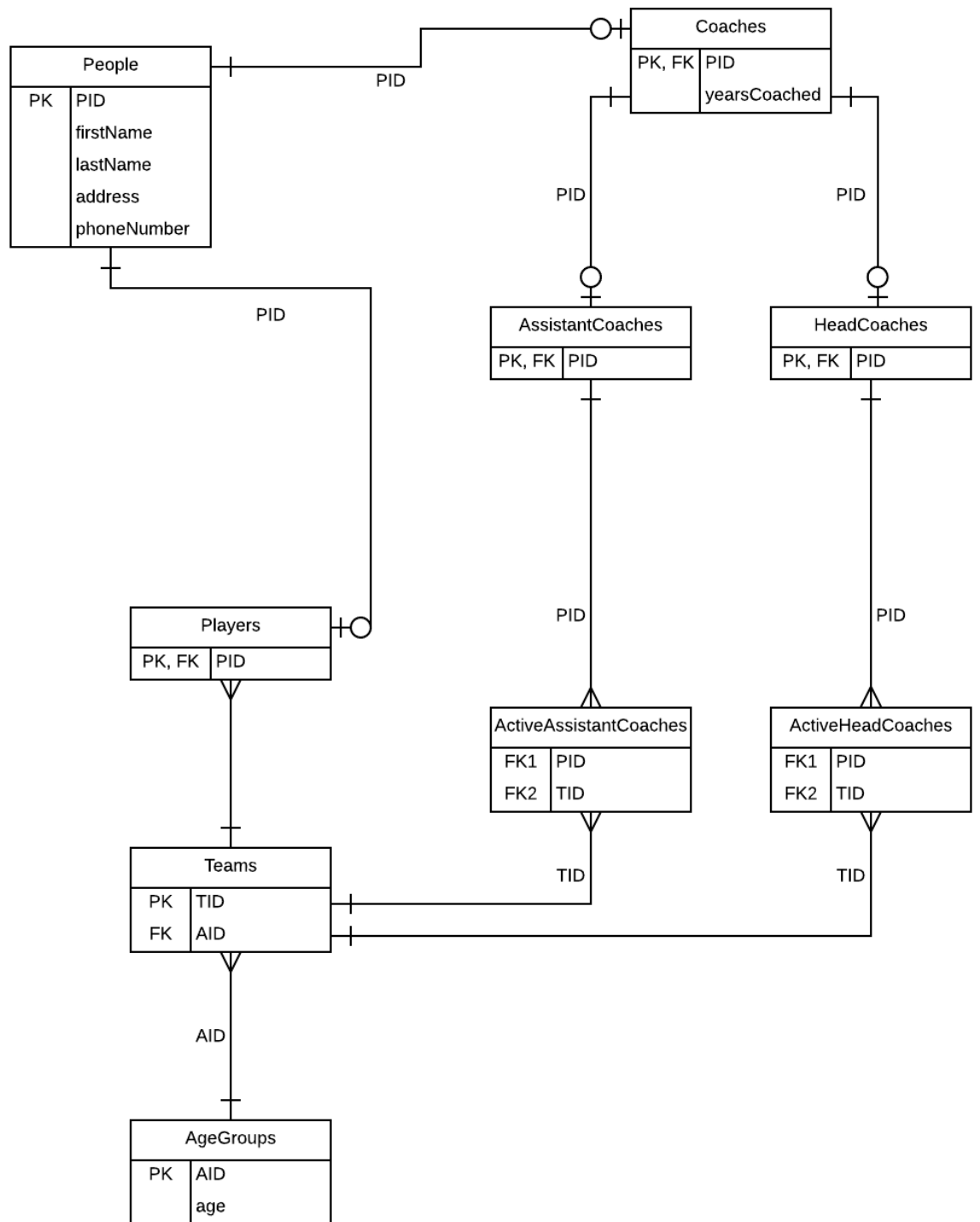
1. People: PID → firstName, lastName, address, phoneNumber

Teams: TID → name

Coaches: PID → yearsCoached

AgeGroups: AID → age

2.



3. The database is in 2NF because it has no partial key dependencies, meaning each field in each table depends on the whole key. In the People table, firstName, lastName, address, and phoneNumber all depend on the primary key PID. In the Teams table, name depends on the primary key TID. In the Coaches table, yearsCoached depends on the primary key PID. In the AgeGroups table, age depends on the primary key AID.

The database is in 3NF because it is in 2NF and it has no transitive key dependencies. In the People table, firstName, lastName, address, and phoneNumber do not determine anything, so there cannot be any transitive dependencies. The other tables only have one attribute, so there cannot be any transitive dependencies there either.

The database is in BCNF because all of the determinants in the functional dependencies are primary keys.