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Labouseur Lab 8
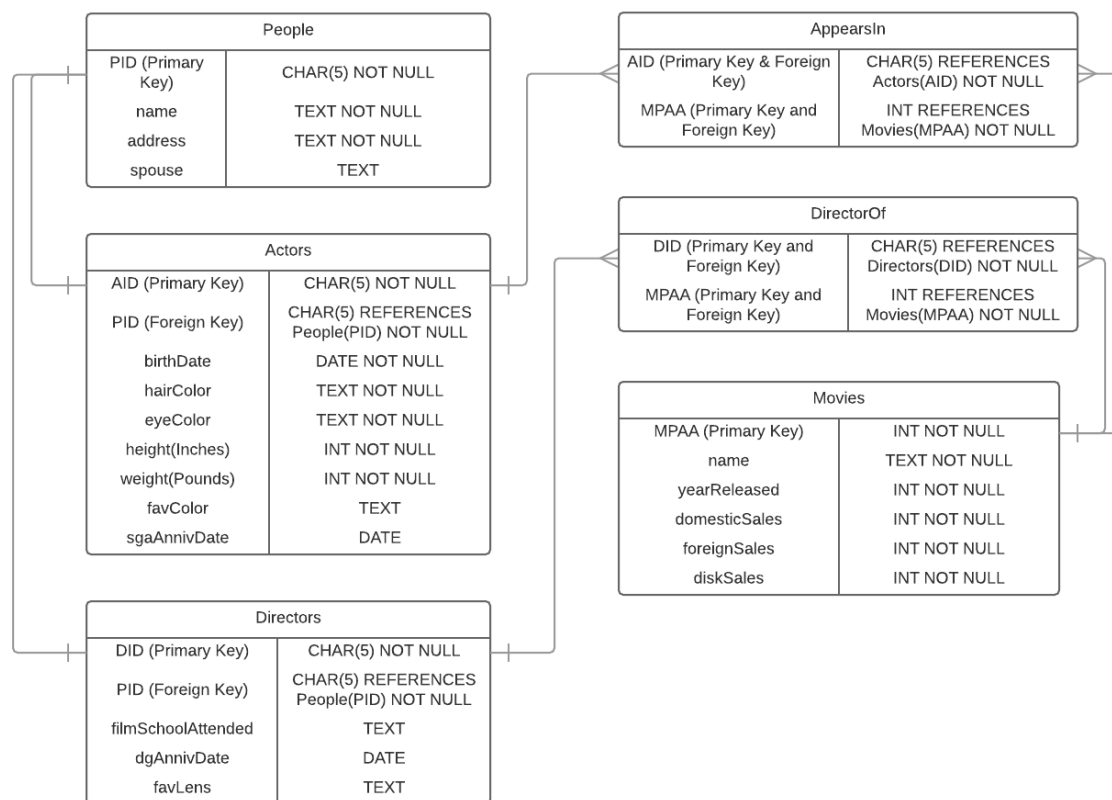
Actor Data → name, address, birth date, hair color, eye color, height in inches, weight, spouse name, favorite color, screen actors guild anniversary date

Movie Data → name, year released, MPAA number, domestic box office sales, foreign box office sales, DVD/Blu-ray sales

Director Data → name, address, spouse name, film school attended, directors guild anniversary date, favorite lens maker

Build this database. You may add or rename any fields you like. You must create a relational database in Boyce-Codd normal form (BCNF). Document your database with . . .

1. A fully decorated and aesthetically beautiful E/R diagram.

2. SQL create statements for each table.

```
CREATE TABLE People (
        PID CHAR(5) PRIMARY KEY NOT NULL,
        name TEXT NOT NULL,
        address TEXT NOT NULL,
        spouse TEXT
);
```

```sql
CREATE TABLE Actors (
        AID CHAR(5) PRIMARY KEY NOT NULL,
        PID CHAR(5) FOREIGN KEY REFERENCES People(PID) NOT NULL,
        birthDate TEXT NOT NULL,
        hairColor TEXT NOT NULL,
        eyeColor TEXT NOT NULL,
        height(Inches) INT NOT NULL,
        weight(Pounds) INT NOT NULL,
        favColor TEXT,
        sagAnniversaryDate DATE
);
CREATE TABLE Directors (
        DID CHAR(5) PRIMARY KEY NOT NULL,
        PID CHAR(5) FOREIGN KEY REFERENCES People(PID) NOT NULL,
        filmSchoolAttended TEXT,
        dgAnnivDate DATE,
        favoriteLens TEXT
);
CREATE TABLE AppearsIn (
        AID CHAR(5) REFERENCES Actors(AID)NOT NULL,
        MPAA INT REFERENCES Movies(MPAA) NOT NULL,
        PRIMARY KEY (AID, MPAA)
);
CREATE TABLE DirectorOf (
        DID CHAR(5) REFERENCES Directors(DID) NOT NULL,
        MPAA INT REFERENCES Movies(MPAA) NOT NULL,
        PRIMARY KEY (DID, MPAA)
);
CREATE TABLE Movies (
        MPAA INT PRIMARY KEY NOT NULL,
        name TEXT NOT NULL,
        yearReleased INT NOT NULL,
        domesticSales INT NOT NULL,
        foreignSales INT NOT NULL,
        diskSales INT NOT NULL
);
```

3. Functional dependencies for each table.

People

PID → name, address, spouse

Actors

AID → birthdate, hairColor, eyeColor, height(Inches), weight(Pounds), favoriteColor, scaAnniversary

PID → AID   PID in People to AID in Actors

Directors

DID → filmSchoolAttended, dgAnniversaryDate, favoriteLens

PID → DID   PID in People to AID in Actors

AppearsIn

MPAA → AID

DirectorOf

MPAA → DID

Movies

MPAA → name, yearReleased, domesticSales, foreignSales, diskSales

4. Write a query to show all the directors with whom actor "Sean Connery" has worked.

```
SELECT *
FROM People
WHERE PID in (
        SELECT PID
        FROM Directors
        WHERE DID in (
                SELECT DID
                FROM DirectorOf
                WHERE MPAA in (
                        SELECT MPAA
                        FROM ActsIn
                        WHERE AID in (
                                SELECT AID
                                FROM Actors
                                WHERE name = 'Sean Connery'
                        )
                )
        )
);
```

5. What time did Sean Connery arrive at Wimbledon?

Said in Sean Connery's voice Around tennish