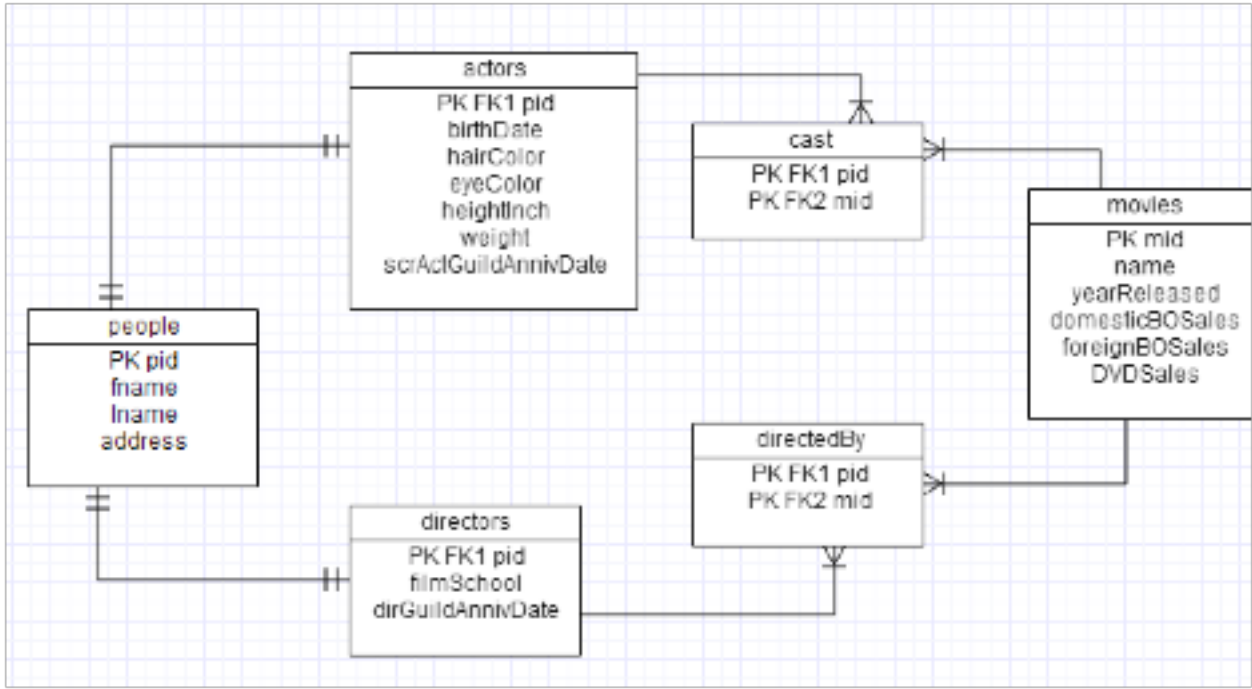


ER Diagram



SQL Create statements... 1 for each table

```
--People Table
CREATE TABLE people(
pid INT NOT NULL,
fname TEXT NOT NULL,
lname TEXT NOT NULL,
address TEXT NOT NULL,
PRIMARY KEY(pid)
);

--Actors table
CREATE TABLE actors(
pid INT NOT NULL references people(pid),
birthDate DATE NOT NULL,
hairColor TEXT NOT NULL,
eyeColor TEXT NOT NULL,
heightInch INT NOT NULL,
weight INT NOT NULL,
scrActGuildAnnivDate DATE NOT NULL,
PRIMARY KEY(pid)
);

--Directors table
CREATE TABLE directors(
pid INT NOT NULL references people(pid),
filmSchool TEXT NOT NULL,
```

```

dirGuildAnnivDate DATE NOT NULL,
PRIMARY KEY(pid)
);
--Movies table
CREATE TABLE movies(
mid INT NOT NULL,
name TEXT NOT NULL,
yearReleased INT NOT NULL,
domesticBOSales DECIMAL NOT NULL,
foreignBOSales DECIMAL NOT NULL,
DVDSales DECIMAL NOT NULL,
PRIMARY KEY(mid)
);
--Cast Table
CREATE TABLE cast(
pid INT NOT NULL references actors(pid),
mid INT NOT NULL references movies(mid),
PRIMARY KEY(pid, mid)
);
--DirectedBy table
CREATE TABLE directedBy(
pid INT NOT NULL references directors(pid),
mid INT NOT NULL references movies(mid),
PRIMARY KEY(pid, mid)
);
SQL Insert Statements for test data
INSERT INTO people (pid, fname, lname, address)
VALUES (001, 'Christopher', 'Nolan', 'Batman St New York, NY'),
(002, 'Sean', 'Connery', '007 Ocean Dr Los Angeles CA'),
(003, 'Jennifer', 'Lawrence', 'Hollywood, CA'),
(004, 'Bradley', 'Cooper', 'Poughkeepsie, NY'),
(005, 'Mark', 'Wahlberg', 'Honolulu, HI'),
(006, 'Heath', 'Ledger', 'Perth, Australia'),
(007, 'Terence', 'Young', 'Phoenix, AZ'),
(008, 'Irvin', 'Kershner', 'Dover, DE'),
(009, 'Lewis', 'Gilbert', 'Albany, NY'),
(010, 'Gary', 'Ross', 'Columbia, SC'),
(011, 'David', 'Russell', 'Austin, TX'),
(012, 'Antoine', 'Fuqua', 'Santa Fe, NM');
INSERT INTO actors(pid, birthdate, hairColor, eyeColor, heightInch, weight,
scrActGuildAnnivDate)
VALUES (002, '08/25/1930', 'brown', 'brown', 68, 180, '05/25/1960'),
(003, '08/15/1990', 'brown', 'blue', 70, 110, '10/03/2011'),
(004, '01/05/1975', 'brown', 'blue', 73, 200, '01/02/2008'),
(005, '06/05/1971', 'brown', 'brown', 68, 220, '03/19/2002'),
(006, '04/04/1979', 'blonde', 'brown', 73, 223, '11/01/2000');

```

```

INSERT INTO directors(pid, filmSchool, dirGuildAnnivDate)
VALUES (001, 'Harvard', '02/02/2002'),
(007, 'Yale', '04/15/1961'),
(008, 'Columbia', '02/13/1969'),
(009, 'Marist', '12/22/1998'),
(010, 'Molloy', '12/01/2009'),
(011, 'Loyola', '11/11/2011'),
(012, 'FIT', '09/07/2002');
INSERT INTO movies(mid, name, yearReleased, domesticBOSales, foreignBOSales,
DVDSales)
VALUES (001, 'From Russia With Love', 1960, 2000000.00, 1000000.00, 9000.00),
(002, 'Never Say Never Again', 1970, 1800000.00, 1600000.00, 32000.00),
(003, 'You Only Live Twice', 1980, 900000.00, 2000000.00, 6500.00),
(004, 'Hunger Games', 2012, 1800000.00, 1900000.00, 7200.00),
(005, 'Silver Linings Playbook', 2013, 1600000.00, 1400000.00, 9100.00),
(006, 'Shooter', 2000, 3400000.00, 9900000.00, 8000.00),
(007, 'The Dark Knight', 2009, 5800000.00, 4300000.00, 30000.00);
INSERT INTO cast(pid, mid)
VALUES (002, 001),
(002, 002),
(002, 003),
(003, 004),
(003, 005),
(004, 005),
(005, 006),
(006, 007);
INSERT INTO directedBy(pid, mid)
VALUES (007, 001),
(008, 002),
(009, 003),
(010, 004),
(011, 005),
(011, 005),
(012, 006),
(001, 007);

```

Functional Dependencies for each table

People table

pid -> fname, lname, address

Actors table

pid -> birthDate, hairColor, eyeColor, heightInch, weight,
scrActGuildAnnivDate

Directors table

pid -> filmSchool, dirGuildAnnivDate

Movies table

mid -> name, yearReleased, domesticBOSales, foreignBOSales, DVDSales

Cast table

```
(pid, mid) ->  
DirectedBy table  
(pid, mid) ->
```

SQL Query

Return all the directors with whom actor "Sean Connery" has worked.

```
SELECT DISTINCT pdirect.fname,  
pdirect.lname  
FROM people pactor,  
people pdirect,  
actors a,  
directors d,  
movies m,  
cast c,  
directedBy db  
WHERE pactor.pid = a.pid  
AND mc.pid = a.pid  
AND c.mid = m.mid  
AND db.mid = m.mid  
AND db.pid = d.pid  
AND d.pid = pdirect.pid  
AND pactor.fname = 'Sean'  
AND pactor.lname = 'Connery';
```