Mary Miller
November 4th
Normalization Homework #2

```sql
-- People --
DROP TABLE IF EXISTS People;
CREATE TABLE People (
  pid      char(4) not null,
  name     text,
  address  text,
primary key(pid)
);

-- Actors --
DROP TABLE IF EXISTS Actors;
CREATE TABLE Actors (
  pid      char(4) references People(pid),
  birthDate date,
  hairColor text,
  eyeColor text,
  heightIN int,
  weightLB int,
  screenActorsGuildAnniversairyDate date
);

-- Director --
DROP TABLE IF EXISTS Directors;
CREATE TABLE Directors (
  pid      char(4) references People(pid),
  filmSchoolAttended text,
  directorsGuildAnniversairyDate date,
primary key(pid)
);

-- Movies --
DROP TABLE IF EXISTS Movies;
CREATE TABLE Movies (
  mid      char(4) not null,
  name     text,
  yearReleased  int,
  domesticBoxOfficeSales money,
  foreignBoxOfficeSales money,
  DVDBluraySales money,
primary key(mid)
);


-- ActedIn --
DROP TABLE IF EXISTS ActedIn;
CREATE TABLE ActedIn (
  mid      char(4) references Movies(mid),
  pid      char(4) references People(pid),
  primary key(mid,pid)
);

-- DirectorOf --
DROP TABLE IF EXISTS DirectorOf;
CREATE TABLE DirectorOf (
  pid      char(4) references People(pid),
  mid      char(4) references Movies(mid),
  primary key(mid,pid)
);

-- People --
INSERT INTO People( pid, name, address )
  VALUES('p001', 'Thomas Sean Connery', '837 Jones St, Edinburgh, Scotland, UK');

INSERT INTO People( pid, name, address )
  VALUES('p002', 'William Bradley Pitt', '9338 Miller St, Shawnee, Oklahoma, USA');

INSERT INTO People( pid, name, address )
  VALUES('p003', 'Alfredo James Pacino', '8383 Independence Rd, New York City, New York, USA');

INSERT INTO People( pid, name, address )
  VALUES('p004', 'Robert Anthony De Niro Jr.', '4 Main Rd, New York City, New York, USA');

INSERT INTO People( pid, name, address )
  VALUES('p005', 'Christian Charles Philip Bale', '14 George St, Haverfordwest, Pembrokeshire, Wales, UK');

INSERT INTO People( pid, name, address )
  VALUES('p006', 'Martin Marcantonio Luciano Scorsese', '89 Masters Rd, Queens, New York City, New York, USA');

INSERT INTO People( pid, name, address )
  VALUES('p007', 'Alfred Joseph Hitchcock', '120 tree lane, Bel Air, Los Angeles, California, USA');

INSERT INTO People( pid, name, address )
  VALUES('p008', 'Terence Young', '47 Coleman rd, Shanghai, China');

INSERT INTO People( pid, name, address )
  VALUES('p009', 'John Campbell McTiernan Jr.', '4022 Main rd, Albany, New York, USA');

INSERT INTO People( pid, name, address )
  VALUES('p010', 'Michael Benjamin Bay', '9283 Presidents Rd, Los Angeles, California, USA');


-- ACTORS --
INSERT INTO Actors( pid, birthDate, hairColor, eyeColor, heightIN, weightLB, screenActorsGuildAnniversairyDate )
  VALUES('p001', '1930-08-25', 'brown', 'blue', 74, 160, '1990-10-10');

INSERT INTO Actors( pid, birthDate, hairColor, eyeColor, heightIN, weightLB, screenActorsGuildAnniversairyDate )
  VALUES('p002', '1963-12-18', 'brown', 'green', 71, 180, '2001-01-23');

INSERT INTO Actors( pid, birthDate, hairColor, eyeColor, heightIN, weightLB, screenActorsGuildAnniversairyDate )
  VALUES('p003', '1940-04-24', 'brown', 'brown', 67, 146, '1980-04-12');

INSERT INTO Actors( pid, birthDate, hairColor, eyeColor, heightIN, weightLB, screenActorsGuildAnniversairyDate )
  VALUES('p004', '1943-08-17', 'brown', 'brown', 70, 179, '1989-03-04');

INSERT INTO Actors( pid, birthDate, hairColor, eyeColor, heightIN, weightLB, screenActorsGuildAnniversairyDate )
  VALUES('p005', '1974-01-30', 'brown', 'blue', 70, 186, '1975-02-19');
```

```sql
-- DIRECTORS --
INSERT INTO Directors( pid, filmSchoolAttended,directorsGuildAnniversairyDate )
  VALUES('p006', 'New York University School of Film', '2005-11-29');

INSERT INTO Directors( pid, filmSchoolAttended,directorsGuildAnniversairyDate )
  VALUES('p007', null, '1940-07-25');

INSERT INTO Directors( pid, filmSchoolAttended,directorsGuildAnniversairyDate )
  VALUES('p008', null, '1970-01-10');

INSERT INTO Directors( pid, filmSchoolAttended,directorsGuildAnniversairyDate )
  VALUES('p009', null, '1990-10-12');

INSERT INTO Directors( pid, filmSchoolAttended,directorsGuildAnniversairyDate )
  VALUES('p010', 'Wesleyan University', '2000-03-14');

-- MOVIES --
INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m001', 'Goodfellas', 1990, 190909.12,8813918.12,16272.22);

INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m002', 'The Departed', 2006, 100002030.11,21837129837.00,1134151.87);

INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m003', 'Psycho', 1960, 81728123.42, 11446644.24 , 1251235.00);

INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m004', 'Vertigo', 1958, 71172829127.11, 7152672.00, 71823912.00);

INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m005', 'Dr. No', 1962, 6177244.35, 181272710.00, 71281283.87);

INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m006', 'Thunderball', 1965, 3423039.35, 72182839.00, 1234152.87);

INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m007', 'The Hunt for Red October', 1990, 5268645.35, 10975642.00, 1234347834.87);

INSERT INTO Movies( mid, name,yearReleased, domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales )
  VALUES('m008', 'The Rock', 1996, 924892398.23, 123193.23, 12313828.23);

--ACTedIN --
INSERT INTO ActedIn(mid,pid)
  VAlUES('m005','p001');

INSERT INTO ActedIn(mid,pid)
  VAlUES('m006','p001');

INSERT INTO ActedIn(mid,pid)
  VAlUES('m007','p001');

INSERT INTO ActedIn(mid,pid)
  VAlUES('m008','p001');

--DirectorOf --

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m005','p008');

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m006','p008');

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m007','p009');

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m008','p010');

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m001','p006');

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m002','p006');

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m003','p007');

INSERT INTO DirectorOf(mid,pid)
  VAlUES('m004','p007');


-- SQL Query

select name
from people
where pid in (select pid
        from Directors
        where pid in (select pid
                from DirectorOf
                where mid in (select mid
                        from Movies
                        where mid in (select mid
                                from actedIn
                                where pid in (select pid
                                  from people
                                  where name = 'Thomas Sean Connery')))))


-- Functional Dependencies

--People Table
pid -> name, address
--Actor Table
pid -> birthdate, hairColor, Eyecolor, heightIN,WeightLb, ScreenActorsGuildAnniversairyDate
--Directors
pid -> Filmschool attended,DirectorsGuildAnniversairyDate
--Movies
mid -> name,yearReleased,domesticBoxOfficeSales, foreignBoxOfficeSales, DVDBluraySales
--ActedIn
pid -> mid
--DirectorOf
pid -> mid
```

-- ER diagram

Movies
mid (primary key)
name
yearReleased
domesticBoxOfficeSales
foriegnBoxOfficeSales
DVDBluraySales

People
pid (primary key)
name
address

DirectorOf
mid
pid

ActedIn
mid
pid

Actors
pid (primary key)
birthdate
hairColor
eyeColor
heightIN
weightIB
screenActorsGuildAnniversairyDate

Directors
pid (primary key)
filmSchoolAttended
directorsGuildAnniversairyDate