



Functional Dependency:

People

pid \rightarrow fname

pid \rightarrow lname

pid \rightarrow address

Actors

aid \rightarrow birthday

aid \rightarrow hairColor

aid \rightarrow eyeColor

aid \rightarrow height

aid \rightarrow weight

aid \rightarrow guildAnniversary

Directors

did \rightarrow school

did \rightarrow guildAnniversary

Movies

mid \rightarrow title

mid \rightarrow year

mid \rightarrow domesticSales

mid \rightarrow foreignSales

mid \rightarrow videoSales

The actual SQL is on my github if you don't want to read through this.

```
DROP TABLE IF EXISTS movieActors;
DROP TABLE IF EXISTS movieDirectors;
DROP TABLE IF EXISTS actors;
DROP TABLE IF EXISTS directors;
DROP TABLE IF EXISTS people;
DROP TABLE IF EXISTS movies;
```

```
CREATE TABLE people (
pid SERIAL,
fname VARCHAR(20),
lname VARCHAR(20),
address VARCHAR(40),
PRIMARY KEY (pid)
);
```

```
CREATE TABLE actors (
aid INT REFERENCES people(pid),
birthday DATE,
hairColor VARCHAR(20),
eyeColor VARCHAR(20),
height INT,
weight INT,
guildAnniversary DATE,
PRIMARY KEY (aid)
);
```

```
CREATE TABLE directors (
did INT REFERENCES people(pid),
school VARCHAR(40),
guildAnniversary DATE,
PRIMARY KEY (did)
);
```

```
CREATE TABLE movies (
mid SERIAL,
title VARCHAR(40),
year INT,
domesticSales FLOAT4,
foreignSales FLOAT4,
videoSales FLOAT4,
PRIMARY KEY (mid)
);
```

```
CREATE TABLE movieActors(
mid INT REFERENCES movies,
aid INT REFERENCES actors(aid),
PRIMARY KEY (mid, aid)
);
```

```
CREATE TABLE movieDirectors(
mid INT REFERENCES movies,
did INT REFERENCES directors(did),
PRIMARY KEY (mid, did)
);
```

```
INSERT INTO people (fname, lname, address)
VALUES
('Sean', 'Connery', '007 Bond Drive'),
('George', 'Lazenby', '008 James Rad'),
('Roger', 'Moore', '009 Seven Street'),
('Terence', 'Young', 'Thunder Ave'),
('Guy', 'Hamilton', 'Live Path'),
('Lewis', 'Gilbert', 'Twice Street'),
('Peter', 'Hunt', 'Secret Street');
```

```
INSERT INTO actors(aid, birthday, hairColor, eyeColor, height, weight, guildAnniversary)
VALUES
(1, '1930-08-25', 'Black', 'Brown', '74', '200', '1954-04-18'),
(2, '1939-09-05', 'Black', 'Brown', '74', '180', '1965-09-17'),
(3, '1930-10-14', 'Black', 'Brown', '73', '195', '1945-04-18');
```

```
INSERT INTO directors(did, school, guildAnniversary)
VALUES
(4, 'University of Cambridge', '1940-04-10'),
(5, 'None', '1952-06-30'),
(6, 'None', '1966-07-04'),
(7, 'University of Rome', '1940-07-18');
```

```
INSERT INTO movies (title, year, domesticSales, foreignSales, videoSales)
VALUES
('Dr. No', 1962, 16.1, 43.5, 30.2),
('From Russia with Love', 1963, 24.8, 54.1, 41.5),
('Goldfinger', 1964, 51.1, 73.8, 79.1),
('Thunderball', 1965, 63.6, 77.6, 92.1),
('You Only Live Twice', 1967, 43.1, 68.5, 69.5),
('On Her Majesty's Secret Service', 1969, 22.8, 59.2, 32.4),
('Live and Let Die', 1973, 35.4, 91.0, 56.9);
```

```
INSERT INTO movieActors (mid, aid)
VALUES
(1, 1),
(2, 1),
(3, 1),
(4, 1),
(5, 1),
(6, 2),
(7, 3);
```

```
INSERT INTO movieDirectors (mid, did)
VALUES
(1, 4),
(2, 4),
(3, 5),
(4, 4),
(5, 6),
(6, 7),
(7, 5);
```

```
SELECT * FROM people;
SELECT * FROM actors;
SELECT * FROM directors;
SELECT * FROM movies;
```

```
SELECT DISTINCT p.fname, p.lname
FROM
people p,
movies m,
directors d,
movieDirectors md
WHERE md.did = d.did AND m.mid = md.mid AND d.did = p.pid
      AND md.mid IN (SELECT m.mid
                     FROM
                     people p,
                     actors a,
                     movies m,
                     movieActors ma
                     WHERE p.pid = a.aid AND m.mid = ma.mid AND a.aid = ma.aid
                        AND p.fname = 'Sean' AND p.lname = 'Connery'
                     );
```