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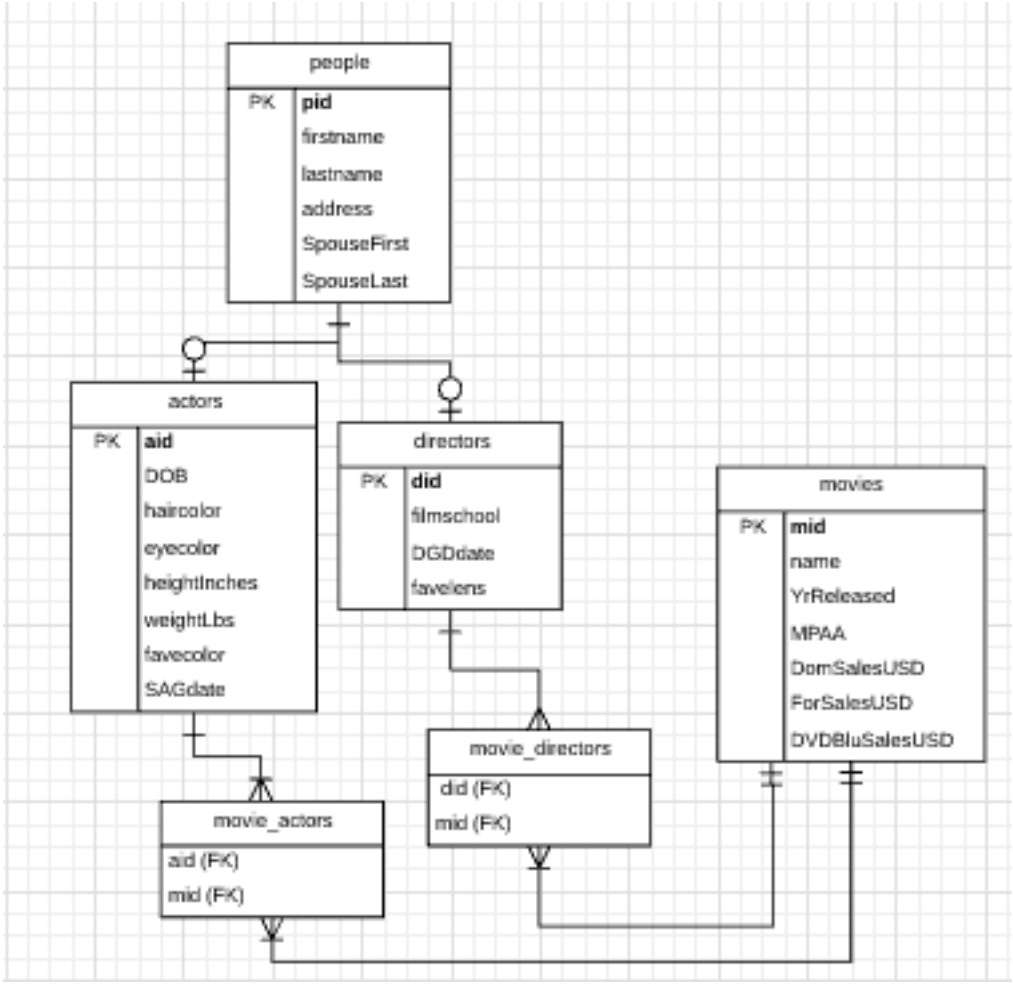
CMPT 308
Lab 8- Normalization 2

1) EON E/R Diagram:



2) SQL create statements:

```
CREATE TABLE people (
    pid INT NOT NULL,
    first_name VARCHAR(20) NOT NULL,
    last_name VARCHAR(20) NOT NULL,
    address VARCHAR(50),
    spouse_first VARCHAR(20),
    spouse_last VARCHAR(20),
    primary key(pid)
    );

CREATE TABLE actors (
    aid INT NOT NULL references people(pid),
```

```
    DOB DATE,
    haircolor VARCHAR(20),
    eyecolor VARCHAR(20),
    heightINCH INT,
    weightLBS INT,
    favecolor VARCHAR(20),
    SAGDate DATE,
    primary key(aid)
    );

CREATE TABLE directors (
    did INT PRIMARY KEY NOT NULL references people(pid),
    filmschool VARCHAR(50),
    DGADate DATE,
    favelens VARCHAR(50)
    );

CREATE TABLE movies (
    mid INT NOT NULL,
    movie_name VARCHAR(50),
    year_released INT,
    DomSalesUSD INT,
    ForSalesUSD INT,
    DVD_BlueSalesUSD INT,
    primary key(mid)
    );

CREATE TABLE movie_actors (
    aid INT references people(pid),
    mid INT references movies(mid)
    );

CREATE TABLE movie_directors (
    did INT references people(pid),
    mid INT references movies(mid)
    );
```

3) Functional dependencies:

Pid → first_name, last_name, address, spouse_first, spouse_last
Aid → DOB, haircolor, eyecolor, heightINCH, weightLBS, SAGDate
Did → filmschool, DGADate, favelens
mid → movie_name, year_released, DomSalesUSD, ForSalesUSD, DVD_BlueSalesUSD
{aid, mid}
{did, mid}

4) Sean Connery query:

```
select distinct people.*
from people, movies, directors, movie_directors
where people.pid = directors.did
and movie_directors.mid = movies.mid
and movie_directors.mid IN (SELECT distinct movies.mid
                            FROM people, movie_actors, movies, actors
                            where people.first_name = 'Sean'
                            and people.last_name = 'Connery'
                            and actors.aid = movie_actors.aid
                            );
```