

## Functional Dependencies

1. People
  - a.  $PID \rightarrow \text{firstName, lastName, phone\#, age, address1, address2, zip}$
2. ZIP
  - a.  $ZIP \rightarrow \text{cityTown, stateProvince, country}$
3. Player
  - a.  $PLID \rightarrow TID$
4. Coach
  - a.  $CID \rightarrow \text{numYearCoach}$
5. Team
  - a.  $TID \rightarrow AGID$
6. Assistant Coach
  - a.  $ACID \rightarrow \text{None}$
7. Head Coach
  - a.  $HCID \rightarrow \text{None}$
8. Team Assi Coach
  - a.  $(TID, ACID) \rightarrow \text{None}$
9. activeTeam
  - a.  $(TID, HCID) \rightarrow \text{None}$
10. Under 10
  - a.  $U10ID \rightarrow \text{None}$
11. 10 Through 14
  - a.  $1014ID \rightarrow \text{None}$
12. Above 14
  - a.  $A14ID \rightarrow \text{None}$

## Justification of Table

First and foremost, the table that is being presented is almost assuredly to be in First Normal Form. All the values located within each individual table and even when combined through consecutive join statements are atomic, in that they are all singular and cannot be divided. (Learning from the mistakes of the last lab address has now been split up into two different sections and zip code is its own dedicated table). Secondly there are no, to my knowledge, partial dependencies in that all the information within the table can be uniquely designated by the given primary key, in table where there are composite keys, the information is determined by both keys combined to produce a unique result hence, there are not partial key dependencies; therefore, putting this table in Second Normal Form. There are also no transitive dependencies within each given table, each table can be determined by its key and nothing but the key, even though they hold the same value with stems from an earlier table each of those values are uniquely marked within their respective categories, making this table in Third Normal form and possibly BCNF.