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Normalization Homework 3
11/12/13

Cestus III

Functional Dependancies
(by table)

People
pid => firstName, lastName, Address

Coaches
(pid,coachID) => yearsCoached

Teams
teamID=> teamName

AgeGroups
ageGroupID => (minAge,maxAge)

This database is in third normal form because is is:
1. In first normal form. All of the tables in the database are atomic. There are no domains in any of the tables which could be sets themselves.

2. In second and third normal form. The non-prime attributes are:

 firstName, lastName, and Address in the People table which are dependant only on pid, which is the primary key.
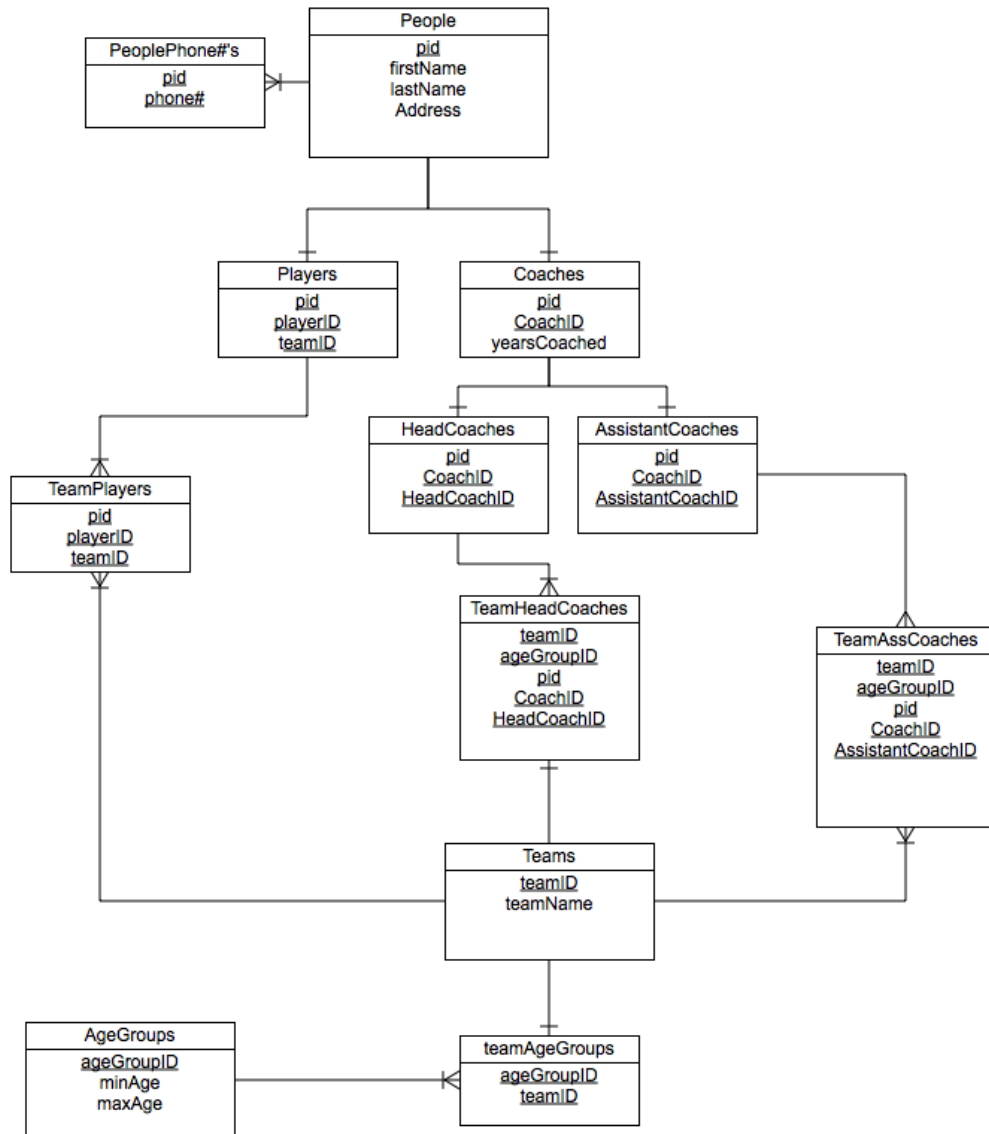
yearsCoached, which is dependant only on the pid and CoachID, the composite key of that table.

teamName, which is dependant only on teamID, which is the prmary key of that table

minimum age and maximum age (the integers that define the range of ages allowed in an age group) are dependant only on ageGroupID, the primary key of that table

The rest of the tables in the database have trivial superkeys which are made up of foreign keys from other tables.
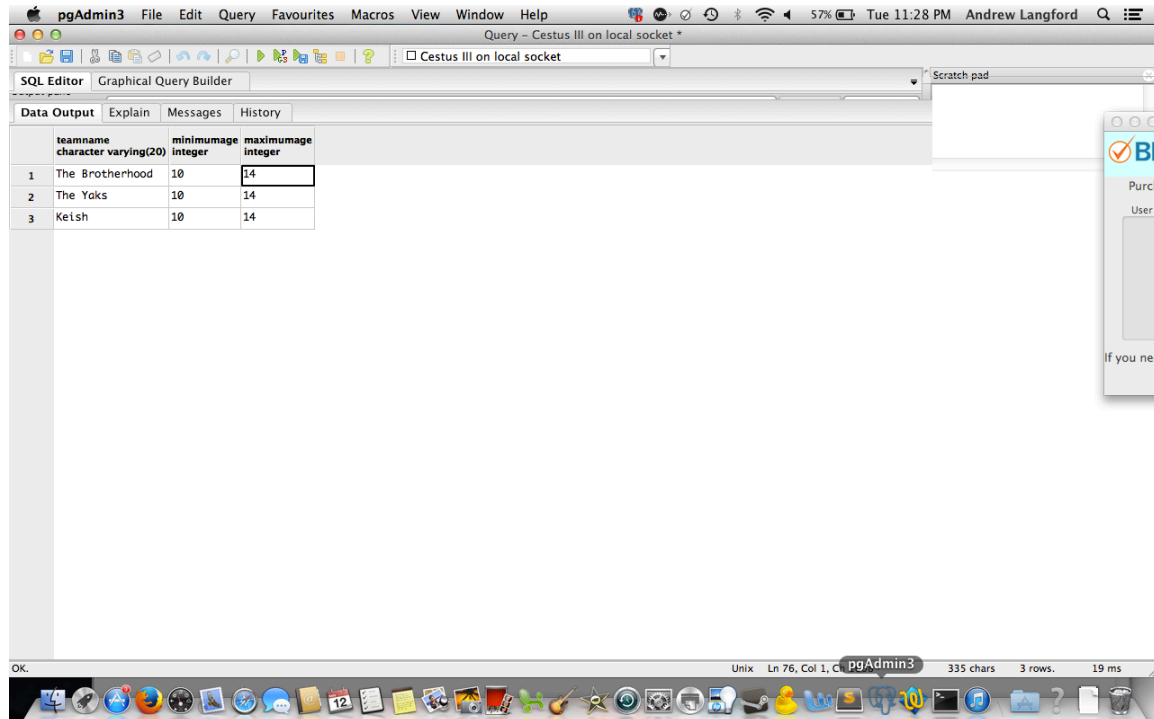
Cestus III Database ER Diagram

People
pid
firstName
lastName
Address

PeoplePhone#'s
pid
phone#

Players
pid
playerID
teamID

Coaches
pid
CoachID
yearsCoached

HeadCoaches
pid
CoachID
HeadCoachID

AssistantCoaches
pid
CoachID
AssistantCoachID

TeamPlayers
pid
playerID
teamID

TeamHeadCoaches
teamID
ageGroupID
pid
CoachID
HeadCoachID

TeamAssCoaches
teamID
ageGroupID
pid
CoachID
AssistantCoachID

Teams
teamID
teamName

AgeGroups
ageGroupID
minAge
maxAge

teamAgeGroups
ageGroupID
teamID

Teams with age range 10-14

-sql

create view teamsTentoFourteen as
select teams.teamname, agegroups.minimumage, agegroups.maximumage
from teams
inner join teamsagegroups
on teams.teamid = teamsagegroups.teamid
inner join agegroups
on teamsagegroups.agid = agegroups.agid
where agegroups.minimumage = 10
and agegroups.maximumage = 14

select * from teamsTentoFourteen

-screen shot of the view