

2. Functional Dependencies:

People: pid,aid ----> First Name, Last Name, Address, Phone Number, DOB

Coaches: cid ----> years_coaching

Players: plid,rid ---->
HeadCoaches: hcid,tid ---->
AsstCoaches: acid ---->
Teams: tid,hcid,acid ----> Name
AsstCoaches_Teams: acid,LLid ---->

AgeGroups: aid ----> age_range_start, age_range_end

3. Based on the definition of third normal form; every non-key attribute is dependent on the key and nothing but the key and it is in second normal form, I believe my model is in third normal form. As shown in the functional dependencies above, each table's non key attributes are determined only on the candidate keys and there are no partial dependencies among non-key attributes (some of the entities don't have functional dependecies, but that's okay). This, by definition, shows that the model is in third normal form. Additionally, this model is in Boyce-Codd normal form (BCNF), based on the definition that in order for this model to be in BCNF, it must be in third normal form and have no transitive dependencies in the entities. Again, referring to the documented functional dependencies above, it is shown that there are no transitive dependencies so the candidate keys are unaffected, which means the model is also in BCNF.