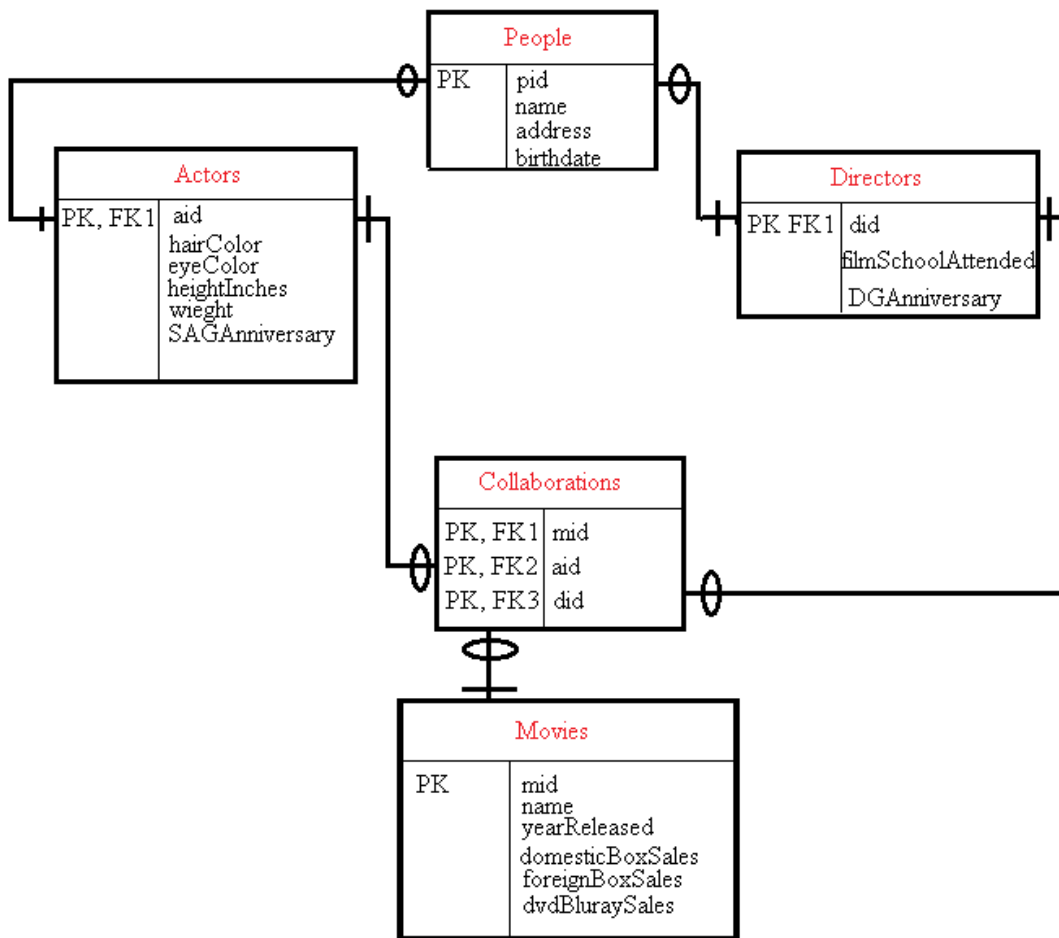Kelsey O'Brien

10/28/13

Normalization HW 2

- **ER Diagram:**



- **Create Statements:**

create table People(
        pid char(3) not null,
        name text not null,
        address text not null,
        birthdate date not null,
    primary key (pid)
    );

```
create table Actors(
        pid char(3) not null references People(pid),
        hairColor text not null,
        eyeColor text not null,
        heightInches real not null,
        weight real not null,
        SAGAnniversary date,
primary key(pid)
);

create table Directors(
        pid char(3) not null references People(pid),
        filmSchoolAttended text not null,
        DGAnniversary date,
primary key(pid)
);

create table Movies(
        mid char(3) not null,
        name text not null,
        yearRelseased int not null check (yearRelseased > 999),
        domesticBoxOfficeSales real not null,
        foreignBoxOfficeSales real not null,
        dvdBluraySales real,
primary key(mid)
);

create table Collaborations(
        mid char(3) not null,
        aid char(3) not null,
        did char(3) not null,
primary key(mid, aid, did)
);
```

- **Insert Statements:**
  - **People:**
    ```
    insert into People (pid, name, address, birthdate)
            values ('P01', 'Daniel Craig', '1 Marist Drive New York, NY', '3-3-1968');
    ```

insert into People (pid, name, address, birthdate)
        values ('P02', 'Sam Mendes', '12 Sunset Street New York, NY', '8-1-1965');

insert into People (pid, name, address, birthdate)
        values ('P03', 'Guy Hamilton', '333 Taylor Ave', '9-16-1922');

insert into People (pid, name, address, birthdate)
        values ('P04', 'Roger Moore', '569 5th Ave New York, NY', '10-14-1927');

insert into People (pid, name, address, birthdate)
        values ('P05', 'Sean Connery', '170 Brushy Hill Rd ', '8-25-1930');

- **Actors:**

insert into Actors(pid, hairColor, eyeColor, heightInches, weight, SAGAnniversary)
        values ('P01', 'Brown', 'Blue', 66, 150, '9-9-2008');

insert into Actors(pid, hairColor, eyeColor, heightInches, weight, SAGAnniversary)
        values ('P04', 'Black', 'Brown', 68, 161, '3-2-1950');

insert into Actors(pid, hairColor, eyeColor, heightInches, weight, SAGAnniversary)
        values ('P05', 'Blonde', 'Green', 67, 156, '6-23-1967');

- **Directors:**

insert into Directors(pid, filmSchoolAttended, DGAnniversary)
        values ('P02', 'Ball State Universary', '7-13-1989');

insert into Directors(pid, filmSchoolAttended, DGAnniversary)
        values ('P03', 'Carolina Film Institute', '3-17-1956');

- **Movies:**

insert into Movies (mid, name, yearRelseased, domesticBoxOfficeSales, foreignBoxOfficeSales, dvdBluraySales)
        values ('001','Lisence to Kill', 1963, 78900000, 78900000, 0);

insert into Movies (mid, name, yearRelseased, domesticBoxOfficeSales, foreignBoxOfficeSales, dvdBluraySales)
        values ('002', 'Live and Let Die', 1989, 156167015, 900000, 0);

insert into Movies (mid, name, yearRelseased, domesticBoxOfficeSales, foreignBoxOfficeSales, dvdBluraySales)

values ('003', 'Skyfall', 2012, 1108561013, 178900000, 27382934);

- o **Collaborations:**
  insert into Collaborations(mid, aid, did)
  values ('001', 'P05', 'P02');

  insert into Collaborations(mid, aid, did)
  values ('002', 'P04', 'P03');

  insert into Collaborations(mid, aid, did)
  values ('002', 'P05', 'P03');

  insert into Collaborations(mid, aid, did)
  values ('003', 'P01', 'P02');

  insert into Collaborations(mid, aid, did)
  values ('003', 'P05', 'P03');

- **Functional Dependencies**:
  - o <u>People</u>: pid → name, address, birthdate
  - o <u>Actors</u>: aid → hairColor, eyeColoe, heightInches, weight, SAGAnniversary
  - o <u>Directors</u>: sid → filmSchoolAttended, DGAnniversary
  - o <u>Movies</u>: mid → name, yearReleased, domesticBoxOfficeSames, foreignBoxOfficeSales, dvdBluraySales
- **Query of directors Sean Connery has worked with (not actually correct in real life):**
  select name as "Directors who worked with Sean Connery"
  from People
  where pid in(
      select did
          from Collaborations c
          where aid in(
              select a.aid
                  from People p, Actors a
                  where p.pid = a.aid
                  and
                  name = 'Sean Connery'
          )
      )