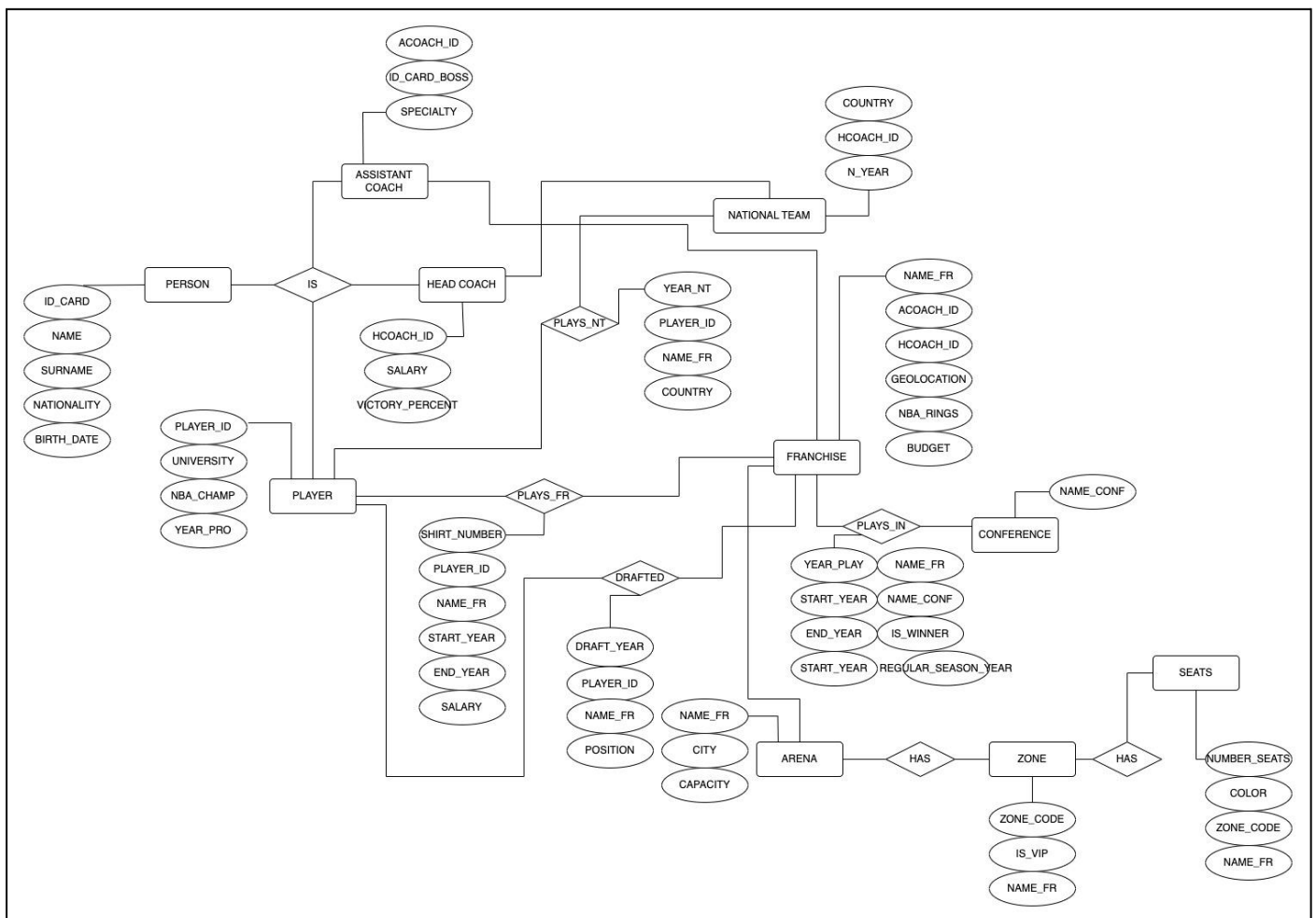


DATABASES REPORT LAB 01

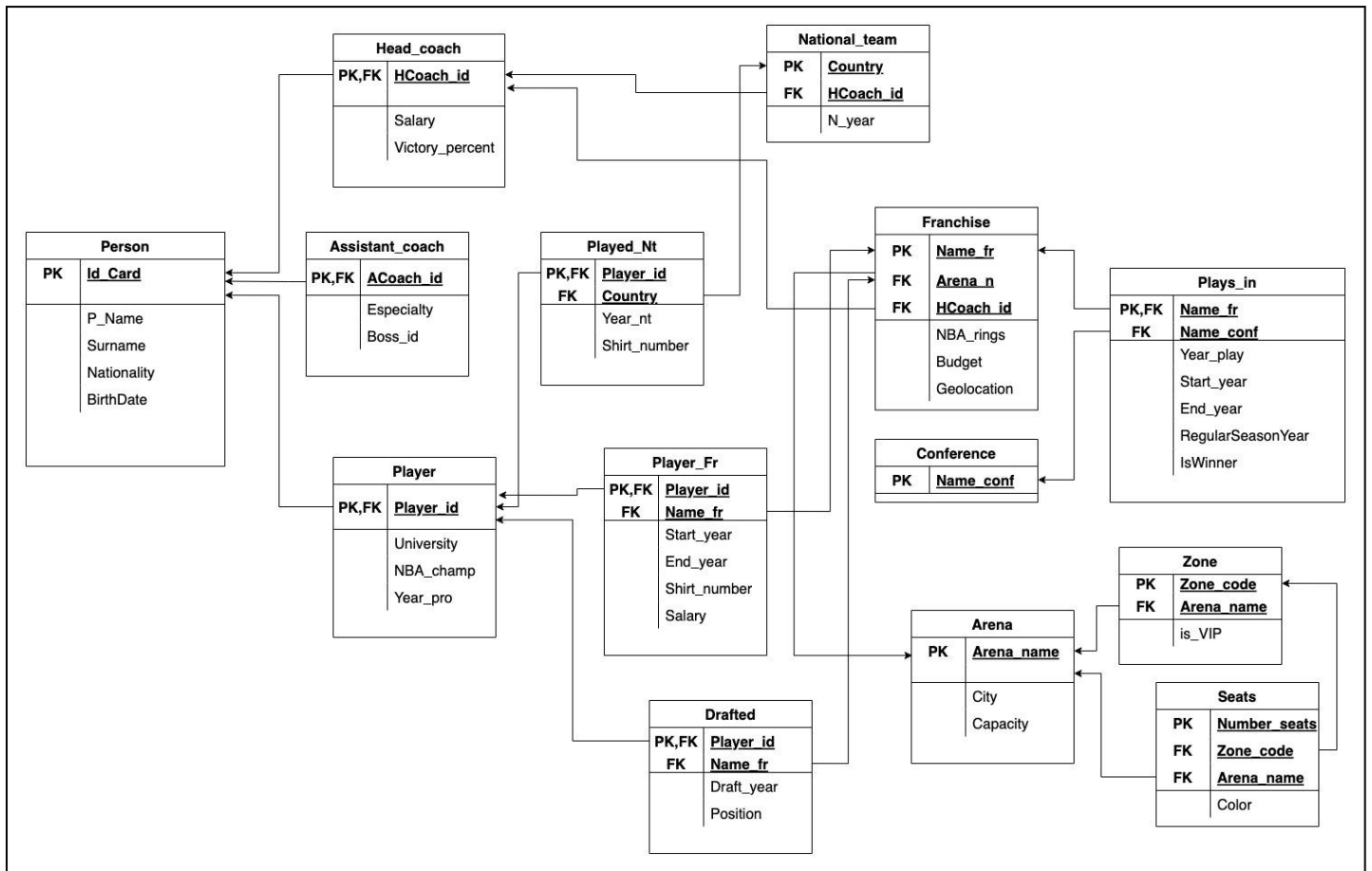
CONCEPTUAL MODEL



Aquí en el conceptual podem veure l'estructura bàsica de les nostres relacions i entitats. L'esquelet de la base de dades que construirem.

Un cop tenim el Model Conceptual podem passar al Model Relacional. En aquest cas, cada entitat i relació és una taula on cada fila serà un atribut. En aquest nivell ja decidim les Primary Keys i Foreign Keys.

RELATIONAL MODEL



Aquí en el Model Relacional tenim totes les relacions posades en taules amb els atributs i les seves característiques. Podem veure que cada Foreign Key referencia a una Primary Key d'una altra taula.

Creem les taules en un fitxer de SQL i inicialitzem la base de dades. Quedaria com:

```

CREATE TABLE Person (
  Id_Card int (9),
  P_Name varchar (20),
  Surname varchar (20),
  Nationality varchar (20),
  BirthDate varchar(10),
  PRIMARY KEY (Id_Card)
);
  
```

```
CREATE TABLE Head_coach(  
    HCoach_id int (9),  
    Victory_percent float(4,2),  
    Salary float (10,2),  
    PRIMARY KEY (HCoach_id),  
    FOREIGN KEY (HCoach_id) REFERENCES Person(Id_Card)  
);
```

```
CREATE TABLE Assistant_coach (  
    ACoach_id int (9),  
    Especiality varchar(20),  
    Boss_id int(9) DEFAULT NULL,  
    PRIMARY KEY (ACoach_id),  
    FOREIGN KEY (ACoach_id) REFERENCES Person(Id_Card)  
);
```

```
CREATE TABLE Player (  
    Player_id int (9),  
    University varchar(12),  
    NBA_champ int(2),  
    Year_pro int(4),  
    PRIMARY KEY (Player_id),  
    FOREIGN KEY (Player_id) REFERENCES Person(Id_Card)  
);
```

```
CREATE TABLE National_team (  
    Country varchar(20),  
    HCoach_id int(9),  
    N_year int(4),  
    PRIMARY KEY (Country),  
    FOREIGN KEY (HCoach_id) REFERENCES Head_coach(HCoach_id)  
);
```

```
CREATE TABLE Arena (  
    Arena_name varchar(50),  
    City varchar(50),  
    Capacity int(8),  
    PRIMARY KEY (Arena_name)  
);
```

```
CREATE TABLE Franchise (  
    Name_fr varchar(50),  
    Geolocation varchar(4),  
    Arena_n varchar(50),  
    HCoach_id int(9),  
    NBA_rings int(2),  
    Budget int(9),  
    PRIMARY KEY (Name_fr),  
    FOREIGN KEY (HCoach_id) REFERENCES Head_coach(HCoach_id),  
    FOREIGN KEY (Arena_n) REFERENCES Arena(Arena_name)  
);
```

```

CREATE TABLE Drafted (
    Draft_year int(4),
    Player_id int(9),
    Name_fr varchar(50),
    Position int(2),
    PRIMARY KEY (Player_id),
    FOREIGN KEY (Player_id) REFERENCES Player(Player_id),
    FOREIGN KEY (Name_fr) REFERENCES Franchise(Name_fr)
);

```

```

CREATE TABLE Player_Fr (
    Player_id int(9),
    Name_fr varchar(50),
    Shirt_number int(3),
    Start_year date,
    End_year date,
    Salary float (12,2),
    PRIMARY KEY (Player_id),
    FOREIGN KEY (Player_id) REFERENCES Player(Player_id),
    FOREIGN KEY (Name_fr) REFERENCES Franchise(Name_fr)
);

```

```

CREATE TABLE Played_Nt (
    Year_nt int(4),
    Country varchar(20),
    Player_id int(9),
    Shirt_number int(3),
    PRIMARY KEY (Player_id),
    FOREIGN KEY (Player_id) REFERENCES Player(Player_id),
    FOREIGN KEY (Country) REFERENCES National_team(Country)
);

```

```

CREATE TABLE Conference(
    Name_conf varchar(50),
    PRIMARY KEY (Name_conf)
);

```

```

CREATE TABLE Plays_in(
    Year_play int(4),
    Start_year date,
    End_year date,
    Name_fr varchar(50),
    Name_conf varchar(50),
    RegularSeasonYear int(4),
    IsWinner int(1),
    PRIMARY KEY (Name_fr),
    FOREIGN KEY (Name_fr) REFERENCES Franchise(Name_fr),
    FOREIGN KEY (Name_conf) REFERENCES Conference(Name_conf)
);

```

```
CREATE TABLE Zone (  
    Zone_Code int(3),  
    Arena_name varchar(50),  
    is_VIP int(1),  
    PRIMARY KEY (Zone_Code),  
    FOREIGN KEY (Arena_name) REFERENCES Arena(Arena_name)  
);
```

```
CREATE TABLE Seats(  
    Arena_name varchar(50),  
    Zone_Code int(3),  
    Number_seats int(10),  
    Color varchar(15),  
    PRIMARY KEY (Number_seats),  
    FOREIGN KEY (Arena_name) REFERENCES Arena(Arena_name),  
    FOREIGN KEY (Zone_Code) REFERENCES Zone(Zone_Code)  
);
```

Un cop ja tenim la base de dades creada, fem els inserts hem hagut de modificar els csv inicials per adaptar-los a les nostres relacions, ja que no tenen la mateixa estructura. Amb aquests nous csv fem l'insert.

Ara ja tenim la base plena de totes les dades així que ja podem fer les queries.