ER Diagram:
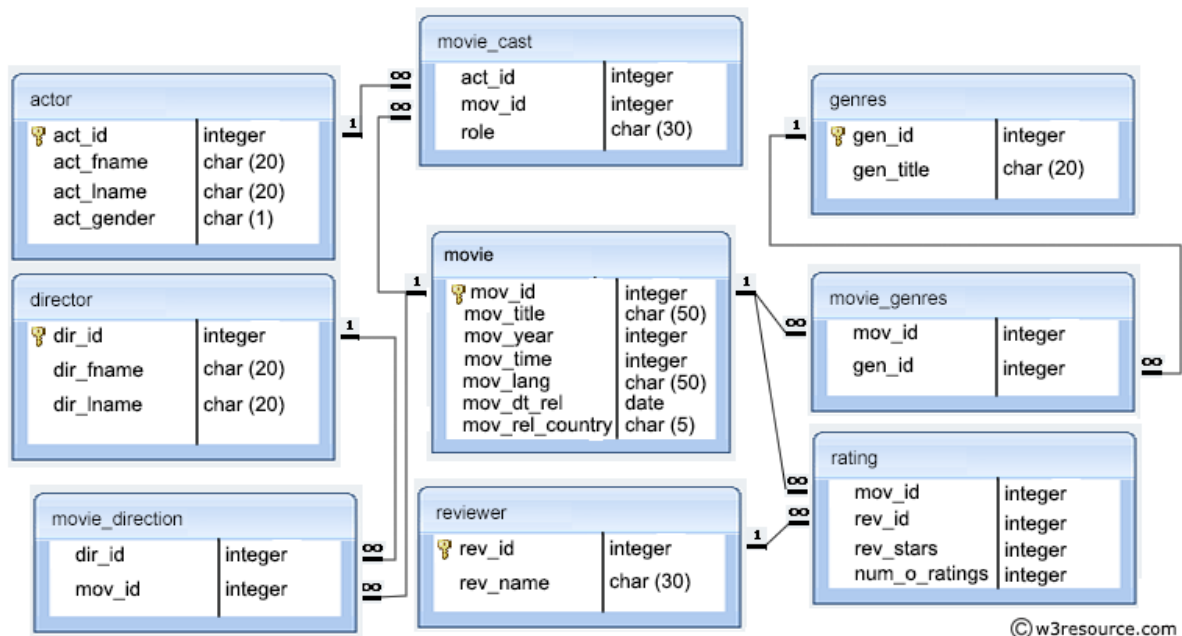

Q-1 Create 9 tables which are presented in ER model and load the data with their foreign key and primary key values.

ANS:->

->create table actor(act_id int primary key, act_fname varchar2(20), act_lname varchar2(20), act_gender varchar2(1));

->create table director(dir_id int primary key, dir_fname varchar2(20), dir_lname varchar2(20));

->create table movie(mov_id int primary key, mov_title varchar2(50), mov_year int, mov_time int, mov_lang varchar(50), mov_dt_rel date, mov_rel_country varchar2(5));

->create table movie_direction(dir_id int references director(dir_id), mov_id int references movie(mov_id));

->create table reviewer(rev_id int primary key, rev_name varchar2(30));

->create table movie_cast(act_id int references actor(act_id), mov_id int references movie(mov_id), mrole varchar2(30));

 ->create table genres(gen_id int primary key, gen_title varchar2(20));

```sql
->create table movie_genres( mov_id int references movie(mov_id),gen_id int references genres(gen_id));

->create table rating( mov_id int references movie(mov_id), rev_id int references reviewer(rev_id), rev_stars int, num_o_ratings int);



->insert into actor values(101,'james','stewart','m');

insert into actor values(102,'deborah','kerr','f');

insert into actor values(103,'peter','otoole','m');

insert into actor values(104,'robert','de niro','m');

insert into actor values(105,'f.murray','abraham','m');

insert into actor values(106,'harrison','ford','m');

insert into actor values(107,'nicole','kidman','f');

insert into actor values(108,'stephen','baldwin','m');

insert into actor values(109,'jack','nicholson','m');

insert into actor values(110,'mark','wahlberg','m');

insert into actor values(111,'woody','allen','m');

insert into actor values(112,'claire','danes','f');

insert into actor values(113,'tim','robbins','m');

insert into actor values(114,'kevin','spacey','m');

insert into actor values(115,'kate','winslet','f');

insert into actor values(116,'robin','williams','m');

insert into actor values(117,'jon','voight','m');

insert into actor values(118,'ewan','mcgregor','m');

insert into actor values(119,'christian','bale','m');

insert into actor values(120,'maggie','gyllenhaal','f');
```

insert into actor values(121,'dev','patel','m');

insert into actor values(122,'sigourney','weaver','f');

insert into actor values(123,'david','aston','m');

insert into actor values(124,'ali','astin','f');

act_id	act_fname	act_lname	act_gender
101	James	Stewart	M
102	Deborah	Kerr	F
103	Peter	OToole	M
104	Robert	De Niro	M
105	F. Murray	Abraham	M
106	Harrison	Ford	M
107	Nicole	Kidman	F
108	Stephen	Baldwin	M
109	Jack	Nicholson	M
110	Mark	Wahlberg	M
111	Woody	Allen	M
112	Claire	Danes	F
113	Tim	Robbins	M
114	Kevin	Spacey	M
115	Kate	Winslet	F
116	Robin	Williams	M
117	Jon	Voight	M
118	Ewan	McGregor	M
119	Christian	Bale	M
120	Maggie	Gyllenhaal	F
121	Dev	Patel	M
122	Sigourney	Weaver	F
123	David	Aston	M
124	Ali	Astin	F

->insert into director values(201,'alfred','Hitchcock');

insert into director values(202,'jack','Clayton');

insert into director values(203,'david','Lean');

insert into director values(204,'michael','Cimino');

insert into director values(205,'milos','Forman');

insert into director values(206,'ridley','Scott');

insert into director values(207,'stanley','Kubrick');

insert into director values(208,'bryan','Singer');

insert into director values(209,'roman','Polanski');

insert into director values(210,'paul','Thomas Anderson');

insert into director values(211,'woody','Allen');

insert into director values(212,'hayao','Miyazaki');

insert into director values(213,'frank','Darabont');

insert into director values(214,'sam','Mendes');

insert into director values(215,'james','Cameron');

insert into director values(216,'gus','Van Sant');

insert into director values(217,'john','Boorman');

insert into director values(218,'danny','Boyle');

insert into director values(219,'christopher','Nolan');

insert into director values(220,'richard','Kelly');

insert into director values(221,'kevin','Spacey');

insert into director values(222,'andrei','Tarkovsky');

insert into director values(223,'peter','Jackson');

dir_id	dir_fname	dir_lname
201	Alfred	Hitchcock
202	Jack	Clayton
203	David	Lean
204	Michael	Cimino
205	Milos	Forman
206	Ridley	Scott
207	Stanley	Kubrick
208	Bryan	Singer
209	Roman	Polanski
210	Paul	Thomas Anderson
211	Woody	Allen
212	Hayao	Miyazaki
213	Frank	Darabont
214	Sam	Mendes
215	James	Cameron
216	Gus	Van Sant
217	John	Boorman
218	Danny	Boyle
219	Christopher	Nolan
220	Richard	Kelly
221	Kevin	Spacey
222	Andrei	Tarkovsky
223	Peter	Jackson

->insert into genres values(1001,'Action');

insert into genres values(1002,'Adventure');

insert into genres values(1003,'Animation');

insert into genres values(1004,'Biography');

insert into genres values(1005,'Comedy');

insert into genres values(1006,'Crime');

insert into genres values(1007,'Drama');

insert into genres values(1008,'Horror');

insert into genres values(1009,'Music');

insert into genres values(1010,'Mystery');

insert into genres values(1011,'Romance');

insert into genres values(1012,'Thriller');

insert into genres values(1013,'War');

gen_id	gen_title
1001	Action
1002	Adventure
1003	Animation
1004	Biography
1005	Comedy
1006	Crime
1007	Drama
1008	Horror
1009	Music
1010	Mystery
1011	Romance
1012	Thriller
1013	War

->insert into Movie_direction values(201,901);

insert into Movie_direction values(202,902);

insert into Movie_direction values(203,903);

insert into Movie_direction values(204,904);

insert into Movie_direction values(205,905);

insert into Movie_direction values(206,906);

insert into Movie_direction values(207,907);

insert into Movie_direction values(208,908);

insert into Movie_direction values(209,909);

insert into Movie_direction values(210,910);

insert into Movie_direction values(211,911);

insert into Movie_direction values(212,912);

insert into Movie_direction values(213,913);

insert into Movie_direction values(214,914);

insert into Movie_direction values(215,915);

insert into Movie_direction values(216,916);

insert into Movie_direction values(217,917);

insert into Movie_direction values(218,918);

insert into Movie_direction values(219,919);

insert into Movie_direction values(220,920);

insert into Movie_direction values(218,921);

insert into Movie_direction values(215,922);

insert into Movie_direction values(221,923);

dir_id	mov_id
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 reviewer values(9001,'Righty Sock');

insert into reviewer values(9002,'Jack Malvern');

insert into reviewer values(9003,'Flagrant Baronessa');

insert into reviewer (rev_id) values(9005);

insert into reviewer values(9004,'Alec Shaw');

insert into reviewer values(9006,'Victor Woeltjen');

insert into reviewer values(9007,'Simon Wright');

insert into reviewer values(9008,'Neal Wruck');

insert into reviewer values(9009, 'Paul Monks');

insert into reviewer values(9010,'Mike Salvati');

insert into reviewer values(9012 ,'Wesley S. Walker');

insert into reviewer (rev_id) values(9011);

insert into reviewer values(9013,'Sasha Goldshtein');

insert into reviewer values(9014,'Josh Cates');

insert into reviewer values(9015,'Krug Stillo');

insert into reviewer values(9016,'Scott LeBrun');

insert into reviewer values(9017,'Hannah Steele');

insert into reviewer values(9018,'Vincent Cadena');

insert into reviewer values(9019,'Brandt Sponseller');

insert into reviewer values(9020,'Richard Adams');

rev_id	rev_name
9001	Righty Sock
9002	Jack Malvern
9003	Flagrant Baronessa
9004	Alec Shaw
9005	
9006	Victor Woeltjen
9007	Simon Wright
9008	Neal Wruck
9009	Paul Monks
9010	Mike Salvati
9011	
9012	Wesley S. Walker
9013	Sasha Goldshtein
9014	Josh Cates
9015	Krug Stillo
9016	Scott LeBrun
9017	Hannah Steele
9018	Vincent Cadena
9019	Brandt Sponseller
9020	Richard Adams

->insert into rating values(901,9001,8.4,263575);

insert into rating values(902,9002,7.9,20207);

insert into rating values(903,9003,8.3,202778);

insert into rating values(906,9005,8.2,484746);

insert into rating (mov_id,rev_id,rev_stars) values(924,9006,7.3);

insert into rating values(908,9007,8.6,779489);

insert into rating (mov_id,rev_id,num_o_ratings)values(909,9008,227235);

insert into rating values(910,9009,3,195961);

insert into rating values(911,9010,8.1,203875);

insert into rating(mov_id,rev_id,rev_stars) values(912,9011,8.4);

insert into rating values(915,9001,7.7,830095);

insert into rating values(916,9014,4,642132);

insert into rating values(925,9015,7.7,81328);

insert into rating (mov_id,rev_id,num_o_ratings)values(918,9016,580301);

insert into rating values(920,9017,8.1,609451);

insert into rating values(921,9018,8,667758);

insert into rating values(922,9019,8.4,511613);

insert into rating values(923,9020,6.7,13091);

insert into rating values(901,9001,8.4,263575);

mov_id	rev_id	rev_stars	num_o_ratings
901	9001	8.4	263575
902	9002	7.9	20207
903	9003	8.3	202778
906	9005	8.2	484746
924	9006	7.3	
908	9007	8.6	779489
909	9008		227235
910	9009	3	195961
911	9010	8.1	203875
912	9011	8.4	
914	9013	7	862618
915	9001	7.7	830095
916	9014	4	642132
925	9015	7.7	81328
918	9016		580301
920	9017	8.1	609451
921	9018	8	667758
922	9019	8.4	511613
923	9020	6.7	13091

->insert into movie_cast values(101,901,'Joan Scottie Ferguson');

insert into movie_cast values(101,901,'John Scottie Ferguson');

insert into movie_cast values(102,902,'Miss Giddens');

insert into movie_cast values(103,903,'T.E. Lawrence');

insert into movie_cast values(104,904,'Michael');

```sql
insert into movie_cast values(105,905,'Antonio Salieri');
insert into movie_cast values(106,906,'Rick Deckard');
insert into movie_cast values(107,907,'Alice Harford');
insert into movie_cast values(108,908,'McManus');
insert into movie_cast values(109,909,'J.J. Gittes');
insert into movie_cast values(110,910,'Eddie Adams');
insert into movie_cast values(111,911,'Alvy Singer');
insert into movie_cast values(112,912,'San');
insert into movie_cast values(113,913,'Andy Dufresne');
insert into movie_cast values(114,914,'Lester Burnham');
insert into movie_cast values(115,915,'Rose DeWitt Bukater');
insert into movie_cast values(116,916,'Sean Maguire');
insert into movie_cast values(117,917,'Ed');
insert into movie_cast values(118,918,'Renton');
insert into movie_cast values(119,919,'Alfred Borden');
insert into movie_cast values(120,920,'Elizabeth Darko');
insert into movie_cast values(121,921,'Older Jamal');
insert into movie_cast values(122,922,'Ripley');
insert into movie_cast values(114,923,'Bobby Darin');
```

act_id	mov_id	role
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 values (901,'Vertigo',1958,128,'English',to_date('1958-08-24','YYYY-MM-DD'),'UK');

insert into movie values (902,'The Innocents',1961,100,'English', to_date('1962-02-19','YYYY-MM-DD'),'SW');

insert into movie values (903,'Lawrence of Arabia',1962,216,'English', to_date('1962-12- 11','YYYY-MM-DD'),'UK');

insert into movie values (904,'The Deer Hunter',1978,183,'English', to_date('1979-03-08','YYYY-MM-DD'),'UK');

insert into movie values (905,'Amadeus',1984,160,'English', to_date('1985-01-07','YYYY-MM-DD'),'UK');

insert into movie values (906,'Blade Runner',1982,117,'English', to_date('1982-09-09','YYYY-MM-DD'),'UK');

insert into movie values (907,'Eyes Wide Shut',1999,159,'English',NULL,'UK');

insert into movie values (908,'The Usual Suspects',1995,106,'English', to_date('1995-08- 25','YYYY-MM-DD'),'UK');

insert into movie values(909,'Chinatown',1974,130,'English', to_date('1974-08-09','YYYY-MM-DD'),'UK');

insert into movie values (910,'The Boogie Nights',1997,155,'English', to_date('1998-02- 16','YYYY-MM-DD'),'UK');

insert into movie values (911,'Annie Hall',1977,93,'English', to_date('1977-04-20','YYYY-MM-DD'),'USA');

```sql
insert into movie values (912,'Princess Mononoke',1997,134,'Japanese',
to_date('2001-10- 19','YYYY-MM-DD'),'UK');

insert into movie values (913,'The Shawshank Redemption',1994,142,'English',
to_date('1995- 02-17','YYYY-MM-DD'),'UK');

insert into movie values(914,'AmericanBeauty',1999,122,'English',NULL,'UK');

insert into movie values (915,'Titanic',1997,194,'English', to_date('1998-01-
23','YYYY-MM-DD'),'UK');

insert into movie values (916,'Good Will Hunting',1997,126,'English',
to_date('1998-06- 03','YYYY-MM-DD'),'UK');

insert into movie values (917,'Deliverance',1972,109,'English', to_date('1982-
10-05','YYYY-MM-DD'),'UK');

insert into movie values (918,'Trainspotting',1996,94,'English', to_date('1996-
02-23','YYYY-MM-DD'),'UK');

insert into movie values (919,'The Prestige',2006,130,'English', to_date('2006-
11-10','YYYY-MM-DD'),'UK');

insert into movie values (920,'Donnie Darko',2001,113,'English',NULL,'UK');

insert into movie values (921,'Slumdog Millionaire',2008,120,'English',
to_date('2009-01- 09','YYYY-MM-DD'),'UK');

insert into movie values (922,'Aliens',1986,137,'English', to_date('1986-08-
29','YYYY-MM-DD'),'UK');

insert into movie values(923,'Beyond the Sea',2004,118,'English', to_date
('2004-11-26','YYYY-MM-DD'),'UK');

insert into movie values(924,'Avatar',2009,162,'English', to_date('2009-12-
17','YYYY-MM-DD'),'UK');

insert into movie values(925,'Braveheart',1995,178,'English', to_date('1995-09-
08','YYYY-MM-DD'),'UK');

insert into movie values (926,'Seven Samurai',1954,207,'Japanese',
to_date('1954-04-26','YYYY-MM-DD'),'JP');

insert into movie values (927,'Spirited Away',2001,125,'Japanese',
to_date('2003-09-12','YYYY-MM-DD'),'UK');

insert into movie values (928,'Back to the Future',1985,116,'English',
to_date('1985-12- 04','YYYY-MM-DD'),'UK');
```

mov_id	mov_title	mov_year	mov_time	mov_lan	mov_dt_rel	mov_rel_country
901	Vertigo	1958	128	English	1958-08-24	UK
902	The Innocents	1961	100	English	1962-02-19	SW
903	Lawrence of Arabia	1962	216	English	1962-12-11	UK
904	The Deer Hunter	1978	183	English	1979-03-08	UK
905	Amadeus	1984	160	English	1985-01-07	UK
906	Blade Runner	1982	117	English	1982-09-09	UK
907	Eyes Wide Shut	1999	159	English		UK
908	The Usual Suspects	1995	106	English	1995-08-25	UK
909	Chinatown	1974	130	English	1974-08-09	UK
910	Boogie Nights	1997	155	English	1998-02-16	UK
911	Annie Hall	1977	93	English	1977-04-20	USA
912	Princess Mononoke	1997	134	Japanese	2001-10-19	UK
913	The Shawshank Redemption	1994	142	English	1995-02-17	UK
914	American Beauty	1999	122	English		UK
915	Titanic	1997	194	English	1998-01-23	UK
916	Good Will Hunting	1997	126	English	1998-06-03	UK
917	Deliverance	1972	109	English	1982-10-05	UK
918	Trainspotting	1996	94	English	1996-02-23	UK
919	The Prestige	2006	130	English	2006-11-10	UK
920	Donnie Darko	2001	113	English		UK
921	Slumdog Millionaire	2008	120	English	2009-01-09	UK
922	Aliens	1986	137	English	1986-08-29	UK
923	Beyond the Sea	2004	118	English	2004-11-26	UK
924	Avatar	2009	162	English	2009-12-17	UK
926	Seven Samurai	1954	207	Japanese	1954-04-26	JP
927	Spirited Away	2001	125	Japanese	2003-09-12	UK
928	Back to the Future	1985	116	English	1985-12-04	UK
925	Braveheart	1995	178	English	1995-09-08	UK

-> insert into movie_genres values(922,1001);

insert into movie_genres values917,1002);

insert into movie_genres values(903,1002);

insert into movie_genres values(912,1003);

insert into movie_genres values(911,1005);

insert into movie_genres values(908,1006);

insert into movie_genres values(913,1006);

insert into movie_genres values(926,1007);

insert into movie_genres values(928,1007);

insert into movie_genres values(918,1007);

insert into movie_genres values(921,1007);

insert into movie_genres values(902,1008);

insert into movie_genres values(923,1009);

insert into movie_genres values(907,1010);

insert into movie_genres values(927,1010);

insert into movie_genres values(901,1010);

insert into movie_genres values(914,1011);

insert into movie_genres values(906,1012);

insert into movie_genres values(904,1013);

mov_id	gen_id
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