

Program 9: Movie database

Consider the schema for Movie Database:

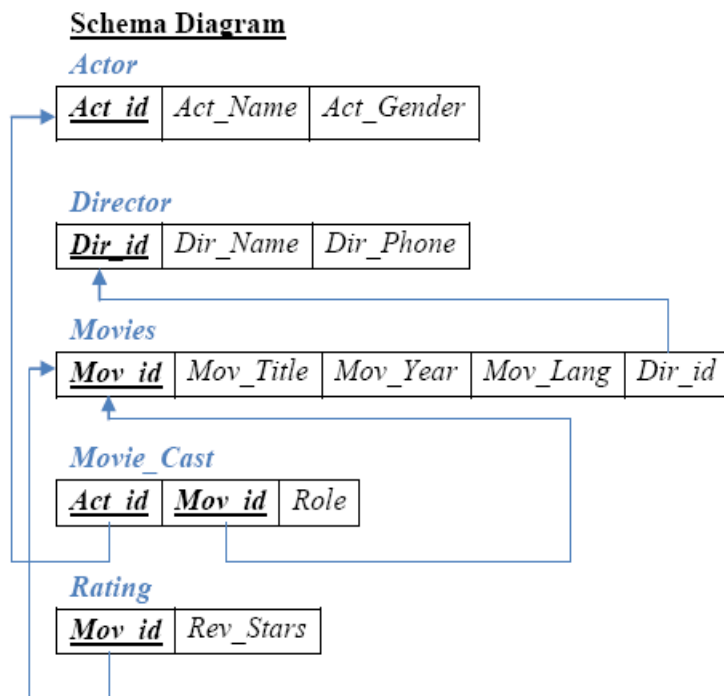
ACTOR (Act_id, Act_Name, Act_Gender)

DIRECTOR (Dir_id, Dir_Name, Dir_Phone)

MOVIES (Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id)

MOVIE_CAST (Act_id, Mov_id, Role)

RATING (Mov_id, Rev_Stars)



```
create database Lab9;
```

```
use Lab9;
```

```
create table actor(act_id int, act_name varchar(30), act_gender enum('M','F'), primary key(act_id));
```

```
desc actor;
```

	Field	Type	Null	Key	Default	Extra
►	act_id	int	NO	PRI	NULL	
	act_name	varchar(30)	YES		NULL	
	act_gender	enum('M','F')	YES		NULL	

```
create table director(dir_id int, dir_name varchar(30), dir_phone varchar(10), primary key(dir_id));
```

```
desc director;
```

	Field	Type	Null	Key	Default	Extra
►	dir_id	int	NO	PRI	NULL	
	dir_name	varchar(30)	YES		NULL	
	dir_phone	varchar(10)	YES		NULL	

```
create table movies(mov_id int, mov_title varchar(30), mov_year year, mov_lang varchar(10), dir_id int,
primary key(mov_id), foreign key(dir_id) references director(dir_id) on delete cascade);
```

```
desc movies;
```

	Field	Type	Null	Key	Default	Extra
►	mov_id	int	NO	PRI	NULL	
	mov_title	varchar(30)	YES		NULL	
	mov_year	year	YES		NULL	
	mov_lang	varchar(10)	YES		NULL	
	dir_id	int	YES	MUL	NULL	

```
create table moviecast(act_id int, mov_id int, part varchar(20), primary key(act_id, mov_id), foreign
key(act_id) references actor(act_id) on delete cascade,
```

```
foreign key(mov_id) references movies(mov_id) on delete cascade);
```

```
desc moviecast;
```

	Field	Type	Null	Key	Default	Extra
►	act_id	int	NO	PRI	NULL	
	mov_id	int	NO	PRI	NULL	
	part	varchar(20)	YES		NULL	

```
create table rating(mov_id int, rev_stars float, primary key(mov_id, rev_stars), foreign key(mov_id)
references movies(mov_id) on delete cascade);
```

```
desc rating;
```

	Field	Type	Null	Key	Default	Extra
►	mov_id	int	NO	PRI	NULL	
	rev_stars	float	NO	PRI	NULL	

```
insert into actor values(100, "Leo DiCaprio", 'M');
```

```
insert into actor values(101, "Tom Hanks", 'M');
```

```
insert into actor values(102, "Tom Cruise", 'M');
```

```
insert into actor values(103, "Margot Robbie", 'F');
```

```
insert into actor values(104, "Jennifer Aniston", 'F');
```

```
insert into actor values(105, "Gal Gadot", 'F');
```

```
select * from actor;
```

	act_id	act_name	act_gender
▶	100	Leo DiCaprio	M
	101	Tom Hanks	M
	102	Tom Cruise	M
	103	Margot Robbie	F
	104	Jennifer Aniston	F
	105	Gal Gadot	F
•	NULL	NULL	NULL

```
insert into director values(200, 'Steven Spielberg', '1649503470');
```

```
insert into director values(201, 'Alfred Hitchcock', '7989467865');
```

```
insert into director values(202, 'James Cameron', '5218281077');
```

```
insert into director values(203, 'Kathryn Bigelow', '6157228013');
```

```
insert into director values(204, 'Niki Caro', '8976600547');
```

```
insert into director values(205, 'Sofia Coppola', '3949875040');
```

```
select * from director;
```

	dir_id	dir_name	dir_phone
▶	200	Steven Spielberg	1649503470
	201	Alfred Hitchcock	7989467865
	202	James Cameron	5218281077
	203	Kathryn Bigelow	6157228013
	204	Niki Caro	8976600547
	205	Sofia Coppola	3949875040
•	NULL	NULL	NULL

```

insert into movies values(300, 'Avatar', 2010, 'EN', 202);

insert into movies values(301, 'Dial M For Murder', 1990, 'EN', 201);

insert into movies values(302, 'Jurassic Park 1', 1999, 'EN', 200);

insert into movies values(303, 'Jurassic Park 2', 2017, 'EN', 200);

insert into movies values(304, 'Vertigo', 1986, 'EN', 201);

insert into movies values(305, 'Zero Dark Thirty', 2012, 'EN', 200);

select * from movies;

```

	mov_id	mov_title	mov_year	mov_lang	dir_id
▶	300	Avatar	2010	EN	202
	301	Dial M For Murder	1990	EN	201
	302	Jurassic Park 1	1999	EN	200
	303	Jurassic Park 2	2017	EN	200
	304	Vertigo	1986	EN	201
	305	Zero Dark Thirty	2012	EN	200
★	NULL	NULL	NULL	NULL	NULL

```

insert into moviecast values(101, 300, 'actor');

insert into moviecast values(105, 300, 'actress');

insert into moviecast values(102, 301, 'actor');

insert into moviecast values(103, 301, 'actress');

insert into moviecast values(100, 302, 'actor');

insert into moviecast values(104, 302, 'actress');

insert into moviecast values(100, 303, 'actor');

insert into moviecast values(104, 303, 'actress');

insert into moviecast values(102, 304, 'actor');

insert into moviecast values(105, 304, 'actress');

insert into moviecast values(103, 305, 'actress');

select * from moviecast;

```

	act_id	mov_id	part
▶	100	302	actor
	100	303	actor
	101	300	actor
	102	301	actor
	102	304	actor
	103	301	actress
	103	305	actress
	104	302	actress
	104	303	actress
	105	300	actress
	105	304	actress
★	NULL	NULL	NULL

insert into rating values(300, 4.5);

insert into rating values(301, 3);

insert into rating values(302, 4);

insert into rating values(303, 3.5);

insert into rating values(304, 5);

insert into rating values(305, 4);

select * from rating;

	mov_id	rev_stars
▶	300	4.5
	301	3
	302	4
	303	3.5
	304	5
	305	4
★	NULL	NULL

1. List the titles of all movies directed by 'Hitchcock'.

select m.mov_title from movies m, director d where m.dir_id=d.dir_id and d.dir_name='Alfred Hitchcock';

	mov_title
▶	Dial M For Murder
	Vertigo

2. Find the movie names where one or more actors acted in two or more movies.

```
select m.mov_title from movies m, moviecast mc where m.mov_id=mc.mov_id
```

```
and act_id in( select act_id from moviecast group by act_id having count(act_id) > 1) group by  
m.mov_title having count(*) >= 2;
```

	mov_title
►	Dial M For Murder
	Jurassic Park 1
	Jurassic Park 2
	Vertigo

3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation).

```
select a.act_name, m.mov_title, m.mov_year from actor a, movies m, moviecast mc
```

```
where a.act_id=mc.act_id and mc.mov_id=m.mov_id and m.mov_year not between 2000 and 2015;
```

	act_name	mov_title	mov_year
►	Tom Cruise	Dial M For Murder	1990
	Margot Robbie	Dial M For Murder	1990
	Leo DiCaprio	Jurassic Park 1	1999
	Jennifer Aniston	Jurassic Park 1	1999
	Leo DiCaprio	Jurassic Park 2	2017
	Jennifer Aniston	Jurassic Park 2	2017
	Tom Cruise	Vertigo	1986
	Gal Gadot	Vertigo	1986

4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title.

```
select mov_title, max(rev_stars) from movies inner join rating using (mov_id)
```

```
group by mov_title having max(rev_stars)>0 order by mov_title;
```

	mov_title	max(rev_stars)
▶	Avatar	4.5
	Dial M For Murder	3
	Jurassic Park 1	4
	Jurassic Park 2	3.5
	Vertigo	5
	Zero Dark Thirty	4

5. Update rating of all movies directed by 'Steven Spielberg' to 5.

```
update rating set rev_stars = 5 where mov_id in (select mov_id from movies where dir_id in
(select dir_id from director where dir_name='Steven Spielberg'));
```

```
select * from rating;
```

	mov_id	rev_stars
▶	300	4.5
	301	3
	302	5
	303	5
	304	5
	305	5
*	NULL	NULL