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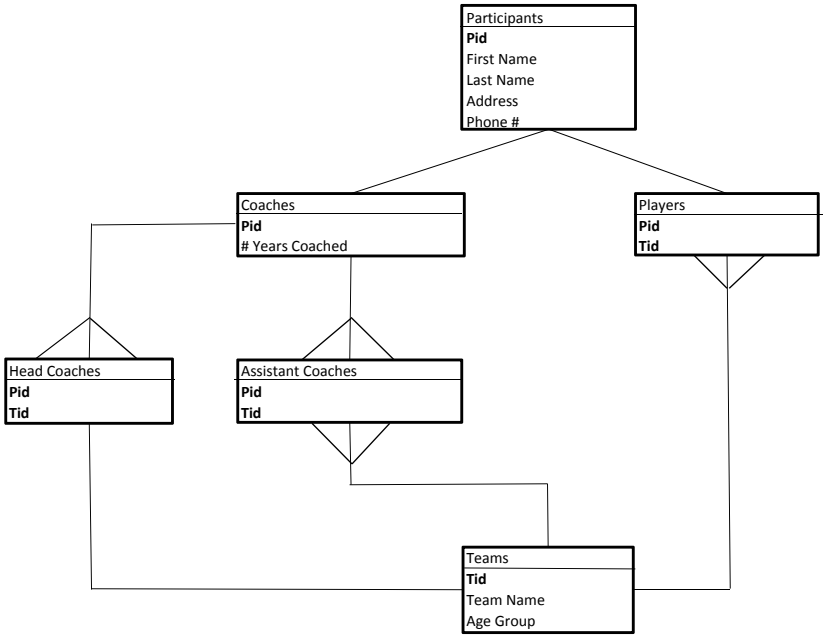
Normalization 3 Homework

ER Diagram:




Functional Dependancies:

| Table | Functional Dependancies: | Depends on |
|---|---|---|
| Participants<br>**Primary Key:Pid** | First Name<br>Last Name<br>Address<br>Phone # | **Pid**<br>**Pid**<br>**Pid**<br>**Pid** |
| Coaches<br>**Primary Key: Pid** | # Years coached | **Pid** |
| Head Coaches<br>**Primary Key: (Pid, Tid)** | | **Pid, Tid** |
| Assistant Coaches<br>**Primary Key:(Pid,Tid)** | | **Pid, Tid** |
| Players<br>**Primary Key (Pid, Tid)** | | **Pid,Tid** |
| Teams<br>**Primary Key: Tid** | Team Name<br>Age Group | **Tid**<br>**Tid** |

Prove your database is in 3NF:

My database definitely passes first normal form because all of the data items are defined, there are no repeating groups of data, and each table has a primary key. The database also passes second normal form because each attribute of each table that is not the primary key provides a fact that depends on the entire key. Finally, the database is in third normal form because each nonprimary key attribute provides a fact that is independant of other non-key attributes and depends only on the key. For example, in the Teams table, the nonprimary keys(Team Name/Age Group) each provide a fact that is independant of each other (the name of the team and the age group of the team) and they both only depend on the key(Tid).

View displaying teams from the 10-14 age group

```
CREATE VIEW TentoFourteen
AS Select Teams.teamname
From Teams
Where Teams.agegroup = '10-14';
```