

Zack Meath – Normalization Homework 3

Functional Dependencies:

People table:

FirstName \rightarrow pid

LastName \rightarrow pid

Address \rightarrow pid

PhoneNumber \rightarrow pid

DateOfBirth \rightarrow pid

Coaches table:

YearsCoached \rightarrow pid

HeadCoaches table: (pid, AgeGroup) must be unique

pid \rightarrow tid

AgeGroup \rightarrow tid

PlayerRoster table:

AgeGroup \rightarrow pid, tid (pid's dateofbirth must lie within the dates of the AgeGroup)

Teams table:

AgeGroup \rightarrow tid

TeamName \rightarrow tid

AgeGroups table:

Description \rightarrow AgeGroupID

StartAge \rightarrow AgeGroupID

EndAge \rightarrow AgeGroupID

3NF:

The database is in 3rd Normal Form because each attribute is dependent on it's table's primary key and only the primary key as shown by the functional dependencies. It is also in Boyce-Codd Normal Form because there are not any dependancies that are also reversable.

View to show all teams in the 10-14 age group:

create view teams10to14 as

select TeamName

from Teams

where AgeGroup in (

select AgeGroupID

from AgeGroups

where StartAge = 10 and EndAge = 14