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Normalization #3 HW

1. Functional Dependencies

People Table

pid -> firstName, lastName, address, phoneNumber, dob

Players Table

Pid -> agid

agid is transitive and determined by the dob in the people table.

Coaches Table

cid -> yearsCoaching

TeamAssistantCoaches

cid -> tid

AgeGroup

Agid -> startAge, endAge

TeamPlayers

Tid,pid -> tagid, pagid

Teams

Tid -> cid, agid, name

2. 3NF

This is in 3rd normal form because there are no partial dependencies or multiple dependencies. firstName, lastName, address, phoneNumber and dob all individually are dependent on pid. Agid in the players table is transitive through the dob in the people table. The agid in the players table is dependent on pid. The players pid is the foreign key of the people pid. In the coaches table the yearsCoaching is dependent on the cid. cid is the foreign key of the pid in the people's table. The cid in teamassistantcoaches is a foreign key to cid in coaches. And tid is dependent on the cid because there can be many assistant coaches on a team. ageGroup has startage and endage are both dependent on the agid. teamPlayers tagid is dependent on tid and pid and pagid is dependent on tid and pid. Tid is a foreign key from teams. In teams agid, cid and name are dependent on tid.

3.

```
create view teams_10_to_14 AS
select *
from Teams
where agid = (select agid
              from AgeGroup
              where startAge = 10
              and endAge = 14)
```

4. E-R diagram



