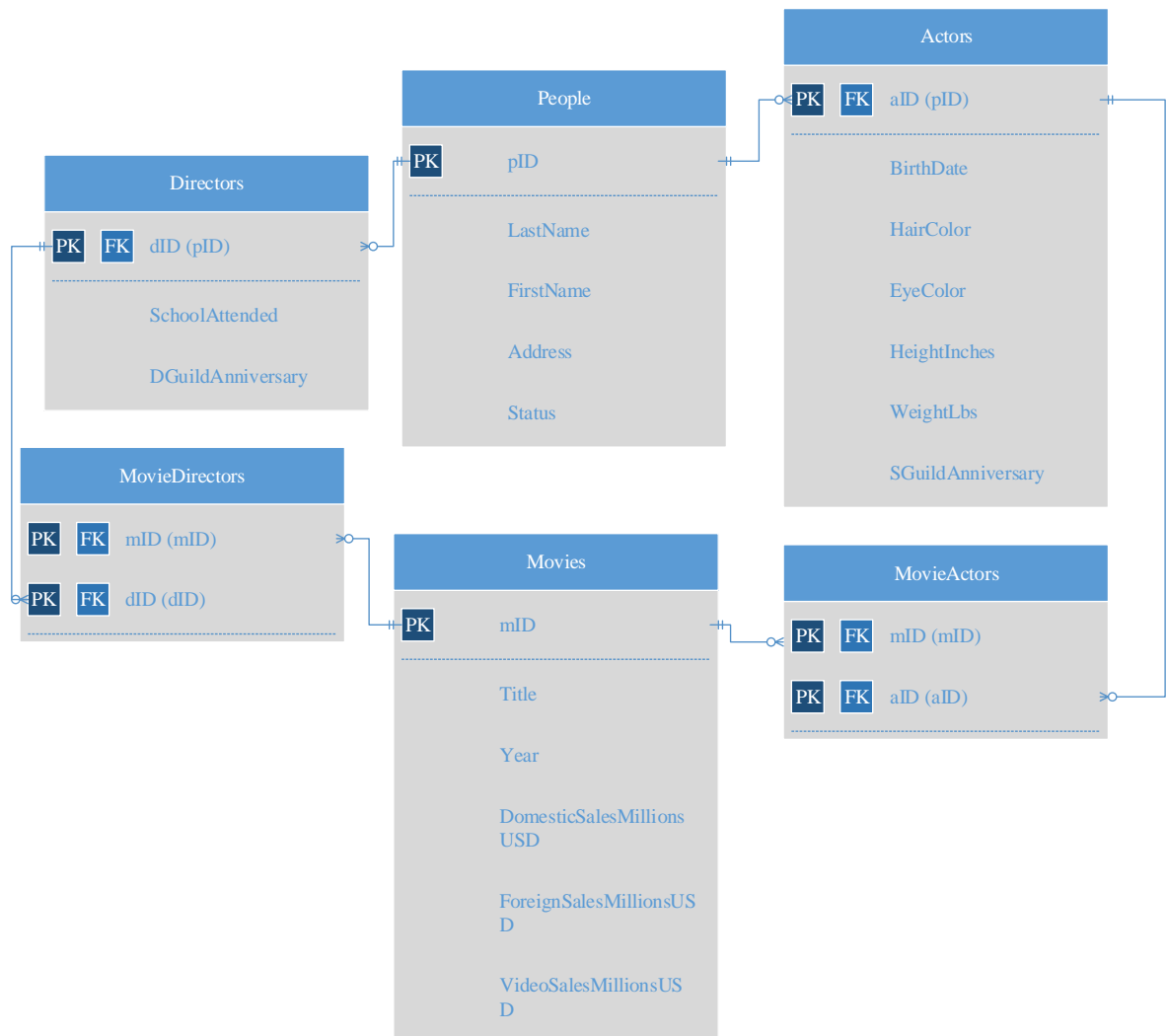


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March 30th 2014

### *Normalization Two*

1) My fully decorated and beautiful E/R diagram:



2 & 3 ) Create and Insert Statements (Query File is on Github):

```
-- Dropping Tables on Initial Build or Update
DROP TABLE IF EXISTS MovieActors;
DROP TABLE IF EXISTS MovieDirectors;
DROP TABLE IF EXISTS Actors;
DROP TABLE IF EXISTS Directors;
```

```
DROP TABLE IF EXISTS Movies;
DROP TABLE IF EXISTS People;
```

```
-- Core Table for Reference for Actors and Directors
```

```
CREATE TABLE People (
pID INT NOT NULL,
LastName VARCHAR(35) NOT NULL,
FirstName VARCHAR(35) NOT NULL,
Address VARCHAR(60), --Added address for the Actors as well
Status CHAR(1) DEFAULT 'N' CHECK (Status='A' or Status='D' or Status='B' or Status='N'),
-- Status is a check for what position the Person is...A = Actor, D = Director, B = Both, and N =
Information not available or None
PRIMARY KEY (pID)
);
```

```
-- Movies Table
```

```
CREATE TABLE Movies (
mID INT NOT NULL,
Title VARCHAR(40) NOT NULL,
Year INT NOT NULL,
DomesticSalesMillionsUSD NUMERIC(10,2),
ForeignSalesMillionsUSD NUMERIC(10,2),
VideoSalesMillionsUSD NUMERIC(10,2),
PRIMARY KEY (mID)
);
```

```
-- Actors Table
```

```
CREATE TABLE Actors (
aID INT REFERENCES people(pID),
BirthDate DATE,
HairColor VARCHAR(20),
EyeColor VARCHAR(20),
HeightInches INT,
WeightLbs INT,
SGuildAnniversary DATE,
PRIMARY KEY (aID)
);
```

```
-- Directors Table
```

```
CREATE TABLE Directors (
dID INT REFERENCES people(pID),
SchoolAttended VARCHAR(40),
DGuildAnniversary DATE,
PRIMARY KEY (dID)
);
```

-- Reference for Each Movie the Given Actors

```
CREATE TABLE MovieActors(  
mID INT REFERENCES Movies(mID),  
aID INT REFERENCES Actors(aID),  
PRIMARY KEY (mID, aID)  
);
```

--Referential Integrity for Each Movie a Director Directs....

```
CREATE TABLE MovieDirectors(  
mID INT REFERENCES Movies(mID),  
dID INT REFERENCES Directors(dID),  
PRIMARY KEY (mID, dID)  
);
```

-- Insert Statements

```
INSERT INTO People (pID,LastName,FirstName,Address,Status)  
VALUES
```

```
(1, 'Moore', 'Roger', '111 Slow Kick Drive', 'A'),  
(2, 'Seymour', 'Jane', '195 Let Drive', 'A'),  
(3, 'Hamilton', 'Guy', '199 Let Drive', 'D'),  
(4, 'Lee', 'Christopher', '44 Lee Lane', 'A'),  
(5, 'Ekland', 'Britt', '44 Ekkkk Avenue', 'A'),  
(6, 'Apted', 'Michael', '007 Not Enough Lane', 'D'),  
(7, 'Brosnan', 'Pierce', '007 Bond James Estate', 'A'),  
(8, 'Marchceau', 'Sophie', '007 Bond James Estate', 'A'),  
(9, 'Campbell', 'Martin', '008 Eye Gold Lane', 'D'),  
(10, 'Bean', 'Sean', '1 I Die In All My Movies Court', 'A'),  
(11, 'Blackman', 'Honor', '69 Her Name Would Never Be Approved Now Lane', 'A'),  
(12, 'Gilbert', 'Lewis', '111 Finger Gold Drive', 'D'),  
(13, 'Dench', 'Judi', '007 M Estate', 'A'),  
(14, 'Connery', 'Sean', '007 James Bond Estate', 'A'),  
(15, 'Glen', 'John', '99 Has No Movies in DB Drive', 'D'),  
(16, 'Hama', 'Mie', '2 Twice Drive', 'A'),  
(17, 'Dor', 'Karin', '3 Trice Drive', 'A'),  
(18, 'Young', 'Terence', '14 Mister No Drive', 'D'),  
(19, 'Andress', 'Ursula', '0 Switzerland Drive', 'A');
```

INSERT INTO Movies

```
(mID,Title,Year,DomesticSalesMillionsUSD,ForeignSalesMillionsUSD,VideoSalesMillionsUSD)  
VALUES
```

```
(1, 'Live and Let Die', 1973, 35.4, 91.0, 56.9),  
(2, 'The Man With the Golden Gun', 1974, 21.0, 76.6, 45.5),  
(3, 'The World is Not Enough', 1999, 126.9, 212.6, 156.9),  
(4, 'GoldenEye', 1995, 106.4, 250.9, 106.8),  
(5, 'Goldfinger', 1964, 51.1, 73.8, 79.1),
```

(6, 'You Only Live Twice', 1967, 43.1, 68.5, 69.5),  
(7, 'Dr.No', 1962, 16.1, 43.5, 30.2);

INSERT INTO Actors

(aID,BirthDate,HairColor,EyeColor,HeightInches,WeightLbs,SGuildAnniversary)  
VALUES

(1, '1927-10-14', 'Black', 'Green', 73, 185, '1947-10-3'),  
(2, '1951-2-15', 'Red', 'Hazel', 64, 110, '1971-1-11'),  
(4, '1922-5-27', 'Black', 'Brown', 77, 195, '1941-2-18'),  
(5, '1942-10-6', 'Blond', 'Green', 65, 115, '1962-9-9'),  
(7, '1953-5-16', 'Black', 'Blue', 73, 185, '1975-5-16'),  
(8, '1966-10-17', 'Auburn', 'Green', 68, 120, '1986-11-12'),  
(10, '1959-4-17', 'Blond', 'Blue', 71, 185, '1980-6-9'),  
(11, '1934-12-9', 'Blond', 'Blue', 61, 100, '1955-2-19'),  
(13, '1930-8-25', 'Black', 'Brown', 74, 190, '1955-5-11'),  
(14, '1925-8-22', 'Blond', 'Blue', 66, 120, '1945-7-22'),  
(16, '1943-10-20', 'Black', 'Hazel', 65, 120, '1963-12-2'),  
(17, '1938-2-22', 'Blond', 'Brown', 65, 120, '1959-11-11'),  
(19, '1936-3-19', 'Blond', 'Blue', 65, 120, '1956-7-7');

INSERT INTO Directors (dID,SchoolAttended,DGuildAnniversary)

VALUES

(3, 'La Femis', '1945-6-23'),  
(6, 'London Film Academy', '1966-9-9'),  
(9, 'American Film Institute', '1964-5-4'),  
(12, 'New York University', '1948-8-8'),  
(15, 'London Film Academy', '1955-11-5'),  
(18, 'University of Cambridge', '1937-8-8');

INSERT INTO MovieActors (mID,aID)

VALUES

(1, 1),  
(1, 2),  
(2, 1),  
(2, 4),  
(2, 5),  
(3, 7),  
(3, 8),  
(4, 7),  
(4, 10),  
(4, 13),  
(5, 14),  
(5, 11),  
(6, 14),  
(6, 16),  
(6, 17),

(7, 14),  
(7, 19);

INSERT INTO MovieDirectors (mID,dID)

VALUES

(1, 3),  
(2, 3),  
(3, 6),  
(4, 9),  
(5, 3),  
(6, 12),  
(7, 18);

#### 4) Functional Dependencies:

People:

pID → LastName  
pID → FirstName  
pID → Address  
pID → Status

Movies:

mID → Title  
mID → Year  
mID → DomesticSalesMillionsUSD  
mID → ForeignSalesMillionsUSD  
mID → VideoSalesMillionsUSD

Actors:

aID → BirthDate  
aID → HairColor  
aID → EyeColor  
aID → HeightInches  
aID → WeightLbs  
aID → SGuildAnniversary

Directors:

dID → SchoolAttended  
dID → DGuildAnniversary

#### 5)

-- Selects all of the Directors with whom have Worked with Sean Connery

SELECT DISTINCT d.dID, p.LastName, p.FirstName

FROM People p,

Movies m,

Directors d,

```
MovieDirectors md
WHERE md.dID = d.dID AND
      m.mID = md.mID AND
      d.dID = p.pID AND
      md.mid IN
        (SELECT m.mid
         FROM People p,
              Actors a,
              Movies m,
              MovieActors ma
          WHERE p.pID = a.aID AND
                m.mID = ma.mID AND
                a.aID = ma.aID AND
                p.LastName = 'Connery' AND
                p.FirstName = 'Sean'
        );
```