

1. **Create Database project_movie_data and deploy table data according to ER diagram.**

```
create database project_movie_data;
```

```
use project_movie_data;
```

2. **Create 9 tables which are presented in ER model and load the data with their foreign key and primary key values.**

```
create table actor(
```

```
act_id int primary key auto_increment,act_fname varchar(45),
```

```
act_lname varchar(45),act_gender enum('M','F'))auto_increment=101;
```

```
create table director(dir_id int primary key auto_increment,
```

```
dir_fname varchar(45),dir_lname varchar(45))auto_increment=201;
```

```
create table movie_direction(
```

```
dir_id int not null,mov_id int not null,
```

```
foreign key(dir_id) references director(dir_id),
```

```
foreign key(mov_id) references movie(mov_id));
```

```
create table movie_cast(act_id int not null,
```

```
mov_id int not null,role varchar(30),
```

```
foreign key(act_id) references actor(act_id),
```

```
foreign key(mov_id) references movie(mov_id));
```

```
create table movie(mov_id int primary key auto_increment,  
  
mov_title varchar(50),mov_year int not null,mov_time int not null,  
  
mov_lang varchar(50) not null,mov_dt_rel date,mov_rel_country  
varchar(10))auto_increment=901;
```

```
create table reviewer(rev_id int primary key auto_increment,  
  
rev_name varchar(30))auto_increment=9001;
```

```
create table genres(gen_id int primary key auto_increment,  
  
gen_title varchar(20))auto_increment=1001;
```

```
create table movie_genres(mov_id int not null,gen_id int not null,  
  
foreign key(mov_id) references movie(mov_id),foreign key(gen_id)  
references genres(gen_id));
```

```
create table rating(mov_id int not null,rev_id int not null,  
  
rev_stars int,num_o_ratings int,foreign key(mov_id) references  
movie(mov_id),  
  
foreign key(rev_id) references reviewer(rev_id) );
```

```
INSERT INTO director(dir_fname,dir_lname)
```

```
values('Alfred','Hitchcock'),('Jack','Clayton'),('David','Lean'),('Michael','Cimin  
o'),('Milos','Forman'),
```

```
('Ridley','Scott'),('Stanley','Kubrick'),('Bryan','Singer'),('Roman','Polanski'),('Pa  
ul','Thomas Anderson'),
```

('Woody','Allen'),('Hayao','Miyazaki'),('Frank','Darabont'),('Sam','Mendes'),('James','Cameron'),

('Gus','Van Sant'),('John','Boorman'),('Danny','Boyle'),('Christopher','Nolan'),('Richard','Kelly'),

('Kevin','Spacey'),('Andrei','Tarkovsky'),('Peter','Jackson');

insert into

movie(mov_title,mov_year,mov_time,mov_lang,mov_dt_rel,mov_rel_country)

values('Vertigo',1958,128,'English','1958-08-24','UK'),('The Innocents',1961,100,'English','1962-02-19','SW'),

('Lawrence of Arabia',1962,216,'English','1962-12-11','UK'),('The Deer Hunter',1978,183,'English','1979-03-08','UK'),

('Amadeus',1984,160,'English','1985-01-07','UK'),('Blade Runner',1982,117,'English','1982-09-09','UK'),

('Eyes Wide Shut',1999,159,'English',null,'UK'),('The Usual Suspects',1995,106,'English','1995-08-09','UK'),

('Chinatown',1974,130,'English','1974-08-09','UK'),('Boogie Nights',1997,155,'English','1998-02-16','UK'),

('Annie Hall',1977,93,'English','1977-04-20','USA'),('Princess Mononoke',1997,134,'Japanese','2001-10-19','UK'),

('The Shawshank Redemption','1994','142','English','1995-02-17','UK'),

('American Beauty',1999,122,'English',null,'UK'),('Titanic',1997,194,'English','1998-01-23','UK'),

('Good Will Hunting',1997,126,'English','1998-06-03','UK'),('Deliverance',1972,109,'English','1982-10-05','UK'),

('Trainspotting',1996,94,'English','1996-02-23','UK'),('The Prestige',2006,130,'English','2006-11-10','UK'),

('Donnie Darko',2001,113,'English',null,'UK'),('Slumdog
Millionaire',2008,120,'English','2009-01-09','UK'),

('Aliens',1986,137,'English','1986-08-29','UK'),('Beyond the
Sea',2004,118,'English','2004-11-26','UK'),

('Avatar',2009,162,'English','2009-12-17','UK'),('Seven
Samurai',1954,207,'Japanese','1954-04-26','JP'),

('Spirited Away',2001,125,'Japanese','2003-09-12','UK'),('Back to the
Future',1985,116,'English','1985-12-04','UK'),

('Braveheart',1995,178,'English','1995-09-08','UK');

insert into movie_direction(dir_id,mov_id)

values(201,901),(202,902),(203,903),(204,904),(205,905),(206,906),(207,90
7),(208,908),

(209,909),(210,910),(211,911),(212,912),(213,913),(214,914),(215,915),(216
,916),(217,917),

(218,918),(219,919),(220,920),(218,921),(215,922),(221,923);

insert into genres(gen_title)

values('Action'),('Adventure'),('Animation'),('Biography'),('Comedy'),('Crime'
),

('Drama'),('Horror'),('Music'),('Mystery'),('Romance'),('Thriller'),('War');

insert into actor(act_fname,act_lname,act_gender)

values('James','Stewart','M'),('Deborah','Kerr','F'),('Peter','Otoole','M'),('Rob
ert','DeNiro','M'),

('F.Murray','Abraham','M'),('Harrison','Ford','M'),('Nicole','Kidman','F'),('Stephen','Baldwin','M'),

('Jack','Nicholson','M'),('Mark','Wahlberg','M'),('Woody','Allen','M'),('Claire','Danes','F'),('Tim','Robbins','M'),

('Jon','Voight','M'),('Kevin','Spacey','M'),('Kate','Winslet','F'),('Robin','Robbins','M'),('Ewan','McGregor','M'),

('Christian','Bale','M'),('Maggie','Gyllenhaal','F'),('Dev','Patel','M'),('Sigourney','Weaver','F'),

('David','Aston','M'),('Ali','Astin','F');

insert into movie_cast(act_id,mov_id,role)

values(101,901,'John Scottie Ferguson'),(102,902,'Miss Giddens'),(103,903,'T.F.Lawrence'),(104,904,'Michael'),

(105,905,'Antonia Salieri'),(106,906,'Rick Deckard'),(107,907,'Alice Harford'),(108,908,'McManus'),

(110,910,'Eddie Adams'),(111,911,'Alvy Singer'),(112,912,'San'),(113,913,'Andy Dulresne'),(114,914,'Lester Burnham'),

(115,915,'Rose DeWitt Bukater'),(116,916,'Sean Maguire'),(117,917,'Ed'),(118,918,'Renton'),

(120,920,'Elizabeth Darko'),(121,921,'Older Jamal'),(122,922,'Ripley'),(114,923,'Bobby Darin'),

(109,909,'J.J.Gittes'),(119,919,'Alfred Borden');

insert into reviewer(rev_name)

values('Righty sock'),('Jack Malven'),('Flagrant Malvern'),('Alec Shaw'),(null),

('Victor Woeltjen'),('Simon Wright'),('Neal Wruck'),('Paul Monks'),('Mike Salvati'),(null),

('Weasly S.Walker'),('Sasha Goldshtein'),('Josh Cates'),('Krug Stillo'),('Scott LeBrun'),('Hannah Steele'),

('Vincent Cadena'),('Brandt Sponseller'),('Richard Adams');

insert into

movie_genres(mov_id,gen_id)values(922,1001),(917,1002),(903,1002),(912,1003),(911,1005),

(908,1006),(913,1006),(926,1007),(928,1007),(918,1007),(921,1007),(902,1008),(923,1009),(907,1010),(927,1010),

(901,1010),(914,1011),(906,1012),(904,1013);

insert into

rating(mov_id,rev_id,rev_stars,num_o_ratings)values(901,9001,8.4,263575),(902,9002,7.9,20207),

(903,9003,8.3,202778),(906,9005,8.2,484746),(924,9006,7.3,null),(908,9007,8.6,779489),(909,9008,null,227235),

(910,9009,3,195961),(911,9010,8.1,203875),(912,9011,8.4,null),(914,9013,7,862618),(915,9001,7.7,830095),

(916,9014,4,642132),(925,9015,7.7,81328),(918,9016,null,580301),(920,9017,8.1,609451),(921,9018,8,667758),

(922,9019,8.4,511613),(923,9020,6.7,13091);

3. Write a query in SQL to list the Horror movies?

```
select mov_title,gen_title from movie
```

```
inner join movie_genres on movie.mov_id=movie_genres.mov_id
```

```
inner join genres on genres.gen_id=movie_genres.gen_id
```

```
where genres.gen_title='Horror';
```



The screenshot shows a database interface with a 'Result Grid' tab. The grid contains one row with the columns 'mov_title' and 'gen_title'. The values are 'The Innocents' and 'Horror' respectively. The interface also includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' checkbox.

mov_title	gen_title
The Innocents	Horror

4. Write a query in SQL to find the name of all reviewers who have rated 8 or more stars?

```
select rev_name,rev_stars from reviewer
```

```
inner join rating on reviewer.rev_id=rating.rev_id
```

```
where rev_stars>=8;
```

	rev_name	rev_stars
▶	Righty sock	8
	Jack Malven	8
	Flagrant Malvern	8
	HULL	8
	Simon Wright	9
	Mike Salvati	8
	HULL	8
	Righty sock	8
	Krug Stillo	8
	Hannah Steele	8
	Vincent Cadena	8
	Brandt Sponseller	8
	Righty sock	8
	Jack Malven	8
	Flagrant Malvern	8
	HULL	8
	Simon Wright	9
	Mike Salvati	8
	HULL	8

	Righty sock	8
	Krug Stillo	8
	Hannah Steele	8
	Vincent Cadena	8
	Brandt Sponseller	8

5. Write a query in SQL to list all the information of the actors who played a role in the movie 'Deliverance'

```
select act_fname,act_lname,act_gender,mov_title from actor
inner join movie_cast on actor.act_id=movie_cast.act_id
inner join movie on movie_cast.mov_id=movie.mov_id
where movie.mov_title='Deliverance';
```

	act_fname	act_lname	act_gender	mov_title
▶	Robin	Robbins	M	Deliverance

6. Write a query in SQL to find the name of the director (first and last names) who directed a movie that casted a role for 'Eyes Wide Shut'. (using subquery)

```
select * from director
where dir_id in(select dir_id from movie_direction where mov_id=907);
```

	dir_id	dir_fname	dir_lname
▶	207	Stanley	Kubrick
*	NULL	NULL	NULL

8. Write a query in SQL to find all the years which produced at least one movie and that received a rating of more than 4 stars.

```
select mov_title,rev_stars,mov_year from movie
inner join rating on movie.mov_id=rating.mov_id
where rev_stars>=4;
```


	mov_title	rev_stars	mov_year
▶	Vertigo	8	1958
	The Innocents	8	1961
	Lawrence of Arabia	8	1962
	Blade Runner	8	1982
	Avatar	7	2009
	The Usual Suspects	9	1995
	Annie Hall	8	1977
	Princess Mononoke	8	1997
	American Beauty	7	1999
	Titanic	8	1997
	Good Will Hunting	4	1997
	Seven Samurai	8	1954
	Donnie Darko	8	2001
	Slumdog Millionaire	8	2008
	Aliens	8	1986
	Beyond the Sea	7	2004
	Vertigo	8	1958
	The Innocents	8	1961
	Lawrence of Arabia	8	1962
	Blade Runner	8	1982
	Avatar	7	2009
	The Usual Suspects	9	1995
	Annie Hall	8	1977
	Princess Mononoke	8	1997
	American Beauty	7	1999
	Titanic	8	1997
	Good Will Hunting	4	1997
	Seven Samurai	8	1954
	Donnie Darko	8	2001
	Slumdog Millionaire	8	2008
	Aliens	8	1986
	Beyond the Sea	7	2004

10. Write a query in SQL to find the name of movies who were directed by 'David'

```
select mov_title,dir_fname,dir_lname from movie
```

```
inner join movie_direction on movie.mov_id=movie_direction.mov_id
```

```
inner join director on movie_direction.dir_id=director.dir_id
```

```
where director.dir_fname='David' or director.dir_lname='David';
```

	mov_title	dir_fname	dir_lname
▶	Lawrence of Arabia	David	Lean
	Lawrence of Arabia	David	Lean

11. Write a query in SQL to list the first and last names of all the actors who were cast in the movie 'Boogie Nights', and the roles they played in that production.

```
select act_fname,act_lname,mov_title,role from actor
inner join movie_cast on actor.act_id=movie_cast.act_id
inner join movie on movie_cast.mov_id=movie.mov_id
where movie.mov_title='Boogie Nights';
```

	act_fname	act_lname	mov_title	role
▶	Mark	Wahlberg	Boogie Nights	Eddie Adams

12. Find the name of the actor who have worked in more than one movie.

```
select mov_title,act_fname,act_lname,role
from movie
join movie_cast
on movie_cast.mov_id=movie.mov_id
join actor
on movie_cast.act_id=actor.act_id
where actor.act_id in (
select act_id from movie_cast
group by act_id
having count(*)>1);
```

	mov_title	act_fname	act_lname	role
▶	American Beauty	jon	Voight	Lester Burnham
	Beyond the Sea	jon	Voight	Bobby Darin