1. Create Database project\_movie\_data and deploy table data according to ER diagram.

Solution

*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.

Solution

*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(*

*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 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 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) );*

*show tables;*

*insert into actor(act\_fname,act\_lname,act\_gender) values*

*('James','Stewart','M'),('Deborah','Kerr','F'),('Peter','OToole','M'),*

*('Robert','De Niro','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'),('Kevin','Spacey','M'),('Kate','Winslet','F'),*

*('Robin','Williams','M'),('Jon','Voight','M'),('Ewan','McGregor','M'),*

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

*('Sigourney','Weaver','F'),('David','Aston','M'),('Ali','Astin','F');*

*insert into director(dir\_fname,dir\_lname) values*

*('Alfred','Hitchcock'),('Jack','Clayton'),('David','Lean'),('Michael','Cimino'),*

*('Milos','Forman'),('Ridley','Scott'),('Stanley','Kubrick'),('Bryan','Singer'),*

*('Roman','Polanski'),('Paul','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 genres(gen\_title) values*

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

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

*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','1995-08-25','UK'),*

*('Chinatown',1974,130,'English','1974-08-09','UK'),*

*('Boogle 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'),*

*('Allens',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\_cast(act\_id,mov\_id,role) values*

*(101,901,'John Scottie Ferguson'),(102,902,'Miss Giddens'),(103,903,'T.E. Lawrence'),*

*(104,904,'Michael'),(105,905,'Antonio 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 Dufresne'),*

*(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 movie\_direction(dir\_id,mov\_id) values*

*(201,901),(202,902),(203,903),(204,904),(205,905),*

*(206,906),(207,907),(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 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 reviewer(rev\_name) values*

*('Righty Sock'),('Jack Malvern'),('Flagrant Baronessa'),*

*('Alec Shaw'),(null),('Victor Woeltjen'),('Simon Wright'),*

*('Neal Wruck'),('Paul Monks'),('Mike Salvati'),(null),*

*('Wesley S. Walker'),('Sasha Goldshtein'),('Josh Cates'),('Krug Stillo'),*

*('Scott LeBrun'),('Hannah Steele'),('Vincent Cadena'),*

*('Brandt Sponseller'),('Richard Adams');*

*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?

Solution

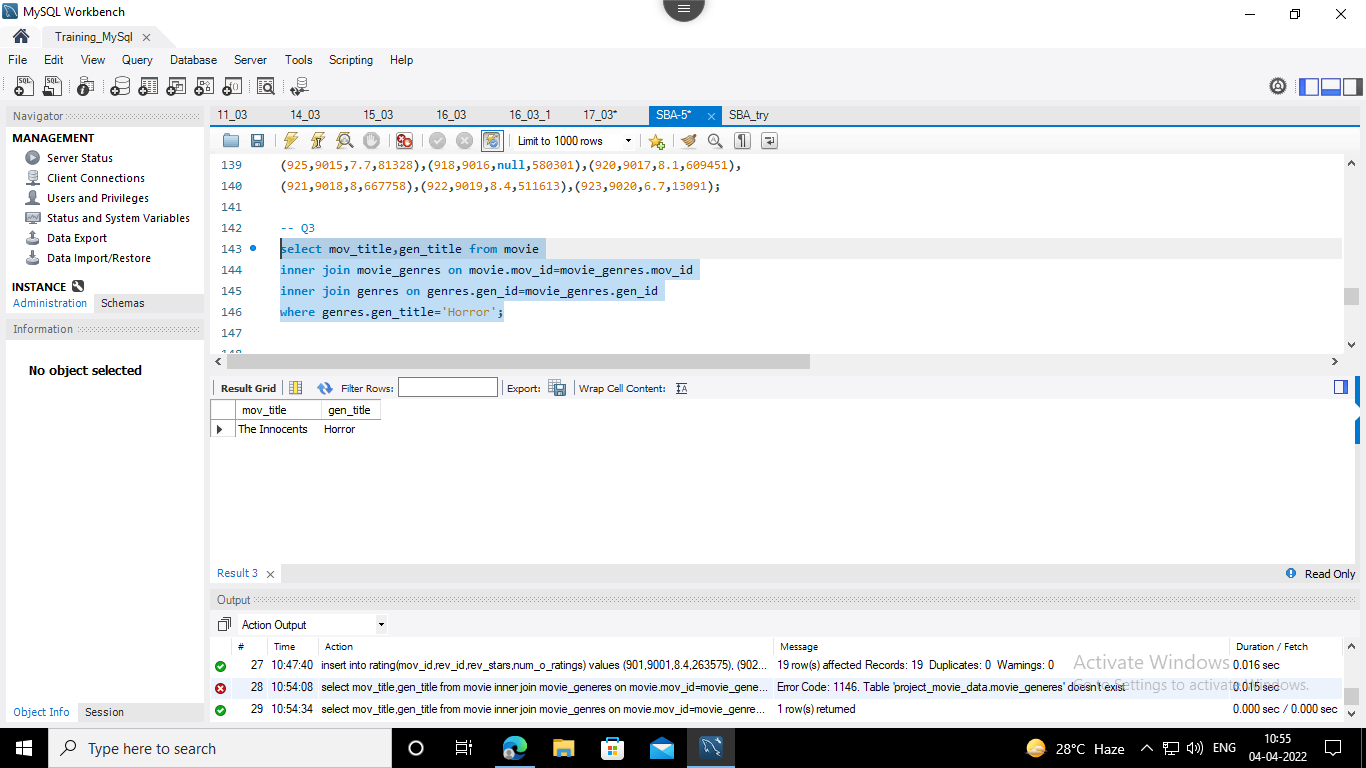
*select mov\_title,gen\_title from movie*

*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';*

Output



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

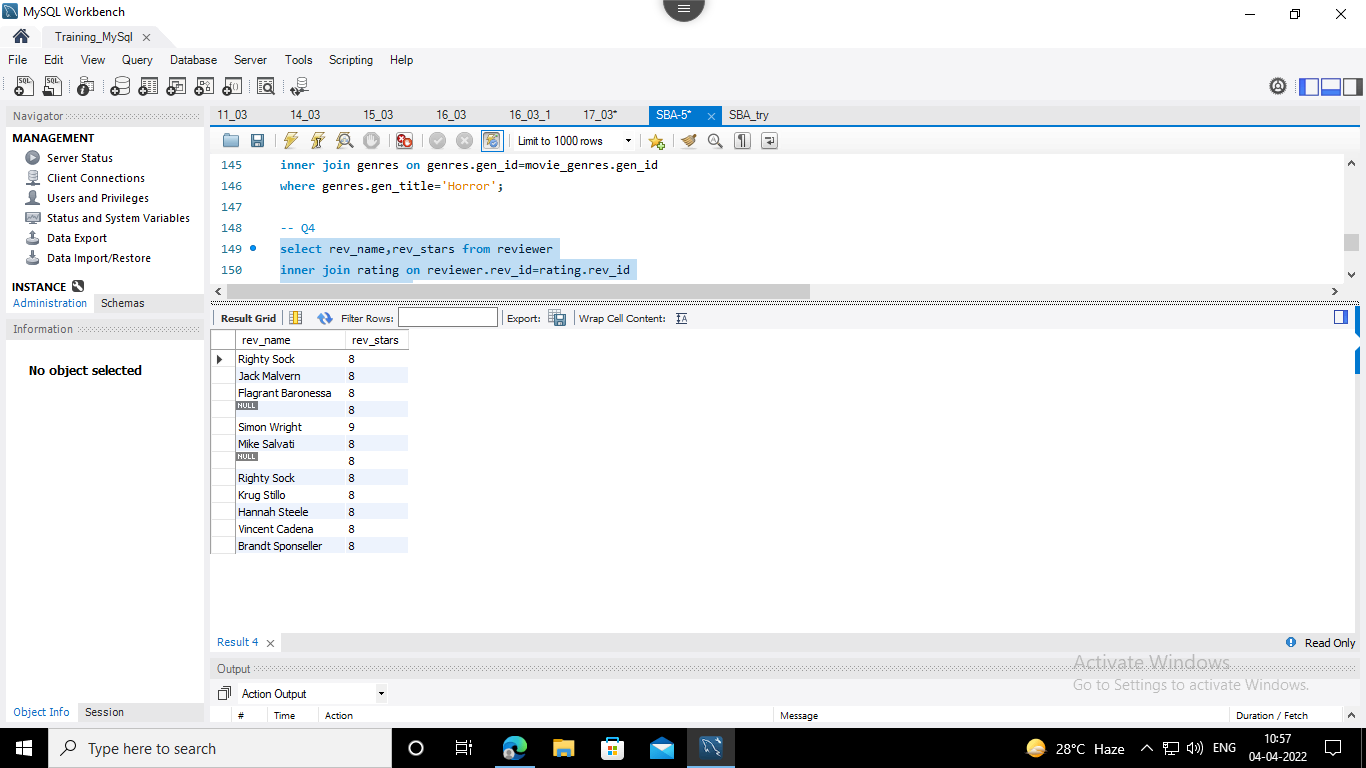
Solution

*select rev\_name,rev\_stars from reviewer*

*inner join rating on reviewer.rev\_id=rating.rev\_id*

*where rev\_stars>=8;*

Output



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

Solution

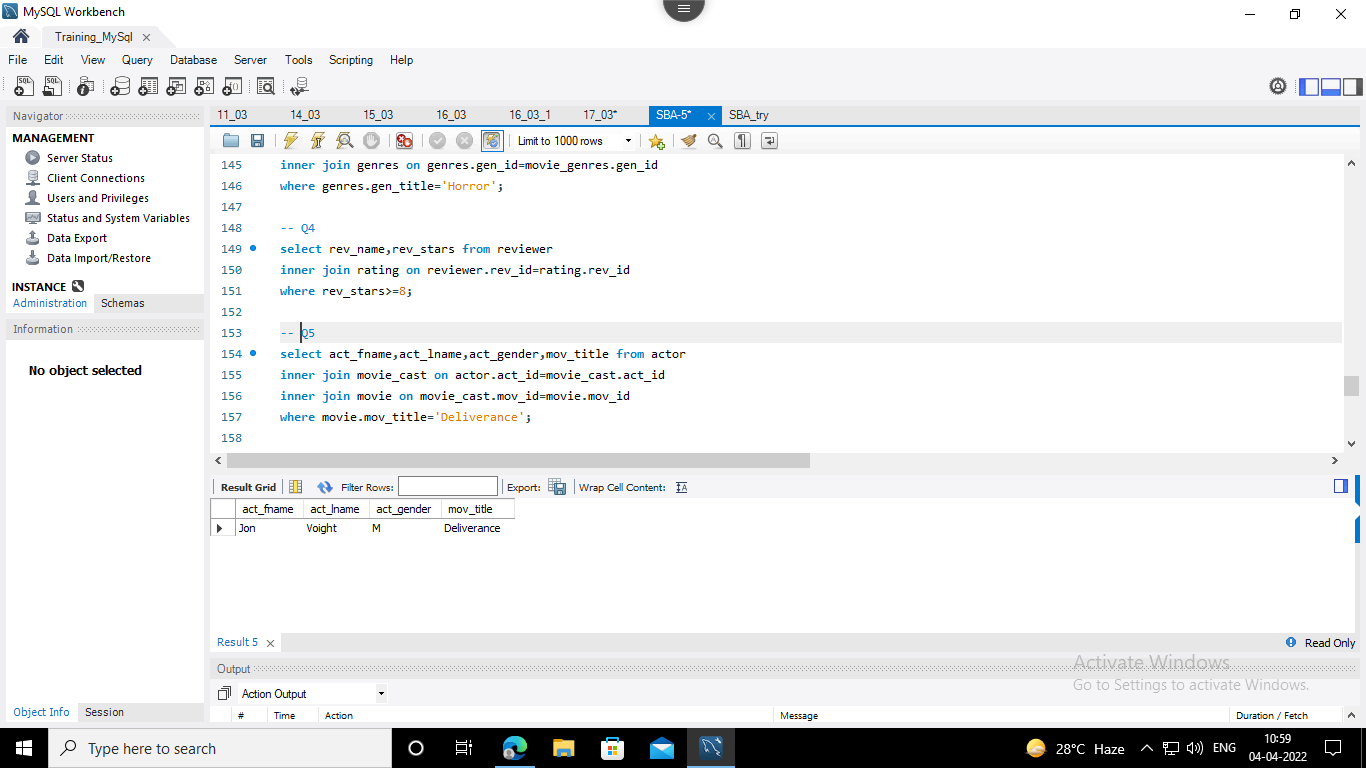
*select act\_fname,act\_lname,act\_gender,mov\_title from actor*

*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';*

Output



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.

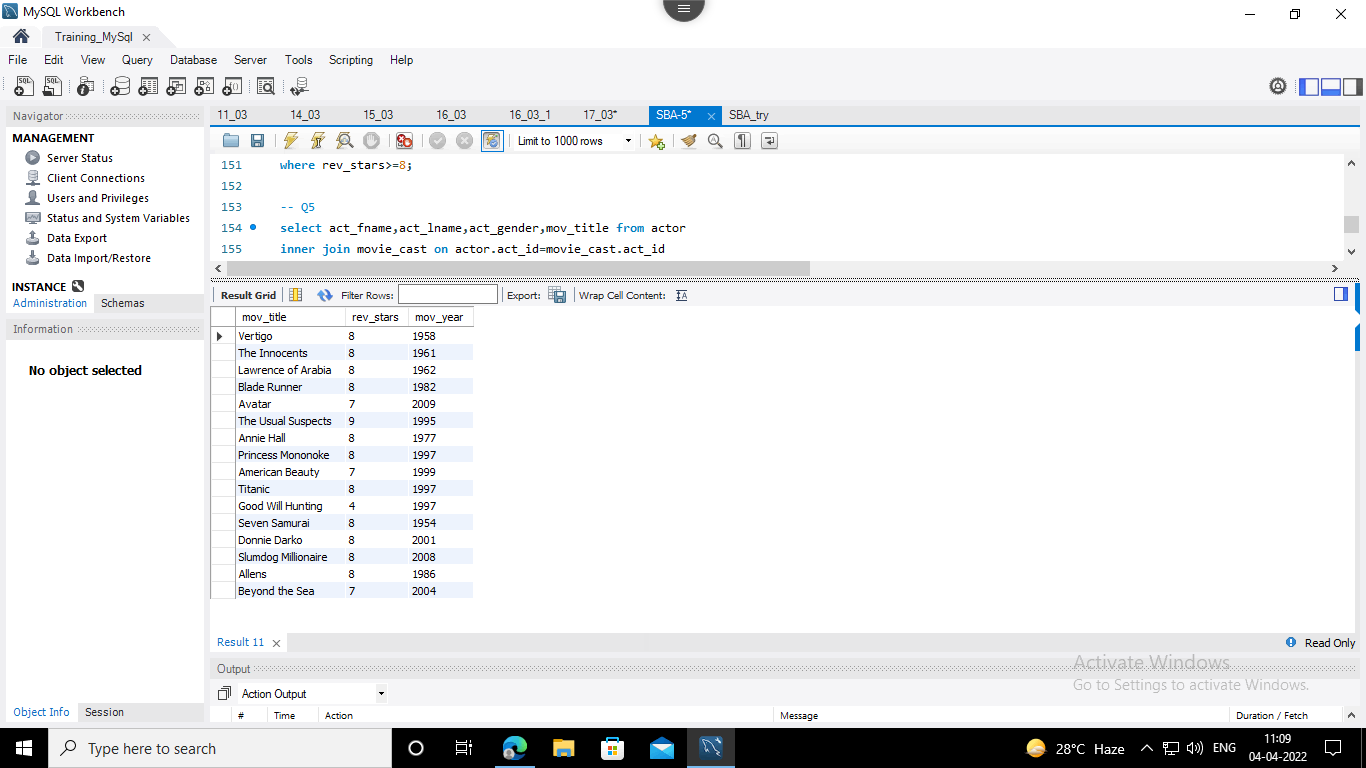
Solution

*select mov\_title,rev\_stars,mov\_year from movie*

*inner join rating on movie.mov\_id=rating.mov\_id*

*where rev\_stars>=4;*

Output



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

Solution

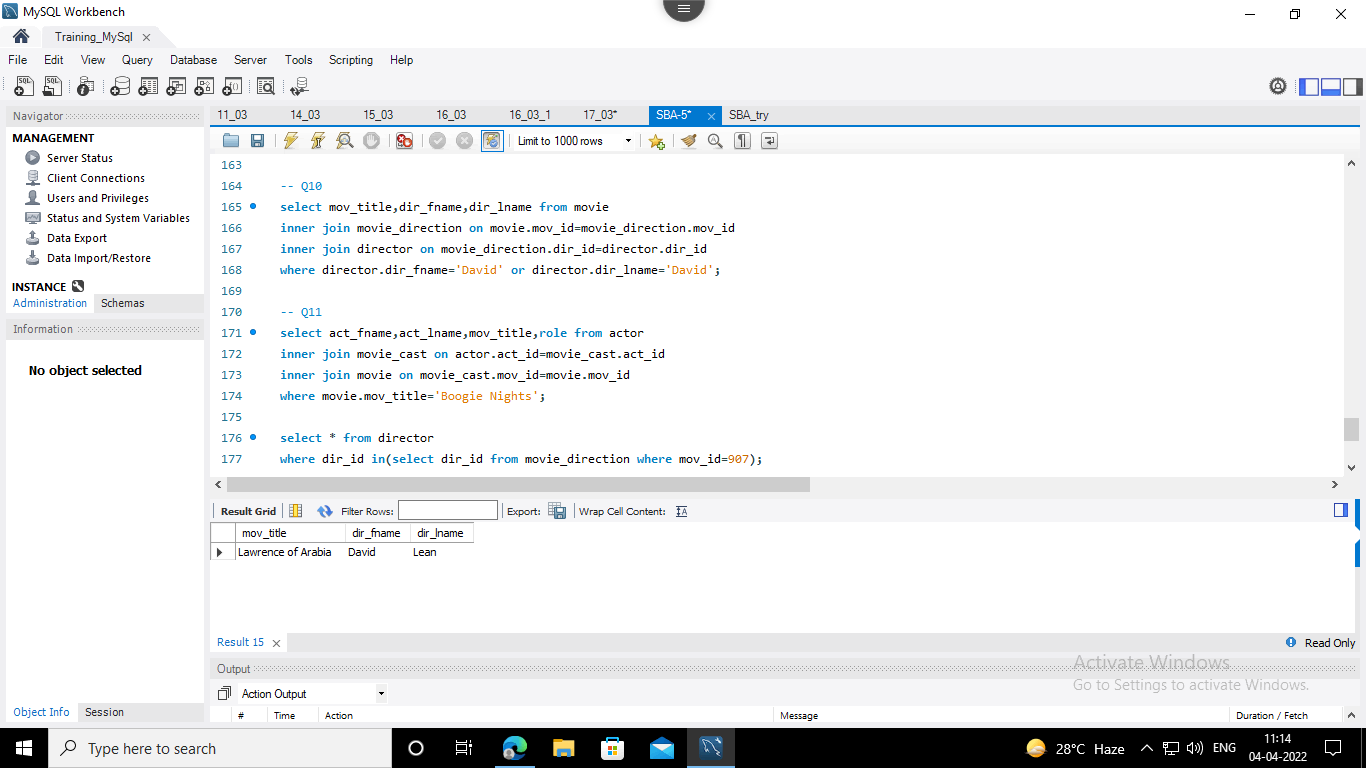
*select mov\_title,dir\_fname,dir\_lname from movie*

*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';*

Output



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

Solution

*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);*

Output

