People

PK	pid	char(5) unique
	fname	text
	lname	text
	address	text
	phone#	text

Players

PK	pid	char(5) unique
	age	integer
	number	integer(2)

Coaches

PK	pid	char(5) unique
	yearsCoaching	integer

TeamRosters

FK	pid	char(5) unique
FK	agid	char(5)
FK	tid	char(5)

HeadCoaches

CompositeKey	pid	char(5) unique
CompositeKey	agid	char(5) unique
FK	tid	char(5) unique

AssistantCoaches

CompositeKey	pid	char(5) unique
CompositeKey	agid	char(5) unique
FK	tid	char(5)

Teams

PK	tid	char(5) unique
Key	name	text unique
FK	agid	char(5)

AgeGroups

PK	agid	char(5)
	minimumAge	integer
	maximumAge	integer

Functional Dependencies

People:

Pid →fname, lname, address, phone#

Players:

Pid → age, number

Coaches:

Pid → yearsCoaching, typeOfCoach

HeadCoaches:

Pid, agid → tid

Note: The composite key of pid and agid will have a unique constraint to prevent the same head coach from being a coach for another team in the same age group. Tid is also unique in order to make sure each team can only have one head coach.

AssistantCoaches:

Pid, agid → tid

Note: The composite key of pid and agid will have a unique constraint to prevent the same head coach from being a coach for another team in the same age group.

TeamRosters:

Tid → agid, pid

AgeGroups:

Agid → minimumAge, maximumAge

Teams:

Tid → name, agid

This database is in third normal form because no table in my database contains partial key dependencies or multiple key dependencies. From what I can tell no table violates this rule. HeadCoach and AssisstantCoach tables have a candidate

key that appears to follow the rule "the key, the whole key and nothing but the key."