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Normalization HW 2

SQL Create Statements

People

```
CREATE TABLE People(
    pid       char(4) not null,
    name      varchar(30),
    address   varchar(150),
    primary key (pid)
);
```

Directors

```
CREATE TABLE Directors(
    pid                 char(4) not null references People(pid),
    film_school         char(50),
    dag_anniversary     varchar(50),
    primary key(pid)
);
```

Actors

```
CREATE TABLE Actors(
    pid                 char(4) not null references People(pid),
    birthday            varchar(15),
    hair_color          varchar(15),
    eye_color           varchar(6),
    height_inches       integer,
    weight              integer,
    sag_anniversary_date    date,
    primary key(pid)
);
```

Movies

```
CREATE TABLE Movies(
    mid             char(4) not null,
    title           varchar(50),
    year            integer,
    domestic_sales  numeric(12,2),
    foreign_sales   numeric(12,2),
    dvd_bluray_sales numeric(12,2),
    primary key(mid)
);
```

MDirectors- *This table is responsible for relating the movies and the directors so you can get the output of moives and who directed them.*

```
CREATE TABLE MDirectors(
    mid     char(4)     not null references Movies(mid),
    pid     char(4) not null references Directors(pid),
    primary key (mid, pid)
);
```

MActors- *This table is responsible for relating movies and actors so you can get the output of movies and who directed them.*

```
CREATE TABLE MActors(
    mid     char(4) not null references Movies(mid),
    pid     char(4) not null references Actors(pid),
    primary key (mid, pid)
);
```

Insert Statements

People

```
INSERT INTO People(pid, name, address) VALUES
    ('p01', 'Sean Connery', '123 Abbey Road UK'),
    ('p02', 'Michael Bay', '45 Madison Ave NY'),
    ('p03', 'Shia Labouf', '56 Rodeo Drive LA California'),
    ('p04', 'Harrison Ford', '14 Finikay Lane New York'),
    ('p05', 'Steven Spielberg', '13 E.T Lane California');
```

Directors

```
INSERT INTO Directors(pid, film_school, dag_anniversary) VALUES
    ('p01', 'None', 'None'),
    ('p02', 'Wesleyn', '12/05/2007'),
    ('p03', 'USC', '01/09/1973');
```

Actors

```
INSERT INTO Actors(pid, birthday, hair_color, eye_color, height_inches, weight,
sag_anniversary_date) VALUES
    ('p01', '08/25/1930', 'Brown', 'Brown', 74, 200, '12/10/1997'),
    ('p03', '06/11/1986', 'Brown', 'Brown', 69, 160, '08/08/2007'),
    ('p04', '07/13/1942', 'Light Brown', 'Blue', 73, 175, '02/23/1968');
```

Movies

```
INSERT INTO Movies(mid, title, year, domestic_sales, foreign_sales,
dvd_bluray_sales) VALUES
    ('m01', 'The Bowler and the Bun', 1967, 200000.00, 400000.00, 150000.00),
    ('m02', 'Transformers', 2007, 80000000.00, 76000000.00, 12000000.00),
```

('m03', 'Indiana Jones and the Lost Crusades', 1989, 1000000.00, 2000000.00, 900000.00);

MDirectos
INSERT INTO MDirectors(mid, pid) VALUES
('m01', 'p01'),
('m02', 'p02'),
('m03', 'p05');

MActors
INSERT INTO MDirectors(mid, pid) VALUES
('m01', 'p01'),
('m02', 'p02'),
('m03', 'p05');

Functional Dependencies

People
Pid→ name
Pid→ address

Actors
Pid → birthday
Pid→ hair_color
Pid → eye_color
Pid → height_inches
Pid → weight
Pid → sag_anniversery_date

Directors
Pid → film_school
Pid → dag_anniversary

Movies
mid → title
mid → year
mid → domestic_sales
mid → foreign_sales
mid→ dvd_blueray

SQL Sean Connery

```
SELECT people.name
FROM People
WHERE pid IN (      SELECT pid FROM MDirectors
WHERE mid IN
(           SELECT mid FROM MActors
```

```
WHERE pid IN
(                   SELECT pid FROM People
WHERE name = 'Sean Connery'                   )             )       );
```

In this query you get the output of Sean Connery because he directed and starred as himself in the Movie The Bowler and the Bun thereore his pid of p01 showed up in both the mactors table and the mdirectors table. Therefore you get the output of Sean connery and Steven Spielberg who worked with Sean Connery in the Indianna Jones films.