



A head coach can lead many teams, but team's primary key is determined by the head coach and the league, making sure that a head coach can't lead multiple teams in the same league.

Assistant coaches are related to teams through the assist table, in a one to many, many to one relationship thus giving them a many to many relationship with teams. To make sure assistant coaches don't coach multiple teams in the same league the assist primary key is a composite of assistant coach id as well as league id. Assist also includes the hcid as a foreign key to determine which team the assistant coach is coaching (since team primary key is a composite of lid and hcid).

A team has many players, but a player has only one team. The player table contains the lid and hcid foreign keys to determine which team each player is on.

```
-- Joseph Gust 4/11/2017 Lab 9 --  
DROP TABLE IF EXISTS Assist;  
DROP TABLE IF EXISTS Teams;  
DROP TABLE IF EXISTS AssistantCoaches;  
DROP TABLE IF EXISTS HeadCoaches;  
DROP TABLE IF EXISTS Players;  
DROP TABLE IF EXISTS Leagues;
```

```
CREATE TABLE Leagues (  
    lid          char(4) not null,  
    AgeMinimum   integer,  
    AgeMaximum   integer,  
    PRIMARY KEY (lid)  
);
```

```
CREATE TABLE HeadCoaches (  
    hcid         char(4) not null,  
    firstName    text,  
    lastName     text,  
    address      text,  
    phoneNum     integer,  
    yearsCoaching integer,  
    PRIMARY KEY (hcid)  
);
```

```
CREATE TABLE AssistantCoaches (  
    acid         char(4) not null,  
    firstName    text,  
    lastName     text,  
    address      text,  
    phoneNum     integer,  
    yearsCoaching integer,  
    PRIMARY KEY (acid)  
);
```

```
CREATE TABLE Teams (  
  lid          char(4) not null references leagues(lid),  
  hcid         char(4) not null references headCoaches(hcid),  
  TeamName    text,  
  PRIMARY KEY (lid,hcid)  
);
```

```
CREATE TABLE Assist (  
  lid   char(4) not null references teams(lid),  
  acid  char(4) not null references assistantCoaches(acid),  
  hcid  char(4) not null references teams(hcid),  
  PRIMARY KEY (lid,acid)  
);
```

```
CREATE TABLE Players (  
  pid          char(4) not null,  
  firstName    text,  
  lastName     text,  
  age          integer,  
  address      text,  
  phoneNum     integer,  
  lid          char(4) not null references teams(lid),  
  hcid         char(4) not null references teams(hcid),  
  PRIMARY KEY (pid)  
);
```

-- Load Data --

-- Leagues --

```
INSERT INTO Leagues(lid, ageMinimum, ageMaximum)  
  VALUES('l001',0,9);  
INSERT INTO Leagues(lid, ageMinimum, ageMaximum)  
  VALUES('l002',10,14);  
INSERT INTO Leagues(lid, ageMinimum, ageMaximum)  
  VALUES('l003',15,null);
```

-- Players --

```
INSERT INTO Players(pid, firstName, lastName, age, address, phoneNum, lid, hcid)  
  VALUES('p001','Peragrin','Took',28,'147 Shire Road', 1112223456, 'l003', 'hc01');  
INSERT INTO Players(pid, firstName, lastName, age, address, phoneNum)
```

```
VALUES('p002','Meriadoc','Brandybuck',36,'120 Brandybuck Lane', 1234567890,'l003',  
'hc01');
```

```
-- HeadCoaches --
```

```
INSERT INTO HeadCoaches(hcid, firstName, lastName, address, phoneNum, yearsCoaching)  
VALUES('hc01','Gandalf','StormCrow',2487,null, 1111111111);
```

```
-- AssistantCoaches --
```

```
INSERT INTO AssistantCoaches(acid, firstName, lastName, address, phoneNum,  
yearsCoaching)  
VALUES('ac01','Radagast','TheBrown',2487,null, 0001117777);
```

```
-- Teams --
```

```
INSERT INTO Teams(lid, hcid, teamName)  
VALUES('l001','hc01','The Wandering Wizards');
```

```
-- Assists --
```

```
INSERT INTO Assists(lid, acid, hcid)  
VALUES('l001','ac01','hc01');
```