

E-R Diagram

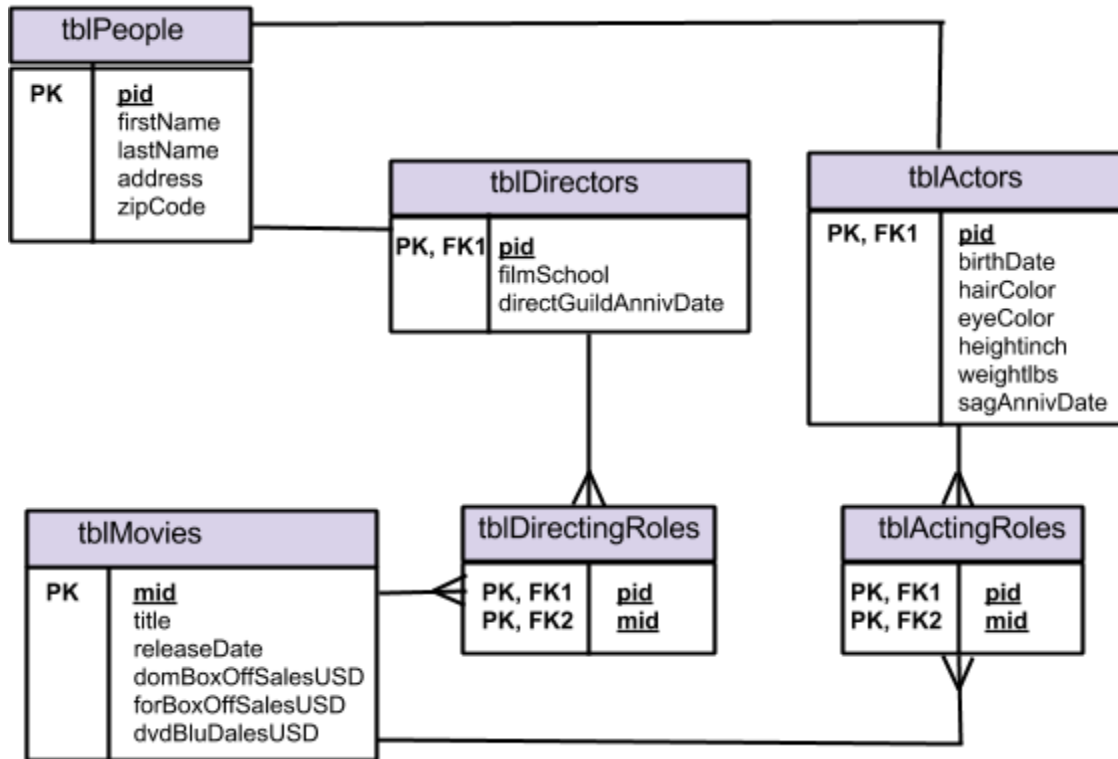


Table Creation Statements

```
-- People --  
CREATE TABLE people (  
  pid      char(4) not null,  
  firstName text,  
  lastName text,  
  address  text,  
  zipCode  char(5),  
  primary key(pid)  
);
```

-- Actors --

```
CREATE TABLE actors (  
  pid      char(4) not null references people(pid),  
  birthDate  date,  
  hairColor  text,  
  eyeColor   text,  
  heightINCH integer,  
  weightLBS  integer,  
  sagAnnivDate date,  
  primary key(pid)  
);
```

-- Directors --

```
CREATE TABLE directors (  
  pid      char(4) not null references people(pid),  
  filmSchool  text,  
  directGuildAnnivDate date,  
  primary key(pid)  
);
```

-- Movies --

```
CREATE TABLE movies (  
  mid      char(4) not null,  
  title     text,  
  releaseDate  date,  
  domBoxOffSalesUSD numeric(12,2),  
  forBoxOffSalesUSD  numeric(12,2),  
  dvdBluSalesUSD  numeric(12,2),  
  primary key(mid)  
);
```

-- Acting Roles --

```
CREATE TABLE actingRoles (  
  pid char(4) not null references actors(pid),  
  mid char(4) not null references movies(mid),  
  primary key(pid, mid)  
);
```

-- Directing Roles --

```
CREATE TABLE directingRoles (  
  pid char(4) not null references directors(pid),  
  mid char(4) not null references movies(mid),  
  primary key(pid, mid)
```

);

Test Data Insertion Statements

-- People --

```
INSERT INTO people( pid, firstName, lastName, address, zipCode)
VALUES('p001', 'Sean', 'Connery', '123 Fake St.', '11223');
```

```
INSERT INTO people( pid, firstName, lastName, address, zipCode)
VALUES('p002', 'Pierce', 'Brosnan', '40 Real St.', '33223');
```

```
INSERT INTO people( pid, firstName, lastName, address, zipCode)
VALUES('p003', 'Bob', 'Smith', '300 Fake Rd.', '13273');
```

```
INSERT INTO people( pid, firstName, lastName, address, zipCode)
VALUES('p004', 'Some', 'Britishguy', '80 Real Rd.', '33223');
```

```
INSERT INTO people( pid, firstName, lastName, address, zipCode)
VALUES('p005', 'Jet', 'Black', '33 Bebop St.', '12378');
```

```
INSERT INTO people( pid, firstName, lastName, address, zipCode)
VALUES('p006', 'Alec', 'Trevelyan', '1 Some St.', '18978');
```

-- Actors --

```
INSERT INTO actors( pid, birthDate, hairColor, eyeColor, heightINCH, weightLBS,
sagAnnivDate)
VALUES('p001', '1930-08-25', 'white', 'brown', 60, 180, '1950-01-13');
```

```
INSERT INTO actors( pid, birthDate, hairColor, eyeColor, heightINCH, weightLBS,
sagAnnivDate)
VALUES('p002', '1953-05-16', 'black', 'brown', 70, 182, '1980-04-17');
```

```
INSERT INTO actors( pid, birthDate, hairColor, eyeColor, heightINCH, weightLBS,
sagAnnivDate)
VALUES('p004', '1980-07-15', 'brown', 'blue', 67, 183, '2002-09-25');
```

```
INSERT INTO actors( pid, birthDate, hairColor, eyeColor, heightINCH, weightLBS,
sagAnnivDate)
VALUES('p005', '1989-09-25', 'black', 'brown', 72, 200, '2010-11-30');
```

-- Directors --

```
INSERT INTO directors( pid, filmSchool, directGuildAnnivDate)
VALUES('p001', 'School 1', '1957-03-19');
```

```
INSERT INTO directors( pid, filmSchool, directGuildAnnivDate)
VALUES('p003', 'School 2', '1987-02-11');
```

```
INSERT INTO directors( pid, filmSchool, directGuildAnnivDate)
VALUES('p004', 'School 3', '2005-09-18');
```

```
INSERT INTO directors( pid, filmSchool, directGuildAnnivDate)
VALUES('p005', 'School 2', '2012-12-04');
```

```
INSERT INTO directors( pid, filmSchool, directGuildAnnivDate)
VALUES('p006', 'School 1', '1977-03-19');
```

-- Movies --

```
INSERT INTO movies( mid, title, releaseDate, domBoxOffSalesUSD, forBoxOffSalesUSD,
dvdBluSalesUSD)
VALUES('m001', 'GoldenEye', '1995-11-13', 300.00, 200.00, 180.00);
```

```
INSERT INTO movies( mid, title, releaseDate, domBoxOffSalesUSD, forBoxOffSalesUSD,
dvdBluSalesUSD)
VALUES('m002', 'Movie A', '2009-12-25', 340.00, 210.00, 100.00);
```

```
INSERT INTO movies( mid, title, releaseDate, domBoxOffSalesUSD, forBoxOffSalesUSD,
dvdBluSalesUSD)
VALUES('m003', 'Movie B', '2010-11-13', 430.00, 210.00, 170.00);
```

```
INSERT INTO movies( mid, title, releaseDate, domBoxOffSalesUSD, forBoxOffSalesUSD,
dvdBluSalesUSD)
VALUES('m004', 'Movie C', '2011-03-18', 432.00, 219.00, 70.00);
```

```
INSERT INTO movies( mid, title, releaseDate, domBoxOffSalesUSD, forBoxOffSalesUSD,
dvdBluSalesUSD)
VALUES('m005', 'Movie D', '2012-01-29', 530.00, 610.00, 1070.00);
```

-- Acting Roles --

```
INSERT INTO actingRoles( pid, mid)
VALUES('p001', 'm002');
```

```
INSERT INTO actingRoles( pid, mid)
VALUES('p002', 'm001');
```

```
INSERT INTO actingRoles( pid, mid)
VALUES('p002', 'm005');
```

```
INSERT INTO actingRoles( pid, mid)
VALUES('p004', 'm002');
```

```
INSERT INTO actingRoles( pid, mid)
VALUES('p004', 'm004');
```

```
INSERT INTO actingRoles( pid, mid)
VALUES('p005', 'm003');
```

-- Directing Roles --

```
INSERT INTO directingRoles( pid, mid)
VALUES('p001', 'm005');
```

```
INSERT INTO directingRoles( pid, mid)
VALUES('p003', 'm002');
```

```
INSERT INTO directingRoles( pid, mid)
VALUES('p003', 'm003');
```

```
INSERT INTO directingRoles( pid, mid)
VALUES('p004', 'm005');
```

```
INSERT INTO directingRoles( pid, mid)
VALUES('p005', 'm003');
```

```
INSERT INTO directingRoles( pid, mid)
VALUES('p005', 'm004');
```

```
INSERT INTO directingRoles( pid, mid)
VALUES('p006', 'm001');
```

Functional Dependencies

people table: pid → firstName, lastName, address, zipCode

actors table: pid → birthDate, hairColor, eyeColor, heightinch, weightlbs, sagAnnivDate

directors table: pid → filmSchool, directGuildAnnivDate

movies table: mid → title, yearReleased, domBoxOffSalesUSD, forBoxOffSalesUSD, dvdBluSalesUSD

actingRoles table: pid, mid →

directingRoles table: pid, mid →

SQL query to return all the directors with whom “Sean Connery” has worked:

```
select firstname, lastname
from people
where pid in (select pid
              from directingRoles
              where mid in (select mid
                           from actingRoles
                           where pid in (select pid
                                         from people
                                         where firstname = 'Sean' and lastname =
                                         'Connery')
                           )
              )
order by firstname asc;
```