EON Productions Actors Database

People Table (Main Table):
SELECT *
FROM Persons;

pid integer	first_name character varying(40)	last_name character varying(40)	address character varying(80)
1	Sean	Connery	2000 Star Avenue, Los Angeles, CA
2	Matt	Damon	The Spanky Taylor Company 3727 Magnolia Suit CA
3	Tom	Cruise	1111 Calle Vista Dr, Beverly Hills, CA 90210
4	Tom	Hanks	1994 Gump Street, Santa Monica, CA
5	Brad	Pitt	32316 Pacific Coast Highway Malibu, CA
6	Ridley	Scott	634 La Peer Dr West Hollywood, CA
7	Neil	Jordan	Waverly House Noel Street Lonsin W1F
8	Guy	Hamilton	225 Violet Ct Saxonburg, Pennsylvania 16056
9	Robert	Zemeckis	1569 E Valley Rd, Montecito, CA 93108

To add more data to the above table, I will insert **entity subtypes** to better represent the model.
Actors Data:
SELECT *
FROM Actors;

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aid integer	last_name character varying(40)	birth_date character varying(40)	eye_color character varying(40)	hair_color character varying(20)	height_inches integer	weight_lbs integer	actors_guild_anniversary date	favorite_color character varying(20)	spouse_name character varying(60)
1	Connery	8/25/1931	green	brown	74	180	1980-05-11	Green	Samantha
2	Damon	10/08/1970	blue	brown	70	175	1990-10-06	White	Angela
3	Cruise	7/3/1962	light blue	dark brown	72	165	1996-04-16	Black	Courtney
4	Hanks	7/9/1953	blue	brown	70	175	1974-01-23	Blue	Alexis
5	Pitt	10/18/1963	blue	brown	70	175	1995-08-29	Orange	Rebecca

Movies Data: **SELECT ***
FROM Movies;

mid integer	movie_name character varying(80)	year_released integer	mpaa_rating text	domestic_box_office_sales_usd integer	foreign_box_office_sales_usd integer	dvd_bluray_sales integer
1	Forrest Gump	1994	PG-13	64000000	15000000	8679305
2	Goldfinger	1964	GP	9000000	15000000	239386
3	Interview with the Vampire	1994	R	47000000	52000000	4369305
4	The Martian	2015	PG-13	37000000	63000000	9833861

Directors Data: **SELECT ***
FROM Directors;

did integer	last_name character varying(40)	film_school_attended character varying(50)	directors_guild_anniversary date	spouse_name character varying(40)	fav_lens_maker character varying(30)
1	Hamilton	New York Film Academy	1962-02-13	Elizabeth	Zeiss
2	Scott	American Film Institute	1983-04-30	Meghan	Olympus
3	Jordan	Boston University School of Arts	1987-08-03	Katie	Pentax
4	Zemeckis	London College of Music	1990-10-30	Caroline	Olympus

Actors and the movies they worked in:
SELECT *
FROM Actors_Movies;

aid integer	mid integer	last_name character varying(40)	movie_name character varying(40)
4	1	Hanks	Forrest Gump
1	2	Connery	Goldfinger
3	3	Cruise	Interview with the Vampire
5	3	Pitt	Interview with the Vampire
2	4	Damon	The Martian

Directors and the movies they directed:
SELECT *
FROM Directors_Movies;

did integer	mid integer	last_name character varying(40)	movie_name character varying(40)
4	1	Zemeckis	Forrest Gump
1	2	Hamilton	Goldfinger
3	3	Jordan	Interview with the Vampire
2	4	Scott	The Martian

The SQL Create Statements for the above tables:

```sql
DROP TABLE if exists Persons;
DROP TABLE if exists Actors;
DROP TABLE if exists Directors;
DROP TABLE if exists Movies;
DROP TABLE if exists Actors_Movies;
DROP TABLE if exists Directors_Movies;

CREATE TABLE Persons(
        pid      serial not null primary key,
        first_name      varchar(40) not null,
        last_name       varchar(40) not null,
        address                 varchar(80)
);

CREATE TABLE Actors (
        aid  int not null primary key references Persons(pid),
        last_name varchar(40),
        birth_date varchar(40) not null,
        eye_color varchar(40),
        hair_color varchar(20),
        height_inches int,
        weight_lbs int,
        actors_guild_anniversary date,
        favorite_color varchar(20),
        spouse_name varchar(60)
);

CREATE TABLE Directors (
        did int not null primary key references Persons(pid),
        last_name varchar(40),
        film_school_attended varchar(50),
        directors_guild_anniversary date,
        spouse_name varchar(40),
        fav_lens_maker varchar(30)
);

CREATE TABLE Movies (
        mid serial not null primary key,
        movie_name varchar(80),
        year_released int,
        MPAA_Rating text,
```

```sql
        domestic_box_office_sales_usd money,
        foreign_box_office_sales_usd money,
        dvd_bluray_sales money
);

CREATE TABLE Actors_Movies (
        aid int not null references Actors(aid),
        mid int not null references Movies(mid),
        last_name varchar(40) not null,
        movie_name varchar(40),
        primary key(aid,mid)
);

CREATE TABLE Directors_Movies (
        did int not null references Directors(did),
        mid int not null references Movies(mid),
        last_name varchar(40),
        movie_name varchar(40),
        primary key(did,mid)
);

-- Main Table Data
insert into Persons (first_name, last_name, address)
        values ('Sean', 'Connery', '2000 Star Avenue, Los Angeles, CA');
insert into Persons (first_name, last_name, address)
        values ('Matt ', 'Damon', 'The Spanky Taylor Company 3727 Magnolia Suit CA');
insert into Persons (first_name, last_name, address)
        values ('Tom', 'Cruise', '1111 Calle Vista Dr, Beverly Hills, CA 90210');
insert into Persons (first_name, last_name, address)
        values ('Tom', 'Hanks', '1994 Gump Street, Santa Monica, CA');
insert into Persons (first_name, last_name, address)
        values ('Brad', 'Pitt', '32316 Pacific Coast Highway Malibu, CA');
insert into Persons (first_name, last_name, address)
        values ('Ridley', 'Scott', '634 La Peer Dr West Hollywood, CA');
insert into Persons (first_name, last_name, address)
        values ('Neil', 'Jordan', 'Waverly House Noel Street Lonsin W1F');
insert into Persons (first_name, last_name, address)
        values ('Guy', 'Hamilton', '225 Violet Ct Saxonburg, Pennsylvania 16056');
insert into Persons (first_name, last_name, address)
        values ('Robert', 'Zemeckis', '1569 E Valley Rd, Montecito, CA 93108');

-- SELECT * FROM Persons;
```

-- Actors --
insert into Actors (aid, last_name, birth_date, hair_color, eye_color, height_inches, weight_lbs, actors_guild_anniversary, favorite_color, spouse_name)
        values (1, 'Connery', '8/25/1931', 'brown', 'green', 74, 180, '5/11/1980', 'Green', 'Samantha');
insert into Actors (aid, last_name, birth_date, hair_color, eye_color, height_inches, weight_lbs, actors_guild_anniversary, favorite_color, spouse_name)
        values (2, 'Damon', '10/08/1970', 'brown', 'blue', 70, 175, '10/06/1990', 'White', 'Angela');
insert into Actors (aid, last_name, birth_date, hair_color, eye_color, height_inches, weight_lbs, actors_guild_anniversary, favorite_color, spouse_name)
        values (3, 'Cruise', '7/3/1962', 'dark brown', 'light blue', 72, 165, '04/16/1996', 'Black', 'Courtney');
insert into Actors (aid, last_name, birth_date, hair_color, eye_color, height_inches, weight_lbs, actors_guild_anniversary, favorite_color, spouse_name)
        values (4, 'Hanks', '7/9/1953', 'brown', 'blue', 70, 175, '01/23/74', 'Blue', 'Alexis');
insert into Actors (aid, last_name, birth_date, hair_color, eye_color, height_inches, weight_lbs, actors_guild_anniversary, favorite_color, spouse_name)
        values (5, 'Pitt', '10/18/1963', 'brown', 'blue', 70, 175, '08/29/1995', 'Orange', 'Rebecca');

SELECT * FROM Actors;

-- Directors --
insert into Directors (did, last_name, film_school_attended, directors_guild_anniversary, spouse_name, fav_lens_maker)
        values (1, 'Hamilton', 'New York Film Academy', '02/13/1962', 'Elizabeth', 'Zeiss');
insert into Directors (did, last_name, film_school_attended, directors_guild_anniversary, spouse_name, fav_lens_maker)
        values (2, 'Scott', 'American Film Institute', '04/30/1983', 'Meghan' , 'Olympus');
insert into Directors (did, last_name, film_school_attended, directors_guild_anniversary, spouse_name, fav_lens_maker)
        values (3, 'Jordan', 'Boston University School of Arts', '08/03/1987', 'Katie', 'Pentax');
insert into Directors (did, last_name, film_school_attended, directors_guild_anniversary, spouse_name, fav_lens_maker)
        values (4, 'Zemeckis', 'London College of Music', '10/30/1990', 'Caroline', 'Olympus');

 SELECT * FROM Directors;

-- Movies --
insert into Movies (movie_name, year_released, MPAA_Rating, domestic_box_office_sales_usd, foreign_box_office_sales_usd, dvd_bluray_sales)
        values ('Forrest Gump', 1994, 'PG-13', 64000000, 15000000, 8679305);
insert into Movies (movie_name, year_released, MPAA_Rating, domestic_box_office_sales_usd, foreign_box_office_sales_usd, dvd_bluray_sales)

values ('Goldfinger', 1964, 'GP', 9000000, 15000000, 239386);
insert into Movies (movie_name, year_released, MPAA_Rating,
domestic_box_office_sales_usd, foreign_box_office_sales_usd, dvd_bluray_sales)
        values ('Interview with the Vampire', 1994, 'R', 47000000, 52000000, 4369305);
insert into Movies (movie_name, year_released, MPAA_Rating,
domestic_box_office_sales_usd, foreign_box_office_sales_usd, dvd_bluray_sales)
        values ('The Martian', 2015, 'PG-13', 37000000, 63000000, 9833861);

-- SELECT * FROM Movies;

insert into Actors_Movies (aid, mid, last_name, movie_name) values (4, 1, 'Hanks', 'Forrest Gump');
insert into Actors_Movies (aid, mid, last_name, movie_name) values (1, 2, 'Connery', 'Goldfinger');
insert into Actors_Movies (aid, mid, last_name, movie_name) values (3, 3, 'Cruise', 'Interview with the Vampire');
insert into Actors_Movies (aid, mid, last_name, movie_name) values (5, 3, 'Pitt', 'Interview with the Vampire');
insert into Actors_Movies (aid, mid, last_name, movie_name) values (2, 4, 'Damon', 'The Martian');

-- SELECT * FROM Actors_Movies;

insert into Directors_Movies (did, mid, last_name, movie_name) values (4, 1, 'Zemeckis', 'Forrest Gump');
insert into Directors_Movies (did, mid, last_name, movie_name) values (1, 2, 'Hamilton', 'Goldfinger');
insert into Directors_Movies (did, mid, last_name, movie_name) values (3, 3, 'Jordan', 'Interview with the Vampire');
insert into Directors_Movies (did, mid, last_name, movie_name) values (2, 4, 'Scott', 'The Martian');

--SELECT * FROM Directors_Movies;

Functional Dependencies:

pid → first_name, last_name, address
aid → birth_date, hair-color, eye_color, height_inches, weight_lbs, actors_guild_anniversary, spouse_name, fav_color
did → film_school_attended, directors_guild_anniversary, spouse_name, fav_lens_maker
mid → movie_name, year_released, domestic_box_office_sales, foreign_box_office_sales, dvd_bluray_sales

This SQL query displays the director with whom Sean Connery has worked, along with the movie title:

SELECT D.*
FROM Directors_Movies D INNER JOIN Actors_Movies A ON D.movie_name = A.movie_name
WHERE A.last_name = 'Connery'
;

ER Diagram: