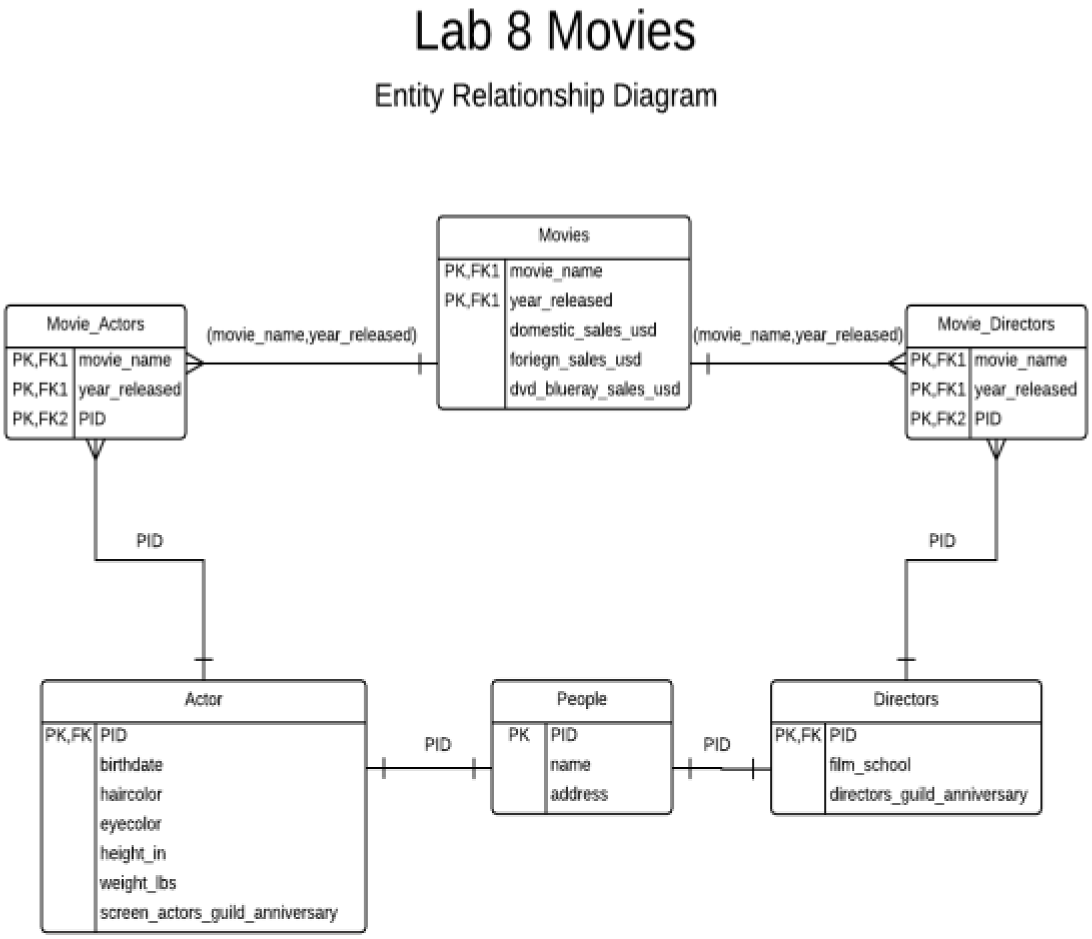
Lab 08

1.)



2.)

```
DROP TABLE IF EXISTS movie_actors;
DROP TABLE IF EXISTS movie_directors;
DROP TABLE IF EXISTS directors;
DROP TABLE IF EXISTS actors;
DROP TABLE IF EXISTS people;
DROP TABLE IF EXISTS movies;

CREATE TABLE Movies (
    movie_name            text not null,
    year_released         smallint CHECK(year_released > 1800),
    domestic_sales_usd    numeric(12,2),
    foriegn_sales_usd     numeric(12,2),
    dvd_blueray_sales_usd    numeric(12,2),
    PRIMARY KEY(movie_name,year_released)
);




CREATE TABLE People(
    pid                             char(6) not null,
    name                            text not null,
    address                         text,
    UNIQUE(name,address),
    PRIMARY KEY(pid)
);

CREATE TABLE Actors (
    pid                                 char(6) not null REFERENCES People(pid),
    birthdate                           date,
    eyecolor                            char(15),
    haircolor                           char(15),
    height_in                           smallint CHECK(height_in > 0),
    weight_lbs                          smallint CHECK(weight_lbs > 0),
    screen_actors_guild_anniversary     date,
    PRIMARY KEY(pid)
);

CREATE TABLE Directors(
    pid                             char(6) not null REFERENCES People(pid),
    film_school                     text,
    directors_guild_anniversary     date,
    PRIMARY KEY(pid)
);

CREATE TABLE Movie_Actors(
    movie_name      text not null,
    year_released   smallint not null,
    pid             char(6) not null REFERENCES Actors(pid),
    FOREIGN KEY(movie_name,year_released) REFERENCES
        Movies(movie_name,year_released),
    PRIMARY KEY(movie_name,year_released,pid)
);

CREATE TABLE Movie_Directors(
    movie_name      text not null,
    year_released   smallint not null,
    pid             char(6) not null REFERENCES Directors(pid),
    FOREIGN KEY(movie_name,year_released) REFERENCES
        Movies(movie_name,year_released),
    PRIMARY KEY(movie_name,year_released,pid)
);
```

3.)

```
INSERT INTO
Movies(movie_name,year_released,domestic_sales_usd,foriegn_sales_usd,dvd_blueray_s
ales_usd)
    VALUES('Entrapment',1999,87704396.00,124700000.00, 1500000.00),
    ('Finding Forrester',2000, 51768623.00 , 28245000.00,1245555.00 ),
    ('The League of Extraordinary Gentlemen',2003, 66465204.00, 112800000.00,
    36400000.00 ),
    ('GoldenEye',1995,106429941.00,245764093.00,22389000.00);

INSERT INTO People(pid,name,address)
    VALUES('p1','Sean Connery','Fake Addres 3033, Podunk, NW 32113'),
    ('p2','Catherine Zeta-Jones','2108 Elm Street, Ellenvile, NY 10482'),
    ('p3','Rob Brown','6792 Pine Road, Trentown, NJ 39802'),
    ('p4','Stuart Townsend','1293 Empire Ave, Taconic, NY 31123'),
    ('p5','Pierce Brosnan','9321 High Street, Pheonix, AZ 11234'),
    ('p6','Jon Amiel','8203 Underwood Road, Endstown, WZ 32393'),
    ('p7','Gus Van Sant','Fake Addres 3033, Podunk, NW 32113'),
    ('p8','Stephen Norrington','3829 Infinite Ion Ave., Nowville, TX 00789'),
    ('p9','Martin Campbell','9987 End Of Line Road, Final Town, GA 23225');

INSERT INTO
Actors(pid,birthdate,haircolor,eyecolor,height_in,weight_lbs,screen_actors_guild_anniver
sary)
    VALUES('p1', '08-25-1930','brown' ,'brown', 56, 216,'06-18-1954'    ),
    ('p2','07-12-1976','blond','blue',60,120,'07-01-1995'),
    ('p3','11-25-1980','black','green',67,140,'02-03-1990'),
    ('p4','02-06-1984','red','hazel',53,210,'04-07-1997'),
    ('p5','05-21-1970','brown','red',57,175,'08-21-1982');

INSERT INTO Directors(pid,film_school,directors_guild_anniversary)
    VALUES('p6','University of Cambridge','03-24-1982'),
    ('p7','Film School Of Nowhereville','11-11-1990'),
    ('p8','Bright Eyes School Of Movies','09-01-1995'),
    ('p9','The World Of Film','12-30-1987');

INSERT INTO Movie_Actors(movie_name,year_released,pid)
    VALUES('Entrapment',1999,'p1'),
    ('Entrapment',1999,'p2'),
    ('Finding Forrester',2000,'p1'),
    ('Finding Forrester',2000,'p3'),
    ('The League of Extraordinary Gentlemen',2003,'p1'),
    ('The League of Extraordinary Gentlemen',2003,'p4'),
    ('GoldenEye',1995,'p5');

INSERT INTO Movie_Directors(movie_name,year_released,pid)
    VALUES('Entrapment',1999,'p6'),
    ('Finding Forrester',2000,'p7'),
    ('The League of Extraordinary Gentlemen',2003,'p8'),
    ('GoldenEye',1995,'p9');
```

4.) Movies

(movie_name, year_released) -> the set and all subsets of {domestic_sales_usd, foriegn_sales_usd, dvd_blueray_sales_dvd}

* If I created an artificial key of movie id, it would not be in BCNF. *

People

pid -> the set and all subsets of {name, address}
(name,address) -> pid

* at first I thought in theory there could be two "Hosea Rodrigez" at the same address, meaning there was no dependency (name,address)->pid, making it in BCNF. This is unrealistic, and that dependency exists. To enforce BCNF, I add unique constraint UNIQUE(name,address) *

Actors

pid -> the set and all subsets of {birthdate, haircolor, eyecolor, height_in, weight_lbs, screen_actors_guild_anniversary}

Directors

pid-> the set and all subsets of {film_school, directors_guild_anniversary}

Movie Actors

(movie_name,year_released,pid) -> * None *

Movie Directors

(movie_name,year_released,pid) -> * None *

5.)

```
select distinct DirectorsJoin.name as "Directors Name" from movies
    inner join movie_directors on movie_directors.movie_name = movies.movie_name
        AND movie_directors.year_released = movie_directors.year_released
    inner join movie_actors on movie_actors.movie_name = movies.movie_name AND
        movie_actors.year_released = movie_actors.year_released
    inner join people as ActorsJoin on ActorsJoin.pid = movie_actors.pid
    inner join people as DirectorsJoin on DirectorsJoin.pid = movie_directors.pid
    where ActorsJoin.name = 'Sean Connery'
    order by DirectorsJoin.name asc;
```