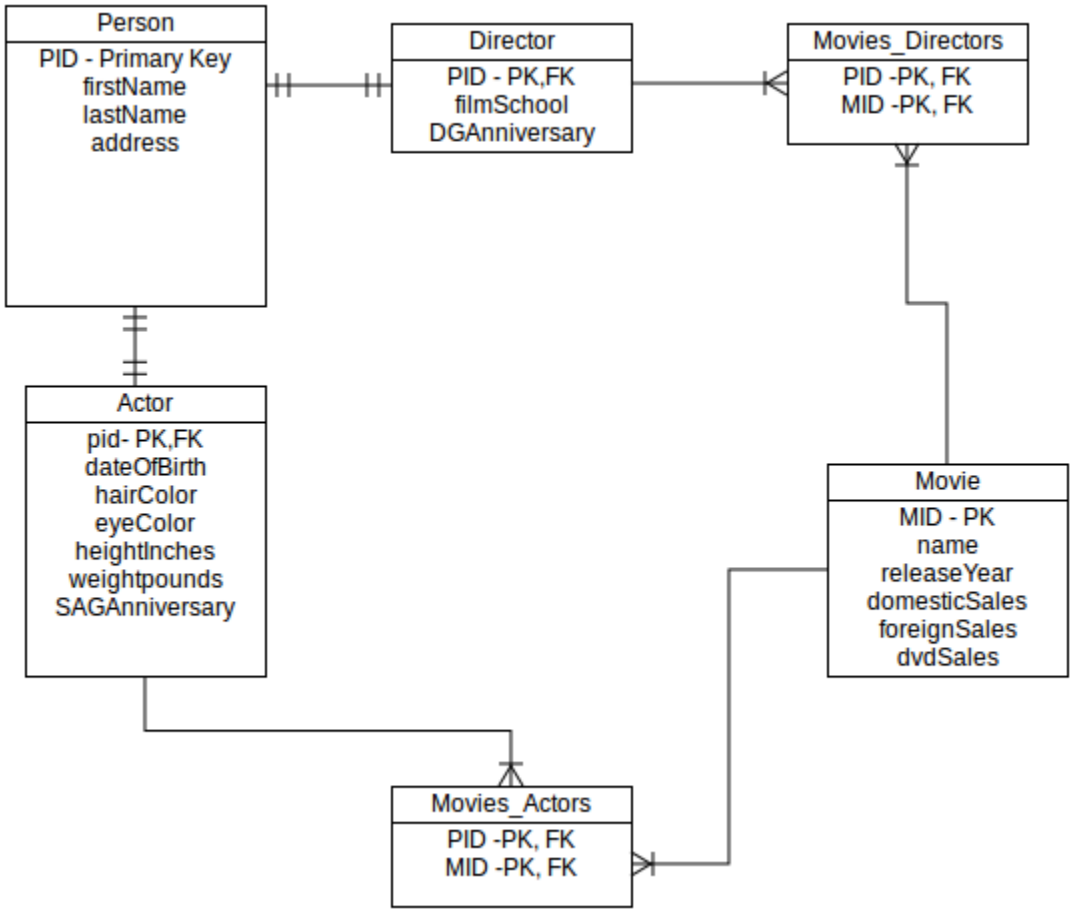
1. ER Diagram



2. SQL create statements

```
drop table if exists person;
create table person (
pid serial primary key,
firstName text not null,
lastName text not null,
address text not null
);

drop table if exists actor;
create table actor (
pid int primary key references person(pid),
dateOfBirth date not null,
hairColor text not null,
eyeColor text not null,
heightInches int not null,
weightPounds int not null,
SAGAnniversary date not null
);

drop table if exists director;
create table director (
pid int primary key references person(pid),
```

```
filmSchool text,
DGAnniversary date not null
);

drop table if exists movie;
create table movie (
mid serial primary key,
name text not null,
releaseYear int not null,
domesticSales money not null,
foreignSales money not null,
dvdSales money not null
);

drop table if exists movies_actors;
create table movie_actors (
pid int references people(pid),
mid int references movies(mid),
primary key(pid,mid)
);

drop table if exists movies_directors;
create table movie_directors (
pid int references people(pid),
mid int references movies(mid),
primary key(pid,mid)
);
```

4. Functional Dependencies

Movie:
mid → name, releaseYear, domesticSales, foreignSales, dvdSales

Person:
pid → firstName, lastName, address

Director:
pid → filmSchool, DGAnniversary

Actor:
pid → dateOfBirth, hairColor, eyeColor, heightInches,weightPounds, SAGAnniversary

Movies_Actors:
(pid, mid) →

Movies_Directors:
(pid, mid) →

5. Query to find the directors Sean Connery has worked with

```
select pid
from movies_directors md
where mid in(
              select mid
              from movie
              where pid in(
                           select pid
                           from actor a
                           where a.firstName = 'Sean' AND a.lastName = 'Connery'))
```