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Lab 09: Normalization

Functional Dependencies

People:

PID -> firstname,lastname,address,phonenumber

Coaches:

PID -> yearscoaching

Players:

PID,TID (Composite Key) -> playerage

TeamHeadCoaches:

PID,TID (Composite Key) ->

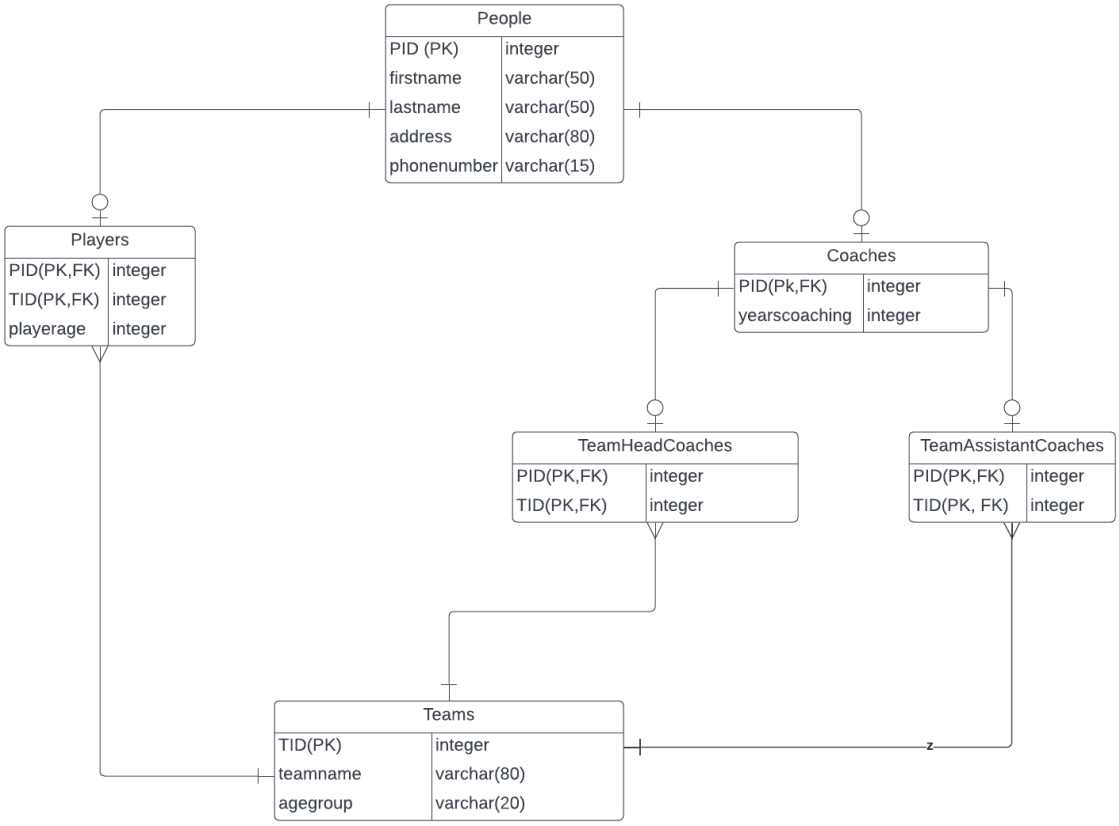
TeamAssistantCoaches:

PID,TID (Composite Key) ->

Teams:

TID -> teamname,agegroup

Entity Relationship Diagram



Normalization Justification

My database is in Boyce-Codd Normal form for the following reasons. First, it follows all three rules of standard normalization, with all values being atomic, having no repeating rows and with all columns depending on the primary key (First Normal Form). Second, there are no partial-key dependencies among the tables as they all rely on the primary key in some way (Second Normal Form). Third, each table does not have multiple key dependencies, as the composite keys I do use only count as a single set going by the set theory definition of third normal form. (Third normal form.) Finally, redundancies based on functional dependencies are not present within the table (Boyce-Codd Normal Form).