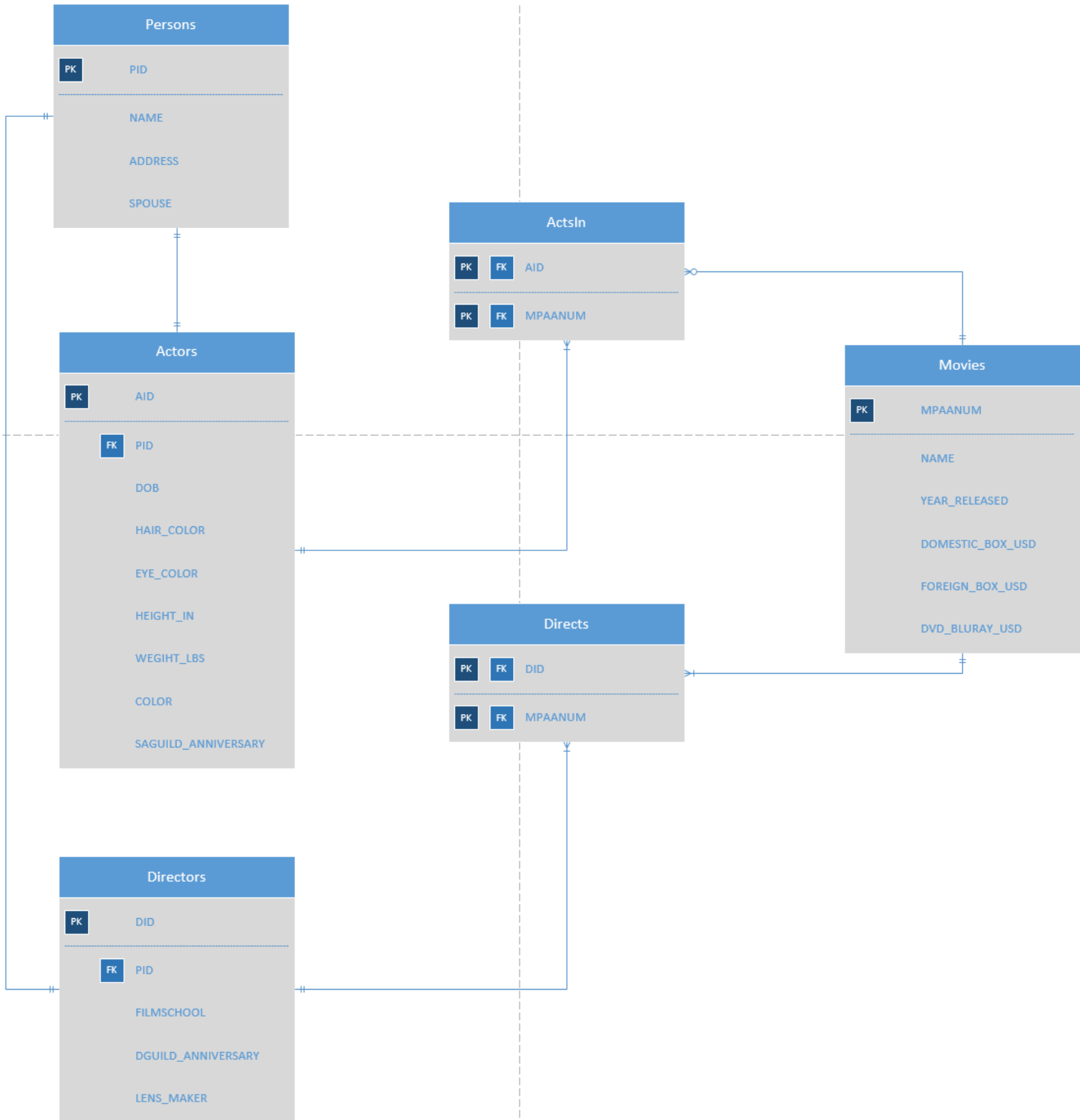


1. ER DIAGRAM:



2. Create Statements:

```
DROP TABLE IF EXISTS Persons;  
DROP TABLE IF EXISTS Actors;  
DROP TABLE IF EXISTS Directors;  
DROP TABLE IF EXISTS ActsIn;  
DROP TABLE IF EXISTS Directs;  
DROP TABLE IF EXISTS Movies;
```

```
CREATE TABLE Persons(  
    PID char(4) not null,  
    NAME text not null,  
    ADDRESS text,  
    SPOUSE text,  
    primary key(PID)  
);
```

```
CREATE TABLE Actors(  
    AID char(4) not null,  
    PID char(4) not null references Persons(PID),  
    DOB date,  
    HAIR_COLOR text not null,  
    EYE_COLOR text not null,  
    HEIGHT_IN integer not null,  
    WEIGHT_LBS integer not null,  
    COLOR text,  
    SAGUILD_ANNIVERSARY date,  
    primary key(AID)  
);
```

```
CREATE TABLE Directors(  
    DID char(4) not null,  
    PID char(4) not null references Persons(PID),  
    FILMSCHOOL text,  
    DGUILD_ANNIVERSARY date,  
    LENS_MAKER text,  
    primary key(DID)  
);
```

```
CREATE TABLE ActsIn(  
    AID char(4) not null references Actors(AID),  
    MPAANUM int not null references Movies(MPAANUM),  
    primary key(AID,MPAANUM)  
);
```

```
CREATE TABLE Directs(  
    DID char(4) not null references Directors(DID),
```

```
        MPAANUM int not null references Movies(MPAANUM),  
        primary key(DID,MPAANUM)  
);  
  
CREATE TABLE Movies(  
    MPAANUM int not null,  
    NAME text not null,  
    YEAR_RELEASED int not null,  
    DOMESTIC_BOX_USD int,  
    FOREIGN_BOX_USD int,  
    DVD_BLURAY_USD int,  
    primary key(MPAANUM)  
);
```

3. Functional Dependencies

- Persons
 - $PID \rightarrow NAME, ADDRESS, SPOUSE$
- Actors
 - $PID \rightarrow AID$
 - $AID \rightarrow DOB, HAIR_COLOR, EYE_COLOR, HEIGHT_IN, WEIGHT_LBS, COLOR, SAGUILD_ANNIVERSARY$
- Directors
 - $PID \rightarrow DID$
 - $DID \rightarrow FILMSCHOOL, DGUILD_ANNIVERSARY, LENS_MAKER$
- ActsIn
 - $MPAANUM \rightarrow AID$
- Directs
 - $MPAANUM \rightarrow DID$
- Movies
 - $MPAANUM \rightarrow NAME, YEAR_RELEASED, DOMESTIC_BOX_USD, FOREIGN_BOX_USD, DVD_BLURAY_USD$

4.

```
SELECT *
FROM PID
WHERE PID IN (
    SELECT PID
    FROM Directors
    WHERE DID IN (
        SELECT DID
        FROM Directs
        WHERE MPAANUM IN (
            SELECT MPAANUM
            FROM ActsIn
            WHERE AID IN (
                SELECT AID
                FROM Actors
                WHERE NAME='Sean Connery'))));
```