

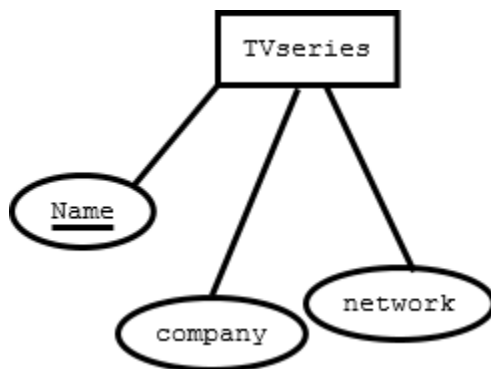
ERMODEL TO RELATIONAL SCHEMA

CREATE A TABLE FOR STRONG ENTITY:

ENTITY NAME : tvseries

ENTTY TYPE : strong

PRIMARY KEY : name



```
SQL> create table series2(  
2  tvseries_name varchar(25),  
3  company_name varchar(25),  
4  network_name varchar(25),
```

5 primary key(tvseries_name)

6);

Table created.

SQL> desc series2;

Name	Null?	Type

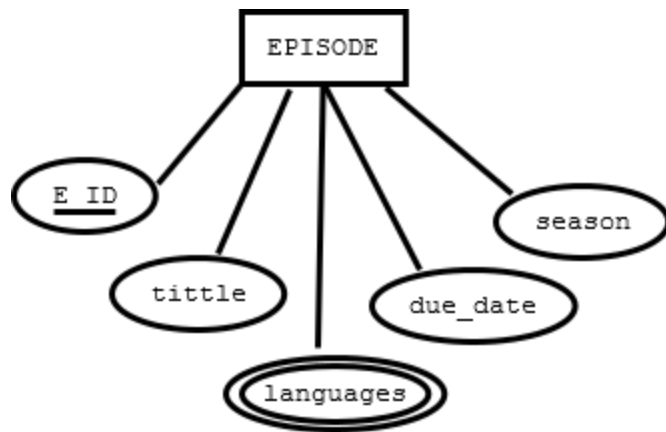
TVSERIES_NAME		NOT NULL VARCHAR2(25)
COMPANY_NAME		VARCHAR2(25)
NETWORK_NAME		VARCHAR2(25)

CREATE A TABLE FOR STRONG ENTITY

ENTITY TYPE: STRONG

ENTITY NAME: episode

PRIMARY KEY: E_id



```

SQL> create table episode2(
2 episode_id number(10),
3 season number(5),
4 episode_tittle varchar(25),
5 due_date date,
6 primary key(episode_id)
7 );
  
```

Table created.

```
SQL> desc episode2;
```

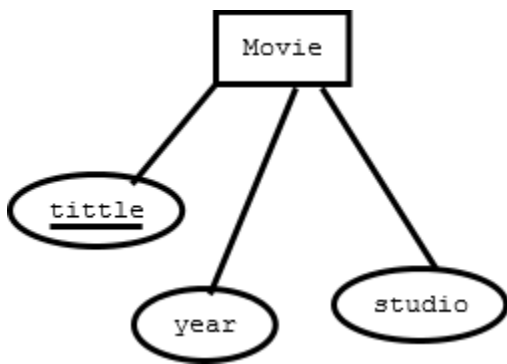
Name	Null?	Type
EPISODE_ID	NOT NULL	NUMBER(10)
SEASON		NUMBER(5)
EPISODE_TITTLE		VARCHAR2(25)
DUE_DATE		DATE

CREATE A TABLE FOR STRONG ENTITY:

ENTITY NAME: Movie

ENTITY TYPE: strong

PRIMARY KEY:tittle



```
SQL> create table movie2(  
2  m_title varchar(25),  
3  m_year number(5),  
4  studio_name varchar(25),  
5  primary key(m_title)  
6 );
```

Table created.

SQL>

SQL> desc movie2;

Name	Null?	Type
------	-------	------

M_TITTLE	NOT NULL	VARCHAR2(25)
----------	----------	--------------

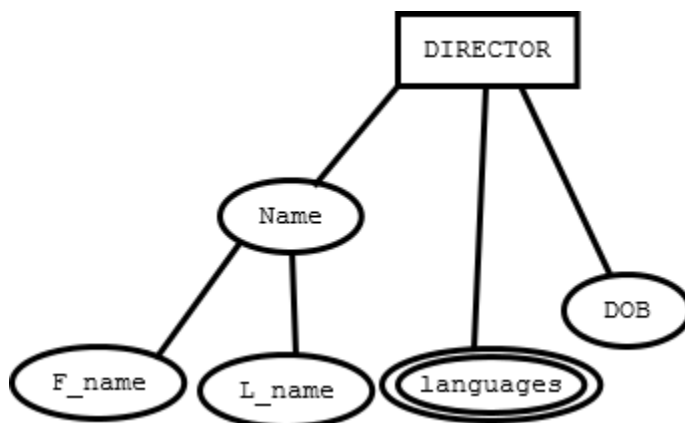
M_YEAR		NUMBER(5)
--------	--	-----------

STUDIO_NAME		VARCHAR2(25)
-------------	--	--------------

CREATE A TABLE FOR STRONG ENTITY:

ENTITY NAME: director

ENTITY TYPE: strong



```
SQL> create table director2(  
2 f_name varchar(25),  
3 l_name varchar(25),  
4 dob number(10)  
5 );
```

Table created.

```
SQL>
```

```
SQL> desc director2;
```

Name	Null?	Type

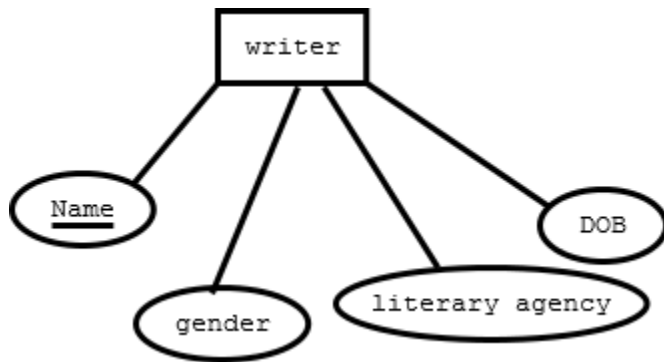
F_NAME		VARCHAR2(25)
L_NAME		VARCHAR2(25)
DOB		NUMBER(10)

CREATE A TABLE FOR STRONG ENTITY:

ENTITY NAME : WRITER

ENTITY TYPE : writer

PRIMARY KEY:name



```
SQL> create table writer2(  
2  w_name varchar(25),  
3  w_gender char(1),  
4  literary varchar(25),  
5  dob number(10),  
6  primary key(w_name)  
7 );
```

Table created.

```
SQL> desc writer2;
```

Name	Null?	Type

W_NAME	NOT NULL	VARCHAR2(25)
W_GENDER		CHAR(1)

LITERARY

VARCHAR2(25)

DOB

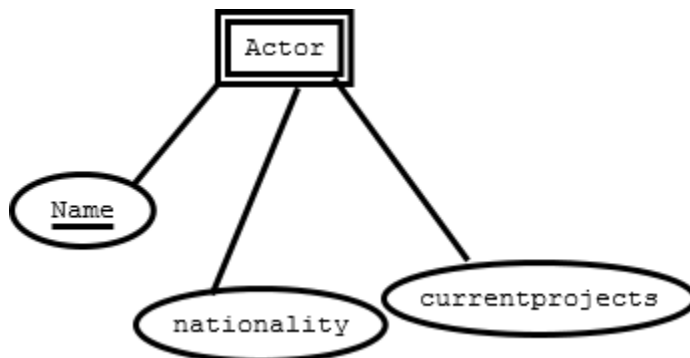
NUMBER(10)

CREATE A TABLE FOR WEAK ENTITY

ENTITY NAME: actor

ENTITY TYPE : weak

PRIMARY KEY: name



```
SQL> create table actor2(
```



```

2  a_name varchar(25),
3  currentprojects varchar(25),
4  nationality varchar(25),
5  m_tittle varchar(25),
6  primary key(a_name,m_tittle),
7  foreign key(m_tittle) references
8  movie2(m_tittle)
9  );

```

Table created.

SQL> desc actor2;

Name	Null?	Type

A_NAME	NOT NULL	VARCHAR2(25)
CURRENTPROJECTS		VARCHAR2(25)
NATIONALITY		VARCHAR2(25)
M_TITTLE	NOT NULL	VARCHAR2(25)

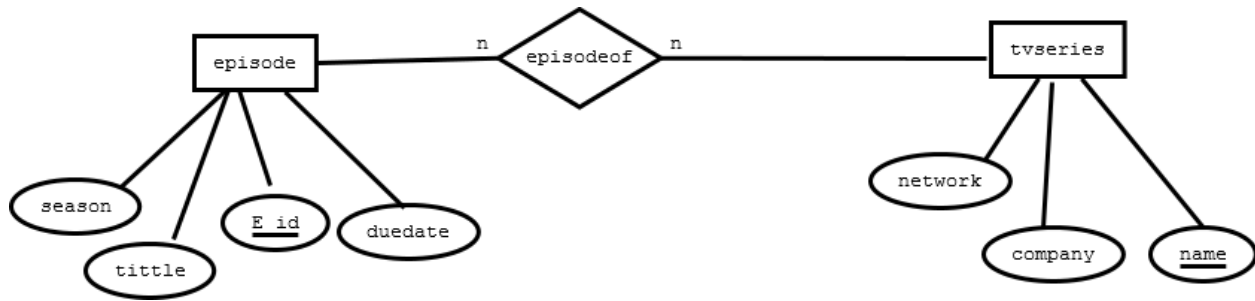
MAPPING OF N : N RELATION

CREATE A TABLE FOR RELATIONSHIP

RELATED ENTITIES: EPISODE AND TVSERIES

PRIMARY KEY : E_ID,SERIES_NAME

FOREIGN KEY: SERIES_NAME



```
SQL> create table episodeofs(  
2     episode_id number(10),  
3     tvseries_name  varchar(10),  
4     primary key(episode_id,tvseries_name),  
5     foreign key(episode_id) references  
6     episode2(episode_id),  
7     foreign key(tvseries_name) references  
8     series2(tvseries_name)  
9 );
```

Table created.

```
SQL> desc episodeofs;
```

Name	Null?	Type
------	-------	------

EPISODE_ID

NOT NULL NUMBER(10)

TVSERIES_NAME

NOT NULL VARCHAR2(10)

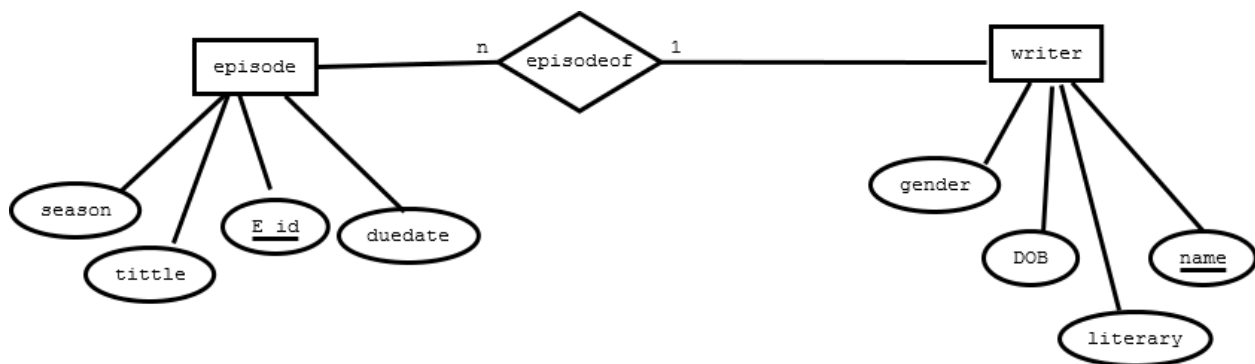
MAPPING OF N: 1 RELATION

CREATE A TABLE FOR RELATIONSHIP

RELATED ENTITIES: EPISODE AND WRITER

PRIMARY KEY :w_name, e_id

FOREIGN KEY :w_name,e_id.



```
SQL> create table writes2(  
2   w_name varchar(25),  
3   episode_id number(10),  
4   primary key(w_name,episode_id),  
5   foreign key(w_name) references  
6   writer2(w_name),
```

```
7    foreign key(episode_id) references
8    episode2(episode_id)
9    );
```

Table created.

```
SQL> desc writes2;
```

Name	Null?	Type

W_NAME	NOT NULL	VARCHAR2(25)
EPISODE_ID	NOT NULL	NUMBER(10)

```
SQL> desc writes2;
```

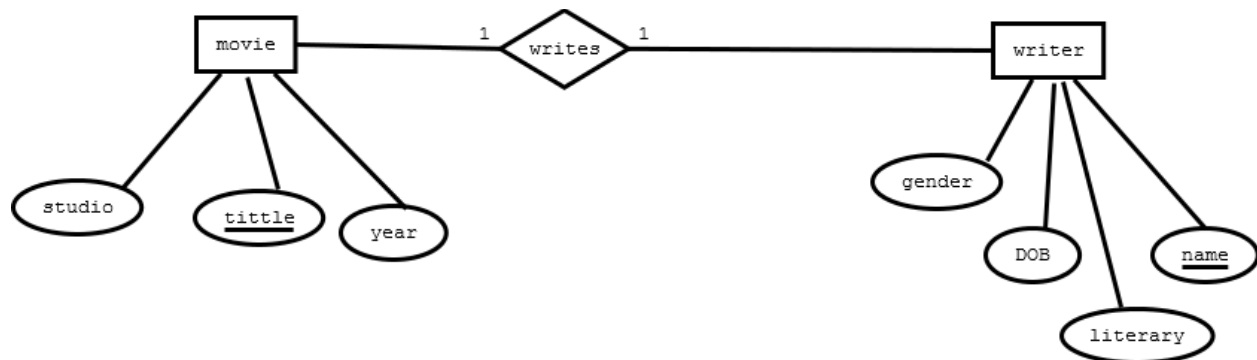
MAPPING OF 1: 1 RELATION

CREATE A TABLE FOR RELATIONSHIP .

RELATED ENTITIES: MOVIE AND WRITER

PRIMARY KEY:W_NAME.

FOREIGN KEY :M_TITTLE.



```
SQL> alter table writer2 add foreign key (m_title) references
movie2(m_title);
```

Table altered.

```
SQL> desc writer2;
```

Name	Null?	Type
W_NAME	NOT NULL	VARCHAR2(25)
W_GENDER		CHAR(1)
LITERARY		VARCHAR2(25)
DOB		NUMBER(10)
M_TITTLE		VARCHAR2(25)

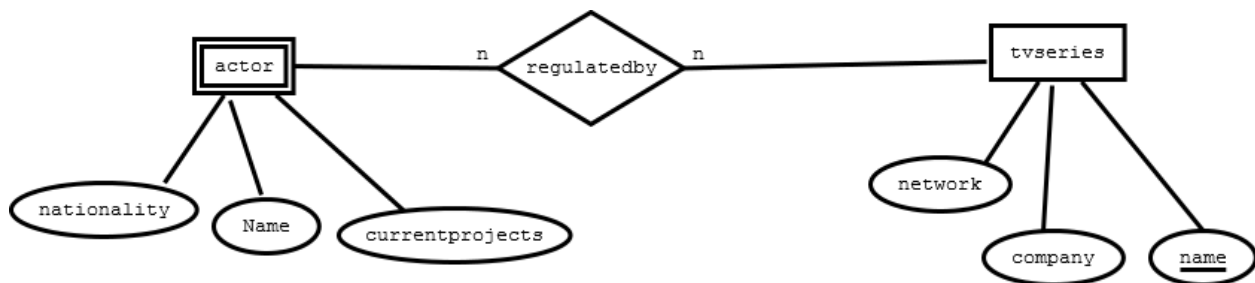
MAPPING OF N : N RELATION

CREATE A TABLE FOR RELATIONSHIP

Related entities: actor and tvseries

PRIMARY KEY:TVSERIES_NAME,A_NAME

FOREIGN KEY: TVSERIES_NAME,A_NAME



```
SQL> create table regulated(  
2     a_name varchar(25),  
3     tvseries_name varchar(25),  
4     primary key(a_name,tvseries_name),  
5     foreign key(a_name) references actor2(a_name),  
6     foreign key(tvseries_name) references series2(tvseries_name)  
7 );
```

Table created.

SQL> desc regulated;

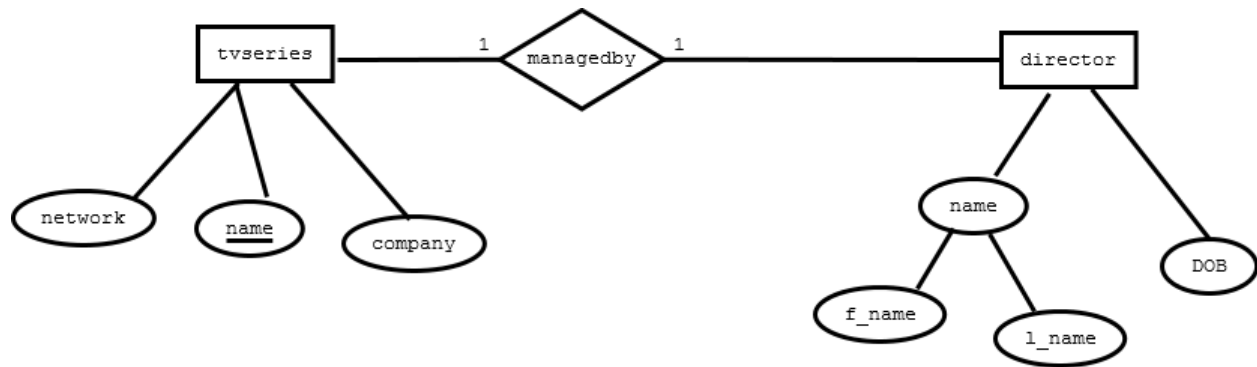
Name	Null?	Type

A_NAME	NOT NULL	VARCHAR2(25)
TVSERIES_NAME	NOT NULL	VARCHAR2(25)

MAPPING OF 1: 1 RELATION

**RELATED ENTITIES: TVSERIES AND
DIRECTOR.**

FOREIGN KEY:SERIES_NAME



SQL>alter table director2 add foreign key(tvseries_name)references series2(tvseries_name);

Table altered.

SQL> desc director2;

Name	Null?	Type

F_NAME		VARCHAR2(25)
L_NAME		VARCHAR2(25)
DOB		NUMBER(10)
TVSERIES_NAME		VARCHAR2(25)

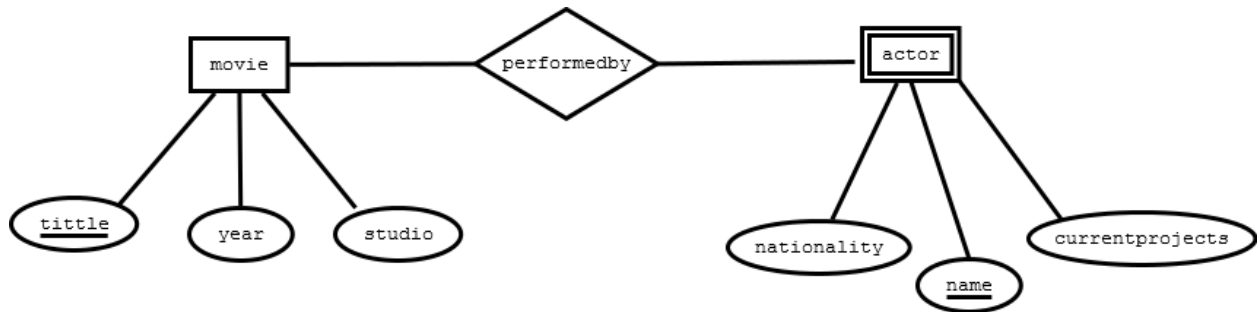
MAPPING OF N :1 RELATION

CREATE A TABLE FOR RELATIONSHIP

Related entities: movie andACTOR

PRIMARY KEY :w_name,m_tittle

FOREIGN KEY:w_name,m_tittle



```
SQL> create table performed1(  
2   m_tittle varchar(25),  
3   w_name varchar(25),  
4   primary key(m_tittle,w_name),  
5   foreign key(m_tittle) references  
6   movie2(m_tittle),  
7   foreign key(w_name) references  
8   writer2(w_name)  
9   );
```

Table created.

```
SQL> desc performed1;
```

Name	Null?	Type
------	-------	------

M_TITTLE

NOT NULL VARCHAR2(25)

W_NAME

NOT NULL VARCHAR2(25)

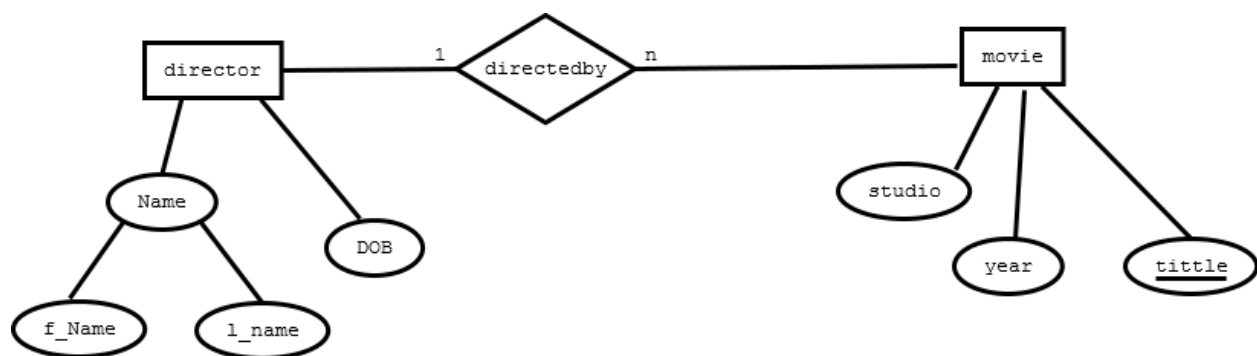
MAPPING OF N : N RELATION

CREATE A TABLE FOR RELATIONSHIP

RELATED ENTITTIES : DIRECTOR AND MOVIE

PRIMARY KEY:M_TITTLE

FOREIGN KEY:M_TITTLE



SQL> create table directed(

```
2 m_title varchar(25),
3 primary key(m_title),
4 foreign key(m_title) references movie2(m_title)
5 );
```

Table created.

SQL>

SQL> desc directed;

Name	Null?	Type

M_TITTLE		NOT NULL VARCHAR2(25)

**CREATE A TABLE FOR MULTIVALUED
ATTRIBUTE**

PRIMARY KEY: E_ID

Foreign key:e_id

```
SQL> create table languages1(  
2   language varchar(25),  
3   episode_id number(10),  
4   primary key(language,episode_id),  
5   foreign key(episode_id) references  
6   episode2(episode_id)  
7   );
```

Table created.

```
SQL> desc languages1;
```

Name	Null?	Type

LANGUAGE	NOT NULL	VARCHAR2(25)
EPISODE_ID	NOT NULL	NUMBER(10)

CRAETE ATABLE FOR MULTIVALUED ATTRIBUTE:

PRIMARY KEY:CURRENTPROJECTS

```
SQL> create table currenprojects(  
2  currentprojects varchar(25),  
3  primary key(currentprojects)  
4  );
```

Table created.

```
SQL> desc currenprojects;
```

Name	Null?	Type

CURRENTPROJECTS		NOT NULL VARCHAR2(25)

SQL Plus

Enter user-name: scott

Enter password:

Connected to:

Oracle Database 11g Enterprise Edition Release 11.1.0.6.0 - Production

With the Partitioning, OLAP, Data Mining and Real Application Testing options

```
SQL> create table series2(
  2  tvseries_name varchar(25),
  3  company_name varchar(25),
  4  network_name varchar(25),
  5  primary key(tvseries_name)
  6  );
```

Table created.

```
SQL> desc series2;
```

Name	Null?	Type
TVSERIES_NAME	NOT NULL	VARCHAR2(25)
COMPANY_NAME		VARCHAR2(25)
NETWORK_NAME		VARCHAR2(25)

```
SQL> create table episode2(
  2  episode_id number(10),
  3  season number(5),
  4  episode_tittle varchar(25),
  5  due_date date,
  6  primary key(episode_id)
  7  );
```

Table created.

```
SQL> desc episode2;
```

Name	Null?	Type
EPISODE_ID	NOT NULL	NUMBER(10)
SEASON		NUMBER(5)
EPISODE_TITTLE		VARCHAR2(25)
DUE_DATE		DATE

```
SQL> _
```



Search the web and Windows



SQL Plus

SQL> desc episode2;

Name	Null?	Type
EPISODE_ID	NOT NULL	NUMBER(10)
SEASON		NUMBER(5)
EPISODE_TITLE		VARCHAR2(25)
DUE_DATE		DATE

```
SQL> create table movie2(
  2  m_title varchar(25),
  3  m_year number(5),
  4  studio_name varchar(25),
  5  primary key(m_title)
  6 );
```

Table created.

SQL>

SQL> desc movie2;

Name	Null?	Type
M_TITLE	NOT NULL	VARCHAR2(25)
M_YEAR		NUMBER(5)
STUDIO_NAME		VARCHAR2(25)

SQL> create table director2(

```
  2  f_name varchar(25),
  3  l_name varchar(25),
  4  dob number(10)
  5 );
```

Table created.

SQL>

SQL> desc director2;

Name	Null?	Type
F_NAME		VARCHAR2(25)
L_NAME		VARCHAR2(25)
DOB		NUMBER(10)

SQL>



Search the web and Windows



Table created.

SQL> desc episode2;

Name	Null?	Type
EPISODE_ID	NOT NULL	NUMBER(10)
SEASON		NUMBER(5)
EPISODE_TITLLE		VARCHAR2(25)
DUE_DATE		DATE

SQL> create table movie2(
2 m_tittle varchar(25),
3 m_year number(5),
4 studio_name varchar(25),
5 primary key(m_tittle)
6);

Table created.

SQL>

SQL> desc movie2;

Name	Null?	Type
M_TITLLE	NOT NULL	VARCHAR2(25)
M_YEAR		NUMBER(5)
STUDIO_NAME		VARCHAR2(25)

SQL> create table director2(
2 f_name varchar(25),
3 l_name varchar(25),
4 dob number(10)
5);

Table created.

SQL>

SQL> desc director2;

Name	Null?	Type
F_NAME		VARCHAR2(25)
L_NAME		VARCHAR2(25)
DOB		NUMBER(10)



SQL Plus

```
alter table acto2r add unique(m_title)
```

```
*
```

ERROR at line 1:

ORA-00942: table or view does not exist

```
SQL> create table actor2(
```

```
2   a_name varchar(25),
```

```
3   currentprojects varchar(25),
```

```
4   nationality varchar(25),
```

```
5   m_title varchar(25),
```

```
6   primary key(a_name,m_title),
```

```
7   foreign key(m_title) references
```

```
8   movie2(m_title)
```

```
9 );
```

Table created.

```
SQL>
```

```
SQL>
```

```
SQL> desc actor2;
```

Name	Null?	Type
A_NAME	NOT NULL	VARCHAR2(25)
CURRENTPROJECTS		VARCHAR2(25)
NATIONALITY		VARCHAR2(25)
M_TITLE	NOT NULL	VARCHAR2(25)

```
SQL>
```

```
SQL>
```

```
SQL> create table episodeofs(
```

```
2   episode_id number(10),
```

```
3   tvseries_name varchar(10),
```

```
4   primary key(episode_id,tvseries_name),
```

```
5   foreign key(episode_id) references
```

```
6   episode2(episode_id),
```

```
7   foreign key(tvseries_name) references
```

```
8   series2(tvseries_name)
```

```
9 );
```

Table created.

```
SQL> _
```



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SQL Plus

```
CURRENTPROJECTS          VARCHAR2(25)
NATIONALITY                VARCHAR2(25)
M_TITTLE                   NOT NULL VARCHAR2(25)
```

SQL>

SQL>

```
SQL> create table episodeofs(
2     episode_id number(10),
3     tvseries_name varchar(10),
4     primary key(episode_id,tvseries_name),
5     foreign key(episode_id) references
6     episode2(episode_id),
7     foreign key(tvseries_name) references
8     series2(tvseries_name)
9 );
```

Table created.

SQL> desc episodeofs;

Name	Null?	Type
EPISODE_ID	NOT NULL	NUMBER(10)
TVSERIES_NAME	NOT NULL	VARCHAR2(10)

```
SQL> create table writes2(
2     w_name varchar(25),
3     episode_id number(10),
4     primary key(w_name,episode_id),
5     foreign key(w_name) references
6     writer2(w_name),
7     foreign key(episode_id) references
8     episode2(episode_id)
9 );
```

Table created.

SQL> desc writes2;

Name	Null?	Type
W_NAME	NOT NULL	VARCHAR2(25)
EPISODE_ID	NOT NULL	NUMBER(10)

SQL>



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SQL Plus

```
NATIONALITY          VARCHAR2(25)
M_TITLLE              NOT NULL VARCHAR2(25)
```

SQL>

SQL>

```
SQL> create table episodeofs(
2     episode_id number(10),
3     tvseries_name varchar(10),
4     primary key(episode_id,tvseries_name),
5     foreign key(episode_id) references
6     episode2(episode_id),
7     foreign key(tvseries_name) references
8     series2(tvseries_name)
9 );
```

Table created.

SQL> desc episodeofs;

Name	Null?	Type
EPISODE_ID	NOT NULL	NUMBER(10)
TVSERIES_NAME	NOT NULL	VARCHAR2(10)

SQL> create table writes2(

```
2     w_name varchar(25),
3     episode_id number(10),
4     primary key(w_name,episode_id),
5     foreign key(w_name) references
6     writer2(w_name),
7     foreign key(episode_id) references
8     episode2(episode_id)
9 );
```

Table created.

SQL> desc writes2;

Name	Null?	Type
W_NAME	NOT NULL	VARCHAR2(25)
EPISODE_ID	NOT NULL	NUMBER(10)

SQL> desc writes2;_



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```
SQL> create table regulated(  
2     a_name varchar(25),  
3     tvseries_name varchar(25),  
4     primary key(a_name,tvseries_name),  
5     foreign key(a_name) references actor2(a_name),  
6     foreign key(tvseries_name) references series2(tvseries_name)  
7 );
```

Table created.

```
SQL> desc regulated;
```

Name	Null?	Type
A_NAME	NOT NULL	VARCHAR2(25)
TVSERIES_NAME	NOT NULL	VARCHAR2(25)

```
SQL> alter table director2 add tvseries_name varchar(25);
```

Table altered.

```
SQL> alter table director2 add foregin key(tvseries_name )references series2(tvseries_name);  
alter table director2 add foregin key(tvseries_name )references series2(tvseries_name)
```

ERROR at line 1:

ORA-01735: invalid ALTER TABLE option

```
SQL>
```

```
SQL> alter table director2 add foreign key(tvseries_name )references series2(tvseries_name);
```

Table altered.

```
SQL> desc director2;
```

Name	Null?	Type
F_NAME		VARCHAR2(25)
L_NAME		VARCHAR2(25)
DOB		NUMBER(10)
TVSERIES_NAME		VARCHAR2(25)

```
SQL> _
```



SQL Plus

Name	Null?	Type
F_NAME		VARCHAR2(25)
L_NAME		VARCHAR2(25)
DOB		NUMBER(10)
TVSERIES_NAME		VARCHAR2(25)

```
SQL> create table performed1(  
2     m_title varchar(25),  
3     w_name  varchar(25),  
4     primary key(m_title,w_name),  
5     foreign key(m_title) references  
6     movie2(m_title),  
7     foreign key(w_name) references  
8     writer2(w_name)  
9 );
```

Table created.

SQL>

SQL>

SQL>

SQL> desc performed1;

Name	Null?	Type
M_TITLE	NOT NULL	VARCHAR2(25)
W_NAME	NOT NULL	VARCHAR2(25)

```
SQL> create table directed(  
2     m_title varchar(25),  
3     primary key(m_title),  
4     foreign key(m_title) references movie2(m_title)  
5 );
```

Table created.

SQL>

SQL> desc directed;

Name	Null?	Type
M_TITLE	NOT NULL	VARCHAR2(25)

SQL> _



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SQL Plus

Table created.

SQL>

SQL>

SQL>

SQL> desc performed1;

Name	Null?	Type
M_TITTLE	NOT NULL	VARCHAR2(25)
W_NAME	NOT NULL	VARCHAR2(25)

SQL> create table directed(

```
2 m_tittle varchar(25),
3 primary key(m_tittle),
4 foreign key(m_tittle) references movie2(m_tittle)
5 );
```

Table created.

SQL>

SQL> desc directed;

Name	Null?	Type
M_TITTLE	NOT NULL	VARCHAR2(25)

SQL> create table languages1(

```
2 language varchar(25),
3 episode_id number(10),
4 primary key(language,episode_id),
5 foreign key(episode_id) references
6 episode2(episode_id)
7 );
```

Table created.

SQL> desc languages1;

Name	Null?	Type
LANGUAGE	NOT NULL	VARCHAR2(25)
EPISODE_ID	NOT NULL	NUMBER(10)

SQL>



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SQL Plus

```
6     episode2(episode_id)
7 );
```

Table created.

SQL> desc languages1;

Name	Null?	Type
LANGUAGE	NOT NULL	VARCHAR2(25)
EPISODE_ID	NOT NULL	NUMBER(10)

```
SQL> create table currenproject(
2   currentprojects varchar(25),
3   primary key(currentprojects)
4 );
```

SQL>);
SP2-0042: unknown command ")" - rest of line ignored.

SQL>

```
SQL> create table currenproject(
2   currentprojects varchar(25),
3   primary key(currentprojects)
4 );
```

SQL>);
SP2-0042: unknown command ")" - rest of line ignored.

SQL>

```
SQL> create table currentprojects(
2   currentprojects varchar(25),
3   primary key(currentprojects)
4 );
```

Table created.

SQL> desc currentprojects;

ERROR:

ORA-04043: object currentprojects does not exist

SQL> desc currenprojects;

Name	Null?	Type
CURRENTPROJECTS	NOT NULL	VARCHAR2(25)

SQL>



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SQL Plus

```
6     episode2(episode_id)
7 );
```

Table created.

SQL> desc languages1;

Name	Null?	Type
LANGUAGE	NOT NULL	VARCHAR2(25)
EPISODE_ID	NOT NULL	NUMBER(10)

```
SQL> create table currenproject(
2   currentprojects varchar(25),
3   primary key(currentprojects)
4
```

```
SQL> );
```

SP2-0042: unknown command ")" - rest of line ignored.

SQL>

```
SQL> create table currenproject(
2   currentprojects varchar(25),
3   primary key(currentprojects)
4
```

```
SQL> );
```

SP2-0042: unknown command ")" - rest of line ignored.

SQL>

```
SQL> create table currenprojects(
2   currentprojects varchar(25),
3   primary key(currentprojects)
4 );
```

Table created.

SQL> desc currentprojects;

ERROR:

ORA-04043: object currentprojects does not exist

SQL> desc currenprojects;

Name	Null?	Type
CURRENTPROJECTS	NOT NULL	VARCHAR2(25)

SQL> _



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