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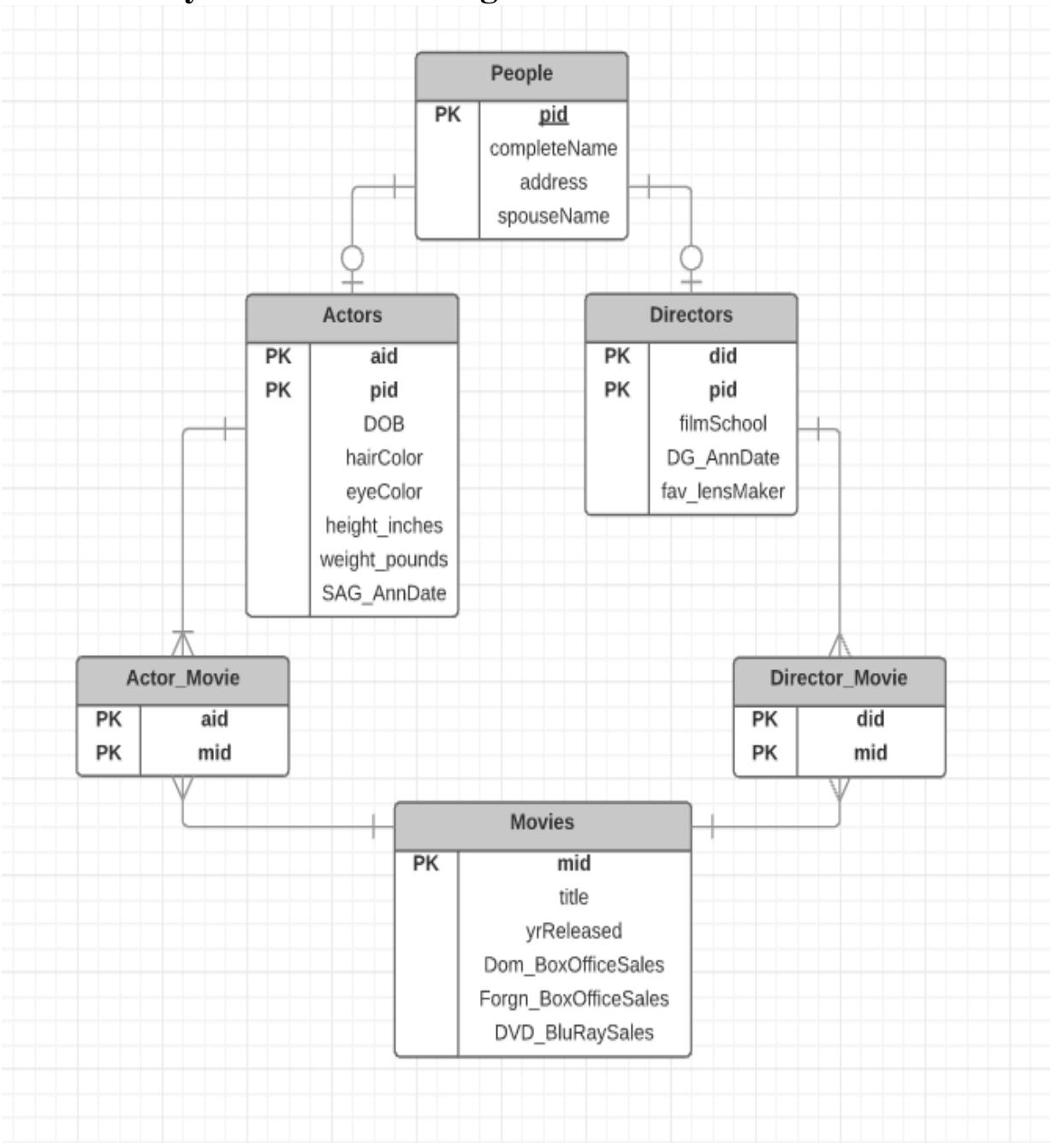
Lab8: Normalization Two

1. **Aesthetically beautiful E/R diagram.**



2. SQL create statements for each table.

```
--create table people (Strong Entity)
create table people(
  pid char(4) not null,
  completeName text,
  address text,
  spouseName text,
  primary key(pid)
);

--create table actors (Strong Entity), Entity SubType of people
create table actors(
  aid char(4) not null,
  pid char(4) not null,
  DOB date,
  hairColor text,
  eyeColor text,
  height_inches float,
  weight_pounds float,
  SAG_AnnDate date,
  primary key(aid,pid)
);
--create table directors (Strong Entity), Entity SubType of people
create table directors(
  did char(4) not null,
  pid char(4) not null,
  filmSchool text,
  DG_AnnDate date,
  fav_lensMaker text,
  primary key(did,pid)
);
```

```
--create table movies (Strong Entity)
create table movies(
  mid char(4) not null,
  title text not null,
  yrReleased date,
  Dom_BoxOfficeSales numeric(12,2),
  Forgn_BoxOfficeSales numeric(12,2),
  DVD_BluRaySales numeric(12,2),
  primary key(mid)
);

--create table actor:movie (Weak Entity)
create table actor_movie(
  mid char(4) not null,
  aid char(4) not null,
  primary key(mid, aid)
);

--create table director:movie (Weak Entity)
create table director_movie(
  mid char(4) not null,
  did char(4) not null,
  primary key(mid, did)
);
```

3. **Functional dependencies for each table.**
    - **People Table:**
        - (pid) ➔ completeName, address, spourseName
    - **Actors Table**
        - (aid, pid)➔DOB, hairColor, eyeColor, height_inches, weight_pounds, SAG_AnnDate
    - **Directors Table**
        - (did, pid)➔filmSchool, DG_AnnDate, fav_lensMaker
    - **Movies Table**
        - (mid)➔ title, yrReleased, Dom_BoxOfficeSales, Forgn_BoxOfficeSales, DVD_BluRaySales

- **Actor_Movie Table**
  - (aid, mid)➔
- **Director_Movie Table**
  - (did, mid)➔

4. **Query to show all directors with whom actor “Sean Connery” has worked.**

```
--QUERY TO SHOW ALL DIRECTORS WITH WHOM ACTOR "SEAN CONNERY" HAS WORKED:
select completeName
from people p inner join directors d on p.pid=d.pid
inner join director_movie dm on d.did=dm.did
where dm.mid in
(select mid
from actor_movie am inner join actors a on am.aid=a.aid
inner join people p on a.pid=p.pid
where p.completeName='Sean Connery');
```

SQL included in submission for further inspection if needed.