# Name - Natnael Mengistu

**CMPT 308** 

# Lab 9 - Normalization

1) Team PLid=Tid PK Tid Team Assistant Coach Teamname PK/FK ACid Agegroup HCid ACid=Cid Players PLid Coaches Team Head Coach Cid PK/FK HCid PK CoachingYears People PK Pid PLid=Pid Cid=Pid Fname Lname Address1 Address2 Zipcode PhoneNo Zip FK Zip city state country

Fig: ER diagram for the Belters Little League Sports Alliance

# 2) Functional Dependencies

#### Team table

Tid → Teamname , Agegroup , HCid(head coaches ID)

## **People Table**

Pid → Fname , Lname , Address1 ,Address2,PhoneNo

#### **Coaches Table**

Cid → Coachingyears

### **Team Assistant Coach Table**

 $ACid \rightarrow$ 

#### **Team Heach coach Table**

 $HCid \rightarrow$ 

# **Players Table**

 $PLid \rightarrow$ 

### Zipcode Table

Zip → city ,state ,country

3)

The database is in 3NF because the intersection of all rows and Columns in Atomic, there is no partial and multiple Key dependencies.

Example of Multipe Key dependency - Zipcode

There is No transitive dependency amongst candidate keys so the database satisfies the **Boyes- Codd NF**.