Exercici 1

A partir dels documents adjunts (estructura i dades), crea una base de dades amb MySQL. Mostra les característiques principals de l'esquema creat i explica les diferents taules i variables que hi ha.

In [10]:
```
# Importem les llibreries bàsiques
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import sklearn
```

In [11]:
```
# Importem la llibreria necessària i l'enllacem amb el nostre host

import mysql.connector

mydb= mysql.connector.connect(
  host="localhost",
  user="root",
  password="Trenca9s!"
)

print(mydb)
```

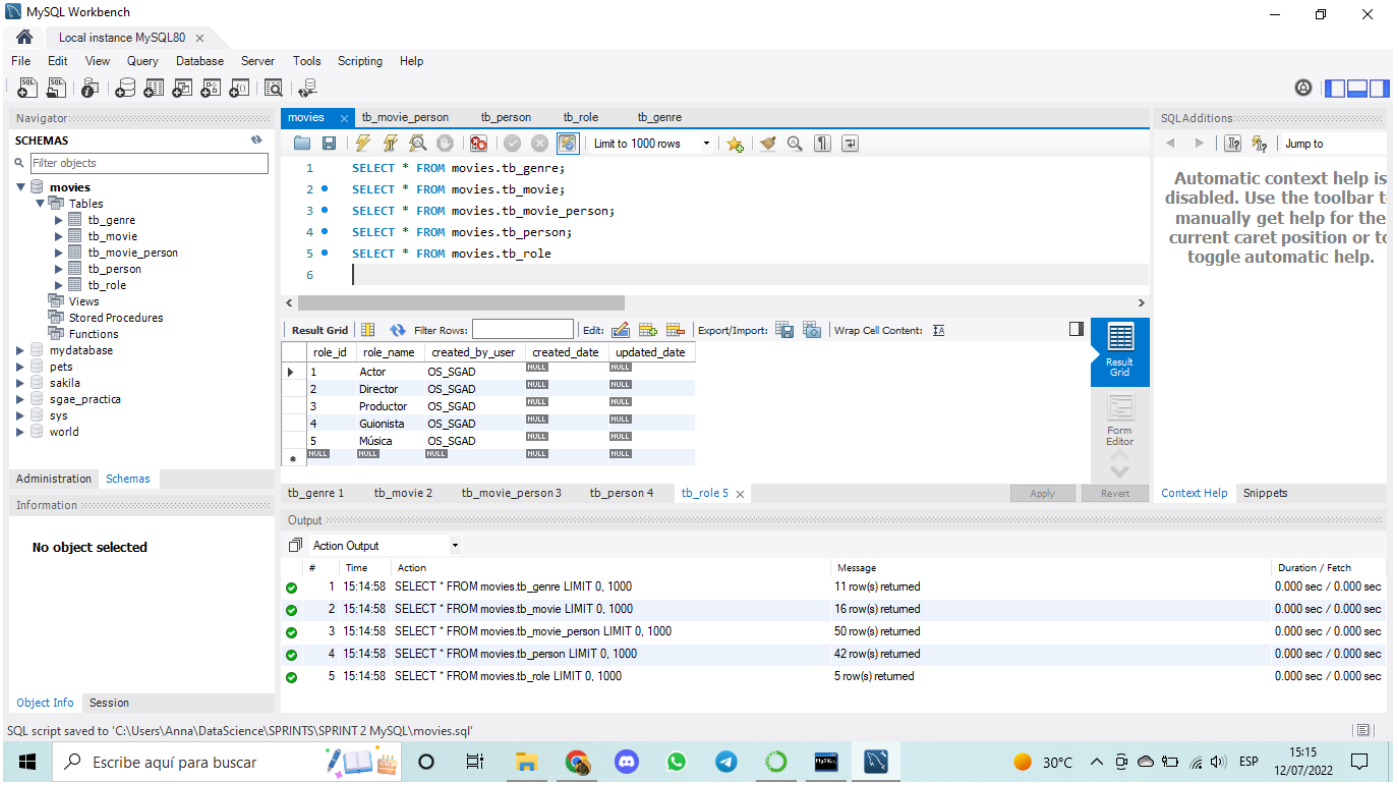
```
<mysql.connector.connection_cext.CMySQLConnection object at 0x0000023876D412E0>
```

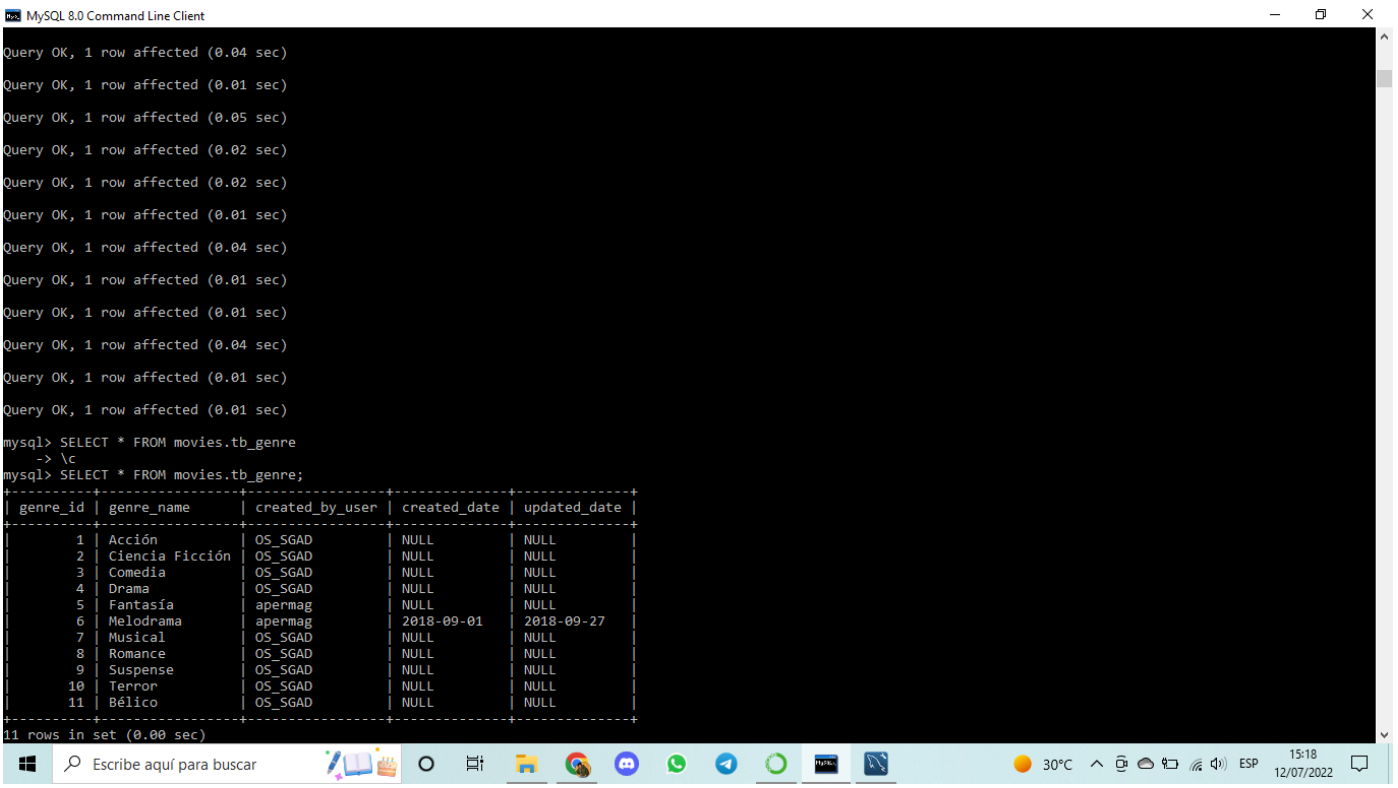
Els següents dos passos els poso en # perquè com que ja he creat les bases de dades, al tornar a apretar el run, em diu que ja existeixen

In [12]:
```
# Creem la BASE DE DADES principal, que s'ha de dir SGAE_Practica
SGAE_Practica = mydb.cursor()

#SGAE_Practica.execute("CREATE DATABASE SGAE_Practica")
```

In [13]:
```
# Creem un SCHEMA que es digui movies. Un esquema en MySQL és com crear una basde de dades
movies = mydb.cursor()

#movies.execute("CREATE DATABASE movies")
```

He creat les taules amb MySQL workbench i he afegit la informació de les columnes amb MySQL Command





Després de crear cada taula per separat dins el dataset movies, les he importat en format csv i cridat amb pd.read_csv per veure com han quedat.

In [14]:
```
genre = pd.read_csv("C:\\Users\\Anna\DataScience\\SPRINTS\\SPRINT 2 MySQL\\tb_genre.csv",
display(genre)
```

	genre_id	genre_name	created_by_user	created_date	updated_date
0	1	AcciÃ³n	OS_SGAD	NaN	NaN
1	2	Ciencia FicciÃ³n	OS_SGAD	NaN	NaN
2	3	Comedia	OS_SGAD	NaN	NaN

	genre_id	genre_name	created_by_user	created_date	updated_date
3	4	Drama	OS_SGAD	NaN	NaN
4	5	FantasÃa	apermag	NaN	NaN
5	6	Melodrama	apermag	2018-09-01	2018-09-27
6	7	Musical	OS_SGAD	NaN	NaN
7	8	Romance	OS_SGAD	NaN	NaN
8	9	Suspense	OS_SGAD	NaN	NaN
9	10	Terror	OS_SGAD	NaN	NaN
10	11	BÃ©lico	OS_SGAD	NaN	NaN

In [15]:
```
movie = pd.read_csv("C:\\Users\\Anna\DataScience\\SPRINTS\\SPRINT 2 MySQL\\tb_movie.csv",
display(movie)
```

	movie_id	movie_title	movie_date	movie_format	movie_genre_id	created_by_user	created_date	updated_dat
0	1	Apocalypse Now	1979-05-10	Film	11	OS_SGAD	NaN	NaN
1	2	Star Wars:Episode IV - A New Hope	1977-05-25	Film	2	OS_SGAD	NaN	NaN
2	3	Indiana Jones and the Temple of Doom	1984-05-08	Film	1	OS_SGAD	NaN	NaN
3	4	The Terminal	2004-06-18	Digital	3	OS_SGAD	NaN	NaN
4	5	Jaws	1975-01-01	Film	10	OS_SGAD	NaN	NaN
5	6	ET The Extraterrestrial	1982-07-25	Film	5	OS_SGAD	NaN	NaN
6	7	Psycho	1960-05-06	Film	9	OS_SGAD	NaN	NaN
7	8	Ocho Apellidos Vascos	2014-03-14	Digital	3	OS_SGAD	NaN	NaN
8	9	Ocho Apellidos Catalanes	2016-06-09	Digital	8	OS_SGAD	NaN	NaN
9	10	El otro lado de la cama	2002-09-04	Digital	8	OS_SGAD	NaN	NaN
10	11	La Gran Familia EspaÃ±ola	2012-10-15	Digital	3	OS_SGAD	NaN	NaN
11	12	El dia de la bestia	1994-12-25	Film	1	OS_SGAD	NaN	NaN
12	13	Braveheart	1995-08-08	Film	4	OS_SGAD	NaN	NaN
13	14	The Shawshank Redemption	1992-01-07	Film	4	OS_SGAD	NaN	NaN

	movie_id	movie_title	movie_date	movie_format	movie_genre_id	created_by_user	created_date	updated_dat
14	15	Las brujas de Zugarramurdi	2009-10-07	Digital	9	OS_SGAD	NaN	Nal
15	16	Blade Runner	1982-12-25	Digital	2	OS_SGAD	NaN	Nal

In [16]:

```
movie_person = pd.read_csv("C:\\Users\\Anna\DataScience\\SPRINTS\\SPRINT 2 MySQL\\tb_movie
display(movie_person)
```

	movie_id	person_id	role_id	movie_award_ind	created_by_user	created_date	updated_date
0	1	1	2	Y	OS_SGAD	NaN	NaN
1	1	1	3	N	OS_SGAD	NaN	NaN
2	1	1	5	N	OS_SGAD	NaN	NaN
3	1	2	5	N	OS_SGAD	NaN	NaN
4	1	3	1	N	OS_SGAD	NaN	NaN
5	1	4	1	N	OS_SGAD	NaN	NaN
6	1	5	1	Y	OS_SGAD	NaN	NaN
7	1	6	1	N	OS_SGAD	NaN	NaN
8	1	41	1	N	OS_SGAD	NaN	NaN
9	2	6	1	N	OS_SGAD	NaN	NaN
10	2	7	2	Y	OS_SGAD	NaN	NaN
11	2	8	3	N	OS_SGAD	NaN	NaN
12	3	6	1	N	OS_SGAD	NaN	NaN
13	3	7	1	N	OS_SGAD	NaN	NaN
14	3	7	4	N	OS_SGAD	NaN	NaN
15	3	9	2	N	OS_SGAD	NaN	NaN
16	3	10	5	N	OS_SGAD	NaN	NaN
17	4	9	2	N	OS_SGAD	NaN	NaN
18	4	9	3	N	OS_SGAD	NaN	NaN
19	4	11	1	N	OS_SGAD	NaN	NaN
20	4	12	1	N	OS_SGAD	NaN	NaN
21	5	9	2	N	OS_SGAD	NaN	NaN
22	6	9	2	N	OS_SGAD	NaN	NaN
23	7	13	1	N	OS_SGAD	NaN	NaN
24	7	13	2	N	OS_SGAD	NaN	NaN
25	7	13	3	N	OS_SGAD	NaN	NaN
26	7	14	2	N	OS_SGAD	NaN	NaN
27	7	15	2	N	OS_SGAD	NaN	NaN
28	8	16	2	N	OS_SGAD	NaN	NaN

	movie_id	person_id	role_id	movie_award_ind	created_by_user	created_date	updated_date
29	8	17	1	N	OS_SGAD	NaN	NaN
30	8	18	1	N	OS_SGAD	NaN	NaN
31	8	19	1	N	OS_SGAD	NaN	NaN
32	8	20	1	N	OS_SGAD	NaN	NaN
33	9	16	2	N	OS_SGAD	NaN	NaN
34	9	17	1	N	OS_SGAD	NaN	NaN
35	9	18	1	N	OS_SGAD	NaN	NaN
36	9	19	1	N	OS_SGAD	NaN	NaN
37	9	20	1	N	OS_SGAD	NaN	NaN
38	10	16	2	N	OS_SGAD	NaN	NaN
39	11	21	2	N	OS_SGAD	NaN	NaN
40	11	21	4	N	OS_SGAD	NaN	NaN
41	11	22	1	N	OS_SGAD	NaN	NaN
42	11	23	1	N	OS_SGAD	NaN	NaN
43	11	24	1	N	OS_SGAD	NaN	NaN
44	11	25	1	N	OS_SGAD	NaN	NaN
45	11	26	1	N	OS_SGAD	NaN	NaN
46	13	28	1	Y	OS_SGAD	NaN	NaN
47	13	28	2	N	OS_SGAD	NaN	NaN
48	14	29	1	N	OS_SGAD	NaN	NaN
49	14	30	1	N	OS_SGAD	NaN	NaN

In [17]:
```
person = pd.read_csv("C:\\Users\\Anna\DataScience\\SPRINTS\\SPRINT 2 MySQL\\tb_person.csv"
display(person)
```

	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
0	1	Francis Ford Coppola	United States	1939-04-07	NaN	NaN	OS_SGAD	N
1	2	Carmine Coppola	United States	1945-07-08	NaN	NaN	OS_SGAD	N
2	3	Marlon Brando	United States	1924-04-03	2004-07-01	NaN	OS_SGAD	N
3	4	Robert Duvall	United States	1931-01-05	NaN	NaN	OS_SGAD	N
4	5	Martin Sheen	United States	1940-08-03	NaN	NaN	OS_SGAD	N
5	6	Harrison Ford	United States	1942-07-13	NaN	NaN	OS_SGAD	N
6	7	George Lucas	United States	1944-05-14	NaN	NaN	OS_SGAD	N
7	8	Gary Kurtz	United States	1940-07-27	NaN	NaN	OS_SGAD	N
8	9	Steven Spielberg	United States	1946-12-18	NaN	NaN	OS_SGAD	N

	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
9	10	John Williams	United States	1928-08-08	NaN	NaN	OS_SGAD	N
10	11	Tom Hanks	United States	1956-07-09	NaN	NaN	OS_SGAD	N
11	12	Catherine Zeta-Jones	Wales	1969-09-25	NaN	NaN	OS_SGAD	N
12	13	Alfred Joseph Hitchcock	United Kingdom	1899-08-13	1980-04-29	NaN	OS_SGAD	N
13	14	Anthony Perkins	United States	1934-04-04	1992-09-08	NaN	OS_SGAD	N
14	15	Vera Miles	United States	1929-08-23	NaN	NaN	OS_SGAD	N
15	16	Emilio Martinez Lazaro	Spain	1956-09-09	NaN	NaN	OS_SGAD	N
16	17	Dani Rovira	Spain	1984-07-01	NaN	NaN	OS_SGAD	N
17	18	Clara Lago	Spain	1986-04-17	NaN	NaN	OS_SGAD	N
18	19	Carmen Machi	Spain	1964-08-09	NaN	NaN	OS_SGAD	N
19	20	Karra Elejalde	Spain	1960-03-06	NaN	NaN	OS_SGAD	N
20	21	Daniel Sanchez Arevalo	Spain	1970-06-08	NaN	NaN	OS_SGAD	N
21	22	Quim Gutierrez	Spain	1981-03-27	NaN	NaN	OS_SGAD	N
22	23	Robert Alamo	Spain	1970-05-06	NaN	NaN	OS_SGAD	N
23	24	Hector Colome	Spain	1944-10-25	2015-02-28	NaN	OS_SGAD	N
24	25	Veronica Echegui	Spain	1983-03-14	NaN	NaN	OS_SGAD	N
25	26	Patrick Criado	Spain	1995-09-23	NaN	NaN	OS_SGAD	N
26	27	Sean Connery	Scotland	1930-07-08	NaN	NaN	OS_SGAD	N
27	28	Mel Gibson	Australia	1950-08-09	NaN	NaN	OS_SGAD	N
28	29	Morgan Freeman	United States	1935-10-01	NaN	NaN	OS_SGAD	N
29	30	Tim Robbins	United States	1949-06-07	NaN	NaN	OS_SGAD	N
30	41	Charlie Sheen	United States	1965-09-03	NaN	5.0	OS_SGAD	N
31	42	Emilio Estevez	United States	1962-05-12	NaN	5.0	OS_SGAD	N
32	43	RamÃ³n Estevez	United States	1963-08-07	NaN	5.0	OS_SGAD	N
33	44	ReneÃ© Estevez	United States	1967-04-02	NaN	5.0	OS_SGAD	N
34	45	Paula Speert Sheen	United States	1986-01-06	NaN	41.0	OS_SGAD	N
35	46	Bob Sheen	United States	2009-05-01	NaN	41.0	OS_SGAD	N
36	47	Max Sheen	United States	2009-05-01	NaN	41.0	OS_SGAD	N

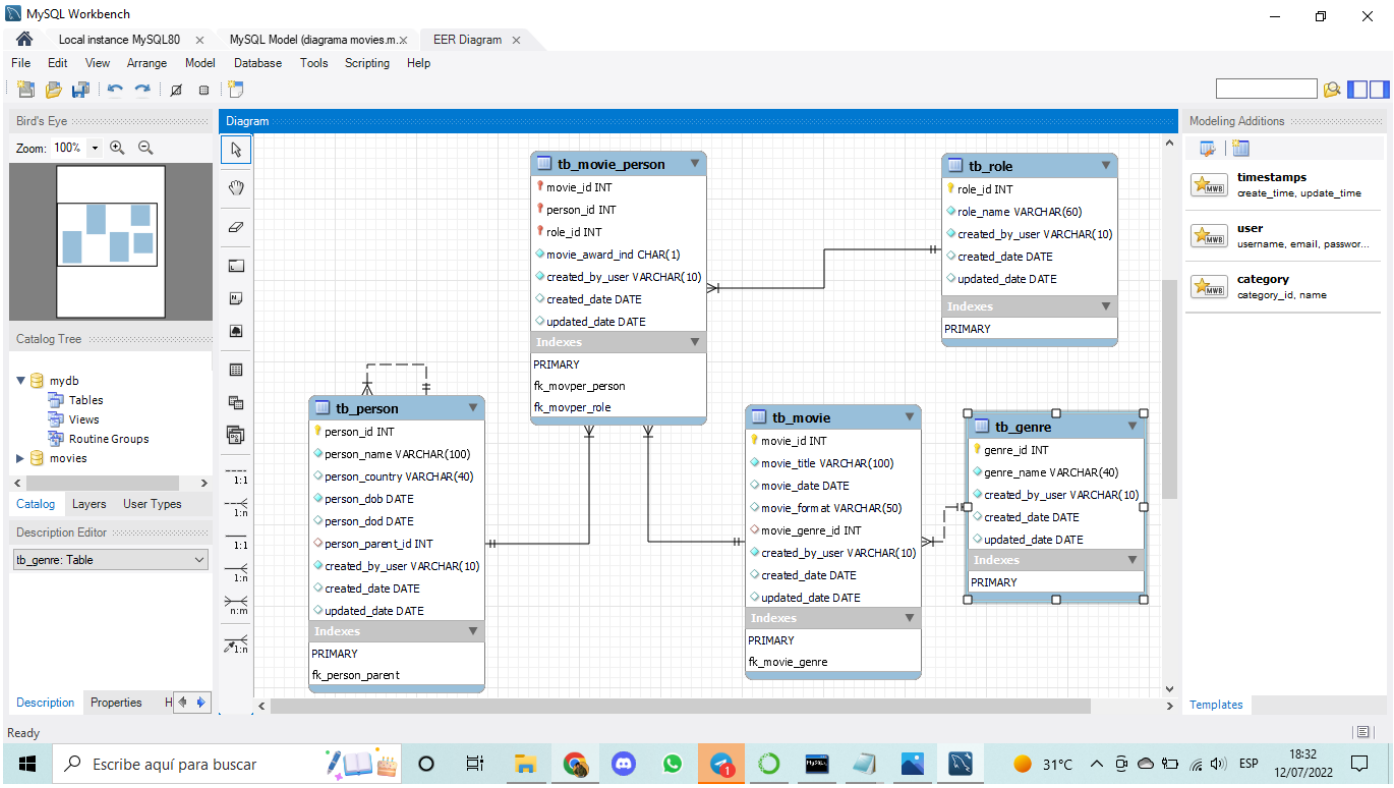
	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
37	48	Sam Sheen	United States	2004-03-09	NaN	41.0	OS_SGAD	N
38	49	Lola Sheen	United States	2005-06-01	NaN	41.0	OS_SGAD	N
39	50	Paula Jones-Sheen	United States	2003-07-06	NaN	45.0	OS_SGAD	N
40	51	Paloma Rae Estevez	United States	1986-02-15	NaN	42.0	OS_SGAD	N
41	52	Taylor Levi Estevez	United States	1984-06-22	NaN	42.0	OS_SGAD	N

In [18]:

```
role = pd.read_csv("C:\\Users\\Anna\DataScience\\SPRINTS\\SPRINT 2 MySQL\\tb_role.csv", er
display(role)
```

	role_id	role_name	created_by_user	created_date	updated_date
0	1	Actor	OS_SGAD	NaN	NaN
1	2	Director	OS_SGAD	NaN	NaN
2	3	Productor	OS_SGAD	NaN	NaN
3	4	Guionista	OS_SGAD	NaN	NaN
4	5	MÃºsica	OS_SGAD	NaN	NaN

Per últim, gràcies al MySQL he creat un diagrama del dataset on es reflecteix millor les relacions entre taules, pk i fk



RESUM EXPLICATIU DEL DATASET

- Està compost per 5 taules diferents: tb_genre, tb_role, tb_movie_person, tb_movie, tb_person
- Totes les taules tenen diferents tamanys i formes, a causa de la informació que ha rebut cada una

- A grosso modo i gràcies al diagrama, veiem que els atributs que tenen una clau al principi són les claus primàries, els que tenen un rombe color groc són claus foràanies/secundàries i la resta són atributs informatius normals
- En totes les taules, excepte en la tb_gendre, tenim 2 columnes creades però a les quals no els hi hem entrat informació, que són "created_date" i "updated_date". No les podem eliminar però perquè en algun punt de relacionar amb les altres taules que sí contenen aquesta informació, ens podria ser d'utilitat
- La taula tb_person està relacionada entre si i també amb la taula tb_movie_person
- La taula tb_movie_person està relaciona amb la tb_person, amb la tb_movie i la tb_role
- La taula tb_movie està relaciona amb la tb_movie_person i la tb_gendre
- La taula tb_genre només està relacionada amb tb_movie
- La taula tb_role només està relacionada amb tb_movie_person

Exercici 2

Realitza la següent consulta sobre la base de dades acabada de crear:

Has d'obtenir el nom, el país i la data de naixement d'aquelles persones per les quals no consti una data de mort i ordenar les dades de la persona més vella a la persona més jove.

Primer de tot identifico en quines taules hi ha la informació que em demanen. En aquest cas, ho trobem tot a la mateixa taula, la de tb_person

In [19]:
```
display(person)
```

	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
0	1	Francis Ford Coppola	United States	1939-04-07	NaN	NaN	OS_SGAD	N
1	2	Carmine Coppola	United States	1945-07-08	NaN	NaN	OS_SGAD	N
2	3	Marlon Brando	United States	1924-04-03	2004-07-01	NaN	OS_SGAD	N
3	4	Robert Duvall	United States	1931-01-05	NaN	NaN	OS_SGAD	N
4	5	Martin Sheen	United States	1940-08-03	NaN	NaN	OS_SGAD	N
5	6	Harrison Ford	United States	1942-07-13	NaN	NaN	OS_SGAD	N
6	7	George Lucas	United States	1944-05-14	NaN	NaN	OS_SGAD	N
7	8	Gary Kurtz	United States	1940-07-27	NaN	NaN	OS_SGAD	N
8	9	Steven Spielberg	United States	1946-12-18	NaN	NaN	OS_SGAD	N
9	10	John Williams	United States	1928-08-08	NaN	NaN	OS_SGAD	N

	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
10	11	Tom Hanks	United States	1956-07-09	NaN	NaN	OS_SGAD	N
11	12	Catherine Zeta-Jones	Wales	1969-09-25	NaN	NaN	OS_SGAD	N
12	13	Alfred Joseph Hitchcock	United Kingdom	1899-08-13	1980-04-29	NaN	OS_SGAD	N
13	14	Anthony Perkins	United States	1934-04-04	1992-09-08	NaN	OS_SGAD	N
14	15	Vera Miles	United States	1929-08-23	NaN	NaN	OS_SGAD	N
15	16	Emilio Martinez Lazaro	Spain	1956-09-09	NaN	NaN	OS_SGAD	N
16	17	Dani Rovira	Spain	1984-07-01	NaN	NaN	OS_SGAD	N
17	18	Clara Lago	Spain	1986-04-17	NaN	NaN	OS_SGAD	N
18	19	Carmen Machi	Spain	1964-08-09	NaN	NaN	OS_SGAD	N
19	20	Karra Elejalde	Spain	1960-03-06	NaN	NaN	OS_SGAD	N
20	21	Daniel Sanchez Arevalo	Spain	1970-06-08	NaN	NaN	OS_SGAD	N
21	22	Quim Gutierrez	Spain	1981-03-27	NaN	NaN	OS_SGAD	N
22	23	Robert Alamo	Spain	1970-05-06	NaN	NaN	OS_SGAD	N
23	24	Hector Colome	Spain	1944-10-25	2015-02-28	NaN	OS_SGAD	N
24	25	Veronica Echegui	Spain	1983-03-14	NaN	NaN	OS_SGAD	N
25	26	Patrick Criado	Spain	1995-09-23	NaN	NaN	OS_SGAD	N
26	27	Sean Connery	Scotland	1930-07-08	NaN	NaN	OS_SGAD	N
27	28	Mel Gibson	Australia	1950-08-09	NaN	NaN	OS_SGAD	N
28	29	Morgan Freeman	United States	1935-10-01	NaN	NaN	OS_SGAD	N
29	30	Tim Robbins	United States	1949-06-07	NaN	NaN	OS_SGAD	N
30	41	Charlie Sheen	United States	1965-09-03	NaN	5.0	OS_SGAD	N
31	42	Emilio Estevez	United States	1962-05-12	NaN	5.0	OS_SGAD	N
32	43	RamÃ³n Estevez	United States	1963-08-07	NaN	5.0	OS_SGAD	N
33	44	ReneÃ© Estevez	United States	1967-04-02	NaN	5.0	OS_SGAD	N
34	45	Paula Speert Sheen	United States	1986-01-06	NaN	41.0	OS_SGAD	N
35	46	Bob Sheen	United States	2009-05-01	NaN	41.0	OS_SGAD	N
36	47	Max Sheen	United States	2009-05-01	NaN	41.0	OS_SGAD	N
37	48	Sam Sheen	United States	2004-03-09	NaN	41.0	OS_SGAD	N

	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
38	49	Lola Sheen	United States	2005-06-01	NaN	41.0	OS_SGAD	N
39	50	Paula Jones-Sheen	United States	2003-07-06	NaN	45.0	OS_SGAD	N
40	51	Paloma Rae Estevez	United States	1986-02-15	NaN	42.0	OS_SGAD	N
41	52	Taylor Levi Estevez	United States	1984-06-22	NaN	42.0	OS_SGAD	N

In [20]:

```
# Importo llibreria, que ja ho tinc fet al principi de tot i crido el dataset exacte amb e
import mysql.connector

mydb = mysql.connector.connect(
  host="localhost",
  user="root",
  password="Trenca9s!",
  database="movies"
)

movies = mydb.cursor()
```

In [21]:

```
# Procedeixo a seleccionar els atributs que necessito per a fer l'exercici
movies = mydb.cursor()  #cada vegada cridaré aquest mètode per no haver de reiniciar tot e

movies.execute("SELECT person_id, person_name, person_country, person_dob, person_dod FROM

resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Francis Ford Coppola', 'United States', datetime.date(1939, 4, 7), None)
(2, 'Carmine Coppola', 'United States', datetime.date(1945, 7, 8), None)
(3, 'Marlon Brando', 'United States', datetime.date(1924, 4, 3), datetime.date(2004, 7,
1))
(4, 'Robert Duvall', 'United States', datetime.date(1931, 1, 5), None)
(5, 'Martin Sheen', 'United States', datetime.date(1940, 8, 3), None)
(6, 'Harrison Ford', 'United States', datetime.date(1942, 7, 13), None)
(7, 'George Lucas', 'United States', datetime.date(1944, 5, 14), None)
(8, 'Gary Kurtz', 'United States', datetime.date(1940, 7, 27), None)
(9, 'Steven Spielberg', 'United States', datetime.date(1946, 12, 18), None)
(10, 'John Williams', 'United States', datetime.date(1928, 8, 8), None)
(11, 'Tom Hanks', 'United States', datetime.date(1956, 7, 9), None)
(12, 'Catherine Zeta-Jones', 'Wales', datetime.date(1969, 9, 25), None)
(13, 'Alfred Joseph Hitchcock', 'United Kingdom', datetime.date(1899, 8, 13), datetime.dat
e(1980, 4, 29))
(14, 'Anthony Perkins', 'United States', datetime.date(1934, 4, 4), datetime.date(1992, 9,
8))
(15, 'Vera Miles', 'United States', datetime.date(1929, 8, 23), None)
(16, 'Emilio Martinez Lazaro', 'Spain', datetime.date(1956, 9, 9), None)
(17, 'Dani Rovira', 'Spain', datetime.date(1984, 7, 1), None)
(18, 'Clara Lago', 'Spain', datetime.date(1986, 4, 17), None)
(19, 'Carmen Machi', 'Spain', datetime.date(1964, 8, 9), None)
(20, 'Karra Elejalde', 'Spain', datetime.date(1960, 3, 6), None)
(21, 'Daniel Sanchez Arevalo', 'Spain', datetime.date(1970, 6, 8), None)
(22, 'Quim Gutierrez', 'Spain', datetime.date(1981, 3, 27), None)
(23, 'Robert Alamo', 'Spain', datetime.date(1970, 5, 6), None)
(24, 'Hector Colome', 'Spain', datetime.date(1944, 10, 25), datetime.date(2015, 2, 28))
(25, 'Veronica Echegui', 'Spain', datetime.date(1983, 3, 14), None)
```

```
(26, 'Patrick Criado', 'Spain', datetime.date(1995, 9, 23), None)
(27, 'Sean Connery', 'Scotland', datetime.date(1930, 7, 8), None)
(28, 'Mel Gibson', 'Australia', datetime.date(1950, 8, 9), None)
(29, 'Morgan Freeman', 'United States', datetime.date(1935, 10, 1), None)
(30, 'Tim Robbins', 'United States', datetime.date(1949, 6, 7), None)
(41, 'Charlie Sheen', 'United States', datetime.date(1965, 9, 3), None)
(42, 'Emilio Estevez', 'United States', datetime.date(1962, 5, 12), None)
(43, 'Ramón Estevez', 'United States', datetime.date(1963, 8, 7), None)
(44, 'Reneé Estevez', 'United States', datetime.date(1967, 4, 2), None)
(45, 'Paula Speert Sheen', 'United States', datetime.date(1986, 1, 6), None)
(46, 'Bob Sheen', 'United States', datetime.date(2009, 5, 1), None)
(47, 'Max Sheen', 'United States', datetime.date(2009, 5, 1), None)
(48, 'Sam Sheen', 'United States', datetime.date(2004, 3, 9), None)
(49, 'Lola Sheen', 'United States', datetime.date(2005, 6, 1), None)
(50, 'Paula Jones-Sheen', 'United States', datetime.date(2003, 7, 6), None)
(51, 'Paloma Rae Estevez', 'United States', datetime.date(1986, 2, 15), None)
(52, 'Taylor Levi Estevez', 'United States', datetime.date(1984, 6, 22), None)
```

In [22]:

```
# Faig el mateix però triant les persones que encara són vives, per tant, que la data de m

movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

seleccio = "SELECT person_id, person_name, person_country, person_dob, person_dod FROM tb_

movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Francis Ford Coppola', 'United States', datetime.date(1939, 4, 7), None)
(2, 'Carmine Coppola', 'United States', datetime.date(1945, 7, 8), None)
(4, 'Robert Duvall', 'United States', datetime.date(1931, 1, 5), None)
(5, 'Martin Sheen', 'United States', datetime.date(1940, 8, 3), None)
(6, 'Harrison Ford', 'United States', datetime.date(1942, 7, 13), None)
(7, 'George Lucas', 'United States', datetime.date(1944, 5, 14), None)
(8, 'Gary Kurtz', 'United States', datetime.date(1940, 7, 27), None)
(9, 'Steven Spielberg', 'United States', datetime.date(1946, 12, 18), None)
(10, 'John Williams', 'United States', datetime.date(1928, 8, 8), None)
(11, 'Tom Hanks', 'United States', datetime.date(1956, 7, 9), None)
(12, 'Catherine Zeta-Jones', 'Wales', datetime.date(1969, 9, 25), None)
(15, 'Vera Miles', 'United States', datetime.date(1929, 8, 23), None)
(16, 'Emilio Martinez Lazaro', 'Spain', datetime.date(1956, 9, 9), None)
(17, 'Dani Rovira', 'Spain', datetime.date(1984, 7, 1), None)
(18, 'Clara Lago', 'Spain', datetime.date(1986, 4, 17), None)
(19, 'Carmen Machi', 'Spain', datetime.date(1964, 8, 9), None)
(20, 'Karra Elejalde', 'Spain', datetime.date(1960, 3, 6), None)
(21, 'Daniel Sanchez Arevalo', 'Spain', datetime.date(1970, 6, 8), None)
(22, 'Quim Gutierrez', 'Spain', datetime.date(1981, 3, 27), None)
(23, 'Robert Alamo', 'Spain', datetime.date(1970, 5, 6), None)
(25, 'Veronica Echegui', 'Spain', datetime.date(1983, 3, 14), None)
(26, 'Patrick Criado', 'Spain', datetime.date(1995, 9, 23), None)
(27, 'Sean Connery', 'Scotland', datetime.date(1930, 7, 8), None)
(28, 'Mel Gibson', 'Australia', datetime.date(1950, 8, 9), None)
(29, 'Morgan Freeman', 'United States', datetime.date(1935, 10, 1), None)
(30, 'Tim Robbins', 'United States', datetime.date(1949, 6, 7), None)
(41, 'Charlie Sheen', 'United States', datetime.date(1965, 9, 3), None)
(42, 'Emilio Estevez', 'United States', datetime.date(1962, 5, 12), None)
(43, 'Ramón Estevez', 'United States', datetime.date(1963, 8, 7), None)
(44, 'Reneé Estevez', 'United States', datetime.date(1967, 4, 2), None)
(45, 'Paula Speert Sheen', 'United States', datetime.date(1986, 1, 6), None)
(46, 'Bob Sheen', 'United States', datetime.date(2009, 5, 1), None)
(47, 'Max Sheen', 'United States', datetime.date(2009, 5, 1), None)
(48, 'Sam Sheen', 'United States', datetime.date(2004, 3, 9), None)
(49, 'Lola Sheen', 'United States', datetime.date(2005, 6, 1), None)
```

```
(50, 'Paula Jones-Sheen', 'United States', datetime.date(2003, 7, 6), None)
(51, 'Paloma Rae Estevez', 'United States', datetime.date(1986, 2, 15), None)
(52, 'Taylor Levi Estevez', 'United States', datetime.date(1984, 6, 22), None)
```

In [23]:

```
# Faig el mateix però ordenant la llista de la persona més vella a la persona més jove

movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

seleccio = "SELECT person_id, person_name, person_country, person_dob, person_dod FROM tb_

movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(10, 'John Williams', 'United States', datetime.date(1928, 8, 8), None)
(15, 'Vera Miles', 'United States', datetime.date(1929, 8, 23), None)
(27, 'Sean Connery', 'Scotland', datetime.date(1930, 7, 8), None)
(4, 'Robert Duvall', 'United States', datetime.date(1931, 1, 5), None)
(29, 'Morgan Freeman', 'United States', datetime.date(1935, 10, 1), None)
(1, 'Francis Ford Coppola', 'United States', datetime.date(1939, 4, 7), None)
(8, 'Gary Kurtz', 'United States', datetime.date(1940, 7, 27), None)
(5, 'Martin Sheen', 'United States', datetime.date(1940, 8, 3), None)
(6, 'Harrison Ford', 'United States', datetime.date(1942, 7, 13), None)
(7, 'George Lucas', 'United States', datetime.date(1944, 5, 14), None)
(2, 'Carmine Coppola', 'United States', datetime.date(1945, 7, 8), None)
(9, 'Steven Spielberg', 'United States', datetime.date(1946, 12, 18), None)
(30, 'Tim Robbins', 'United States', datetime.date(1949, 6, 7), None)
(28, 'Mel Gibson', 'Australia', datetime.date(1950, 8, 9), None)
(11, 'Tom Hanks', 'United States', datetime.date(1956, 7, 9), None)
(16, 'Emilio Martinez Lazaro', 'Spain', datetime.date(1956, 9, 9), None)
(20, 'Karra Elejalde', 'Spain', datetime.date(1960, 3, 6), None)
(42, 'Emilio Estevez', 'United States', datetime.date(1962, 5, 12), None)
(43, 'Ramón Estevez', 'United States', datetime.date(1963, 8, 7), None)
(19, 'Carmen Machi', 'Spain', datetime.date(1964, 8, 9), None)
(41, 'Charlie Sheen', 'United States', datetime.date(1965, 9, 3), None)
(44, 'Reneé Estevez', 'United States', datetime.date(1967, 4, 2), None)
(12, 'Catherine Zeta-Jones', 'Wales', datetime.date(1969, 9, 25), None)
(23, 'Robert Alamo', 'Spain', datetime.date(1970, 5, 6), None)
(21, 'Daniel Sanchez Arevalo', 'Spain', datetime.date(1970, 6, 8), None)
(22, 'Quim Gutierrez', 'Spain', datetime.date(1981, 3, 27), None)
(25, 'Veronica Echegui', 'Spain', datetime.date(1983, 3, 14), None)
(52, 'Taylor Levi Estevez', 'United States', datetime.date(1984, 6, 22), None)
(17, 'Dani Rovira', 'Spain', datetime.date(1984, 7, 1), None)
(45, 'Paula Speert Sheen', 'United States', datetime.date(1986, 1, 6), None)
(51, 'Paloma Rae Estevez', 'United States', datetime.date(1986, 2, 15), None)
(18, 'Clara Lago', 'Spain', datetime.date(1986, 4, 17), None)
(26, 'Patrick Criado', 'Spain', datetime.date(1995, 9, 23), None)
(50, 'Paula Jones-Sheen', 'United States', datetime.date(2003, 7, 6), None)
(48, 'Sam Sheen', 'United States', datetime.date(2004, 3, 9), None)
(49, 'Lola Sheen', 'United States', datetime.date(2005, 6, 1), None)
(46, 'Bob Sheen', 'United States', datetime.date(2009, 5, 1), None)
(47, 'Max Sheen', 'United States', datetime.date(2009, 5, 1), None)
```

Exercici 3

Realitza la següent consulta sobre la base de dades acabada de crear:

Has d'obtenir el nom del gènere i el nombre total de pel·lícules d'aquest gènere i ordenar-ho per ordre descendent de nombre total de pel·lícules.

Primer de tot identifico en quines taules hi ha la informació que em demanen. En aquest cas, necessito les taules tb_movie i tb_genre.

In [15]:
```
display(movie)
```

	movie_id	movie_title	movie_date	movie_format	movie_genre_id	created_by_user	created_date	updated_dat
0	1	Apocalypse Now	1979-05-10	Film	11	OS_SGAD	NaN	NaN
1	2	Star Wars:Episode IV - A New Hope	1977-05-25	Film	2	OS_SGAD	NaN	NaN
2	3	Indiana Jones and the Temple of Doom	1984-05-08	Film	1	OS_SGAD	NaN	NaN
3	4	The Terminal	2004-06-18	Digital	3	OS_SGAD	NaN	NaN
4	5	Jaws	1975-01-01	Film	10	OS_SGAD	NaN	NaN
5	6	ET The Extraterrestrial	1982-07-25	Film	5	OS_SGAD	NaN	NaN
6	7	Psycho	1960-05-06	Film	9	OS_SGAD	NaN	NaN
7	8	Ocho Apellidos Vascos	2014-03-14	Digital	3	OS_SGAD	NaN	NaN
8	9	Ocho Apellidos Catalanes	2016-06-09	Digital	8	OS_SGAD	NaN	NaN
9	10	El otro lado de la cama	2002-09-04	Digital	8	OS_SGAD	NaN	NaN
10	11	La Gran Familia EspaÃ±ola	2012-10-15	Digital	3	OS_SGAD	NaN	NaN
11	12	El dia de la bestia	1994-12-25	Film	1	OS_SGAD	NaN	NaN
12	13	Braveheart	1995-08-08	Film	4	OS_SGAD	NaN	NaN
13	14	The Shawshank Redemption	1992-01-07	Film	4	OS_SGAD	NaN	NaN
14	15	Las brujas de Zugarramurdi	2009-10-07	Digital	9	OS_SGAD	NaN	NaN
15	16	Blade Runner	1982-12-25	Digital	2	OS_SGAD	NaN	NaN

In [16]:
```
display(genre)
```

	genre_id	genre_name	created_by_user	created_date	updated_date

	genre_id	genre_name	created_by_user	created_date	updated_date
0	1	AcciÃ³n	OS_SGAD	NaN	NaN
1	2	Ciencia FicciÃ³n	OS_SGAD	NaN	NaN
2	3	Comedia	OS_SGAD	NaN	NaN
3	4	Drama	OS_SGAD	NaN	NaN
4	5	FantasÃa	apermag	NaN	NaN
5	6	Melodrama	apermag	2018-09-01	2018-09-27
6	7	Musical	OS_SGAD	NaN	NaN
7	8	Romance	OS_SGAD	NaN	NaN
8	9	Suspense	OS_SGAD	NaN	NaN
9	10	Terror	OS_SGAD	NaN	NaN
10	11	BÃ©lico	OS_SGAD	NaN	NaN

In [17]:

```
# Importo llibreria, que ja ho tinc fet al principi de tot i crido el dataset exacte amb e
import mysql.connector

mydb = mysql.connector.connect(
  host="localhost",
  user="root",
  password="Trenca9s!",
  database="movies"
)

movies = mydb.cursor()
```

In [18]:

```
# selecciono els atributs que vull de cada llista i els enllaço

movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

seleccio = "SELECT genre_id, genre_name FROM movies.tb_genre INNER JOIN movies.tb_movie WH


movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Acción')
(1, 'Acción')
(2, 'Ciencia Ficción')
(2, 'Ciencia Ficción')
(3, 'Comedia')
(3, 'Comedia')
(3, 'Comedia')
(4, 'Drama')
(4, 'Drama')
(5, 'Fantasía')
(8, 'Romance')
(8, 'Romance')
(9, 'Suspense')
(9, 'Suspense')
(10, 'Terror')
(11, 'Bélico')
```

In [19]:
```
#Procedim a contar quantes pel·lícules hi ha de cada gènere

movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

seleccio = "SELECT genre_id, genre_name, \
    COUNT(*) FROM movies.tb_genre \
    INNER JOIN movies.tb_movie \
    WHERE movies.tb_genre.genre_id = movies.tb_movie.movie_genre_id \
    GROUP BY movies.tb_genre.genre_name"\


movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Acción', 2)
(2, 'Ciencia Ficción', 2)
(3, 'Comedia', 3)
(4, 'Drama', 2)
(5, 'Fantasía', 1)
(8, 'Romance', 2)
(9, 'Suspense', 2)
(10, 'Terror', 1)
(11, 'Bélico', 1)
```

In [20]:
```
# Per últim, ordenem els gèneres per ordre descendent, és a dir, segons quantes pel·lícule

movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

seleccio = "SELECT genre_id, genre_name,\
    COUNT(*) as contador FROM movies.tb_genre \
    INNER JOIN movies.tb_movie ON movies.tb_genre.genre_id = movies.tb_movie.movie_genre_i
    GROUP BY movies.tb_genre.genre_name \
    ORDER BY contador desc"


movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(3, 'Comedia', 3)
(1, 'Acción', 2)
(2, 'Ciencia Ficción', 2)
(4, 'Drama', 2)
(8, 'Romance', 2)
(9, 'Suspense', 2)
(5, 'Fantasía', 1)
(10, 'Terror', 1)
(11, 'Bélico', 1)
```

Exercici 4

Realitza la següent consulta sobre la base de dades acabada de crear:

Has d'obtenir, per a cada persona, el seu nom i el nombre màxim de rols diferents que ha tingut en una mateixa pel·lícula.

Posteriorment, mostra únicament aquelles persones que hagin assumit més d'un rol en una mateixa pel·lícula.

Primer de tot identifico en quines taules hi ha la informació que em demanen. En aquest cas, necessito les taules tb_person, tb_movie, tb_movie_person i tb_role.

In [21]:
```
display(person)
```

	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
0	1	Francis Ford Coppola	United States	1939-04-07	NaN	NaN	OS_SGAD	N
1	2	Carmine Coppola	United States	1945-07-08	NaN	NaN	OS_SGAD	N
2	3	Marlon Brando	United States	1924-04-03	2004-07-01	NaN	OS_SGAD	N
3	4	Robert Duvall	United States	1931-01-05	NaN	NaN	OS_SGAD	N
4	5	Martin Sheen	United States	1940-08-03	NaN	NaN	OS_SGAD	N
5	6	Harrison Ford	United States	1942-07-13	NaN	NaN	OS_SGAD	N
6	7	George Lucas	United States	1944-05-14	NaN	NaN	OS_SGAD	N
7	8	Gary Kurtz	United States	1940-07-27	NaN	NaN	OS_SGAD	N
8	9	Steven Spielberg	United States	1946-12-18	NaN	NaN	OS_SGAD	N
9	10	John Williams	United States	1928-08-08	NaN	NaN	OS_SGAD	N
10	11	Tom Hanks	United States	1956-07-09	NaN	NaN	OS_SGAD	N
11	12	Catherine Zeta-Jones	Wales	1969-09-25	NaN	NaN	OS_SGAD	N
12	13	Alfred Joseph Hitchcock	United Kingdom	1899-08-13	1980-04-29	NaN	OS_SGAD	N
13	14	Anthony Perkins	United States	1934-04-04	1992-09-08	NaN	OS_SGAD	N
14	15	Vera Miles	United States	1929-08-23	NaN	NaN	OS_SGAD	N
15	16	Emilio Martinez Lazaro	Spain	1956-09-09	NaN	NaN	OS_SGAD	N
16	17	Dani Rovira	Spain	1984-07-01	NaN	NaN	OS_SGAD	N
17	18	Clara Lago	Spain	1986-04-17	NaN	NaN	OS_SGAD	N
18	19	Carmen Machi	Spain	1964-08-09	NaN	NaN	OS_SGAD	N
19	20	Karra Elejalde	Spain	1960-03-06	NaN	NaN	OS_SGAD	N
20	21	Daniel Sanchez Arevalo	Spain	1970-06-08	NaN	NaN	OS_SGAD	N

	person_id	person_name	person_country	person_dob	person_dod	person_parent_id	created_by_user	created_da
21	22	Quim Gutierrez	Spain	1981-03-27	NaN	NaN	OS_SGAD	N
22	23	Robert Alamo	Spain	1970-05-06	NaN	NaN	OS_SGAD	N
23	24	Hector Colome	Spain	1944-10-25	2015-02-28	NaN	OS_SGAD	N
24	25	Veronica Echegui	Spain	1983-03-14	NaN	NaN	OS_SGAD	N
25	26	Patrick Criado	Spain	1995-09-23	NaN	NaN	OS_SGAD	N
26	27	Sean Connery	Scotland	1930-07-08	NaN	NaN	OS_SGAD	N
27	28	Mel Gibson	Australia	1950-08-09	NaN	NaN	OS_SGAD	N
28	29	Morgan Freeman	United States	1935-10-01	NaN	NaN	OS_SGAD	N
29	30	Tim Robbins	United States	1949-06-07	NaN	NaN	OS_SGAD	N
30	41	Charlie Sheen	United States	1965-09-03	NaN	5.0	OS_SGAD	N
31	42	Emilio Estevez	United States	1962-05-12	NaN	5.0	OS_SGAD	N
32	43	RamÃ³n Estevez	United States	1963-08-07	NaN	5.0	OS_SGAD	N
33	44	ReneÃ© Estevez	United States	1967-04-02	NaN	5.0	OS_SGAD	N
34	45	Paula Speert Sheen	United States	1986-01-06	NaN	41.0	OS_SGAD	N
35	46	Bob Sheen	United States	2009-05-01	NaN	41.0	OS_SGAD	N
36	47	Max Sheen	United States	2009-05-01	NaN	41.0	OS_SGAD	N
37	48	Sam Sheen	United States	2004-03-09	NaN	41.0	OS_SGAD	N
38	49	Lola Sheen	United States	2005-06-01	NaN	41.0	OS_SGAD	N
39	50	Paula Jones-Sheen	United States	2003-07-06	NaN	45.0	OS_SGAD	N
40	51	Paloma Rae Estevez	United States	1986-02-15	NaN	42.0	OS_SGAD	N
41	52	Taylor Levi Estevez	United States	1984-06-22	NaN	42.0	OS_SGAD	N

In [22]:
```
display(movie)
```

	movie_id	movie_title	movie_date	movie_format	movie_genre_id	created_by_user	created_date	updated_dat
0	1	Apocalypse Now	1979-05-10	Film	11	OS_SGAD	NaN	Nal
1	2	Star Wars:Episode IV - A New Hope	1977-05-25	Film	2	OS_SGAD	NaN	Nal

	movie_id	movie_title	movie_date	movie_format	movie_genre_id	created_by_user	created_date	updated_dat
2	3	Indiana Jones and the Temple of Doom	1984-05-08	Film	1	OS_SGAD	NaN	NaN
3	4	The Terminal	2004-06-18	Digital	3	OS_SGAD	NaN	NaN
4	5	Jaws	1975-01-01	Film	10	OS_SGAD	NaN	NaN
5	6	ET The Extraterrestrial	1982-07-25	Film	5	OS_SGAD	NaN	NaN
6	7	Psycho	1960-05-06	Film	9	OS_SGAD	NaN	NaN
7	8	Ocho Apellidos Vascos	2014-03-14	Digital	3	OS_SGAD	NaN	NaN
8	9	Ocho Apellidos Catalanes	2016-06-09	Digital	8	OS_SGAD	NaN	NaN
9	10	El otro lado de la cama	2002-09-04	Digital	8	OS_SGAD	NaN	NaN
10	11	La Gran Familia EspaÃ±ola	2012-10-15	Digital	3	OS_SGAD	NaN	NaN
11	12	El dia de la bestia	1994-12-25	Film	1	OS_SGAD	NaN	NaN
12	13	Braveheart	1995-08-08	Film	4	OS_SGAD	NaN	NaN
13	14	The Shawshank Redemption	1992-01-07	Film	4	OS_SGAD	NaN	NaN
14	15	Las brujas de Zugarramurdi	2009-10-07	Digital	9	OS_SGAD	NaN	NaN
15	16	Blade Runner	1982-12-25	Digital	2	OS_SGAD	NaN	NaN

In [23]:
```
display(movie_person)
```

	movie_id	person_id	role_id	movie_award_ind	created_by_user	created_date	updated_date
0	1	1	2	Y	OS_SGAD	NaN	NaN
1	1	1	3	N	OS_SGAD	NaN	NaN
2	1	1	5	N	OS_SGAD	NaN	NaN
3	1	2	5	N	OS_SGAD	NaN	NaN
4	1	3	1	N	OS_SGAD	NaN	NaN
5	1	4	1	N	OS_SGAD	NaN	NaN
6	1	5	1	Y	OS_SGAD	NaN	NaN
7	1	6	1	N	OS_SGAD	NaN	NaN
8	1	41	1	N	OS_SGAD	NaN	NaN
9	2	6	1	N	OS_SGAD	NaN	NaN

	movie_id	person_id	role_id	movie_award_ind	created_by_user	created_date	updated_date
10	2	7	2	Y	OS_SGAD	NaN	NaN
11	2	8	3	N	OS_SGAD	NaN	NaN
12	3	6	1	N	OS_SGAD	NaN	NaN
13	3	7	1	N	OS_SGAD	NaN	NaN
14	3	7	4	N	OS_SGAD	NaN	NaN
15	3	9	2	N	OS_SGAD	NaN	NaN
16	3	10	5	N	OS_SGAD	NaN	NaN
17	4	9	2	N	OS_SGAD	NaN	NaN
18	4	9	3	N	OS_SGAD	NaN	NaN
19	4	11	1	N	OS_SGAD	NaN	NaN
20	4	12	1	N	OS_SGAD	NaN	NaN
21	5	9	2	N	OS_SGAD	NaN	NaN
22	6	9	2	N	OS_SGAD	NaN	NaN
23	7	13	1	N	OS_SGAD	NaN	NaN
24	7	13	2	N	OS_SGAD	NaN	NaN
25	7	13	3	N	OS_SGAD	NaN	NaN
26	7	14	2	N	OS_SGAD	NaN	NaN
27	7	15	2	N	OS_SGAD	NaN	NaN
28	8	16	2	N	OS_SGAD	NaN	NaN
29	8	17	1	N	OS_SGAD	NaN	NaN
30	8	18	1	N	OS_SGAD	NaN	NaN
31	8	19	1	N	OS_SGAD	NaN	NaN
32	8	20	1	N	OS_SGAD	NaN	NaN
33	9	16	2	N	OS_SGAD	NaN	NaN
34	9	17	1	N	OS_SGAD	NaN	NaN
35	9	18	1	N	OS_SGAD	NaN	NaN
36	9	19	1	N	OS_SGAD	NaN	NaN
37	9	20	1	N	OS_SGAD	NaN	NaN
38	10	16	2	N	OS_SGAD	NaN	NaN
39	11	21	2	N	OS_SGAD	NaN	NaN
40	11	21	4	N	OS_SGAD	NaN	NaN
41	11	22	1	N	OS_SGAD	NaN	NaN
42	11	23	1	N	OS_SGAD	NaN	NaN
43	11	24	1	N	OS_SGAD	NaN	NaN
44	11	25	1	N	OS_SGAD	NaN	NaN
45	11	26	1	N	OS_SGAD	NaN	NaN

	movie_id	person_id	role_id	movie_award_ind	created_by_user	created_date	updated_date
46	13	28	1	Y	OS_SGAD	NaN	NaN
47	13	28	2	N	OS_SGAD	NaN	NaN
48	14	29	1	N	OS_SGAD	NaN	NaN
49	14	30	1	N	OS_SGAD	NaN	NaN

In [24]:
```
display(role)
```

	role_id	role_name	created_by_user	created_date	updated_date
0	1	Actor	OS_SGAD	NaN	NaN
1	2	Director	OS_SGAD	NaN	NaN
2	3	Productor	OS_SGAD	NaN	NaN
3	4	Guionista	OS_SGAD	NaN	NaN
4	5	MÃºsica	OS_SGAD	NaN	NaN

In [25]:
```
# Importo llibreria, que ja ho tinc fet al principi de tot i crido el dataset exacte amb e
import mysql.connector

mydb = mysql.connector.connect(
  host="localhost",
  user="root",
  password="Trenca9s!",
  database="movies"
)

movies = mydb.cursor()
```

In [26]:
```
# aquí veiem el codi per fer la primera part de l'exercici, he creat contadors, i he fet t

movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

seleccio = "SELECT query_1.person_id, query_1.person_name, MAX(contador_rols) FROM (\
        SELECT p.person_id, p.person_name, m.movie_id, m.movie_title, count(*) AS contador
        FROM tb_person p\
        INNER JOIN tb_movie_person mp ON p.person_id = mp.person_id\
        INNER JOIN tb_movie m ON mp.movie_id = m.movie_id \
        INNER JOIN tb_role r ON mp.role_id = r.role_id\
        GROUP BY p.person_id, m.movie_id\
        ORDER BY person_id, contador_rols desc) query_1\
    GROUP BY query_1.person_id"

movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Francis Ford Coppola', 3)
(2, 'Carmine Coppola', 1)
(3, 'Marlon Brando', 1)
(4, 'Robert Duvall', 1)
(5, 'Martin Sheen', 1)
(6, 'Harrison Ford', 1)
```

```
(7, 'George Lucas', 2)
(8, 'Gary Kurtz', 1)
(9, 'Steven Spielberg', 2)
(10, 'John Williams', 1)
(11, 'Tom Hanks', 1)
(12, 'Catherine Zeta-Jones', 1)
(13, 'Alfred Joseph Hitchcock', 3)
(14, 'Anthony Perkins', 1)
(15, 'Vera Miles', 1)
(16, 'Emilio Martinez Lazaro', 1)
(17, 'Dani Rovira', 1)
(18, 'Clara Lago', 1)
(19, 'Carmen Machi', 1)
(20, 'Karra Elejalde', 1)
(28, 'Mel Gibson', 2)
(29, 'Morgan Freeman', 1)
(30, 'Tim Robbins', 1)
(41, 'Charlie Sheen', 1)
```

In [27]:

```
# aquí veiem el codi per quedar-nos només amb les persones que tenen més d'un rol en una r

movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

seleccio = "SELECT query_1.person_id, query_1.person_name, MAX(contador_rols) FROM (\
        SELECT p.person_id, p.person_name, m.movie_id, m.movie_title, count(*) AS contador
        FROM tb_person p\
        INNER JOIN tb_movie_person mp ON p.person_id = mp.person_id\
        INNER JOIN tb_movie m ON mp.movie_id = m.movie_id \
        INNER JOIN tb_role r ON mp.role_id = r.role_id\
        GROUP BY p.person_id, m.movie_id\
        HAVING contador_rols > 1\
        ORDER BY person_id, contador_rols desc) query_1\
    GROUP BY query_1.person_id"

movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Francis Ford Coppola', 3)
(7, 'George Lucas', 2)
(9, 'Steven Spielberg', 2)
(13, 'Alfred Joseph Hitchcock', 3)
(28, 'Mel Gibson', 2)
```

Exercici 5

Realitza la següent operació sobre la base de dades acabada de crear:

Has de crear un nou gènere anomenat "Documental" el qual tingui com a identificador el nombre 69.

In [24]:

```
# Importo llibreria, que ja ho tinc fet al principi de tot i crido el dataset exacte amb e
import mysql.connector

mydb = mysql.connector.connect(
  host="localhost",
  user="root",
```

```
  password="Trenca9s!",
  database="movies"
)

movies = mydb.cursor()
```

In [25]:
```
# imprimeixo les columnes de la taula on vull introduir el nou gènere per saber quina info

genre.columns
```

Out[25]:
```
Index(['genre_id', 'genre_name', 'created_by_user', 'created_date',
       'updated_date'],
      dtype='object')
```

In [26]:
```
movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

insertar ="INSERT INTO movies.tb_genre (genre_id, genre_name, created_by_user, created_dat
valors = ("69", "Documental", "Anna Masó", "2022,07,13", "2022,07,13")

movies.execute(insertar, valors)
mydb.commit()
print(movies.rowcount, "record inserted.")
```

```
1 record inserted.
```

In [27]:
```
movies = mydb.cursor()

seleccio = "SELECT * FROM movies.tb_genre"

movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Acción', 'OS_SGAD', None, None)
(2, 'Ciencia Ficción', 'OS_SGAD', None, None)
(3, 'Comedia', 'OS_SGAD', None, None)
(4, 'Drama', 'OS_SGAD', None, None)
(5, 'Fantasía', 'apermag', None, None)
(6, 'Melodrama', 'apermag', datetime.date(2018, 9, 1), datetime.date(2018, 9, 27))
(7, 'Musical', 'OS_SGAD', None, None)
(8, 'Romance', 'OS_SGAD', None, None)
(9, 'Suspense', 'OS_SGAD', None, None)
(10, 'Terror', 'OS_SGAD', None, None)
(11, 'Bélico', 'OS_SGAD', None, None)
(69, 'Documental', 'Anna Masó', datetime.date(2022, 7, 13), datetime.date(2022, 7, 13))
```

Exercici 6

Fes la següent operació sobre la base de dades acabada de crear:

Elimina la pel·lícula "La Gran Familia Española" de la base de dades.

In [32]:
```
# Importo llibreria, que ja ho tinc fet al principi de tot i crido el dataset exacte amb e
import mysql.connector
```

```
mydb = mysql.connector.connect(
  host="localhost",
  user="root",
  password="Trenca9s!",
  database="movies"
)

movies = mydb.cursor()
```

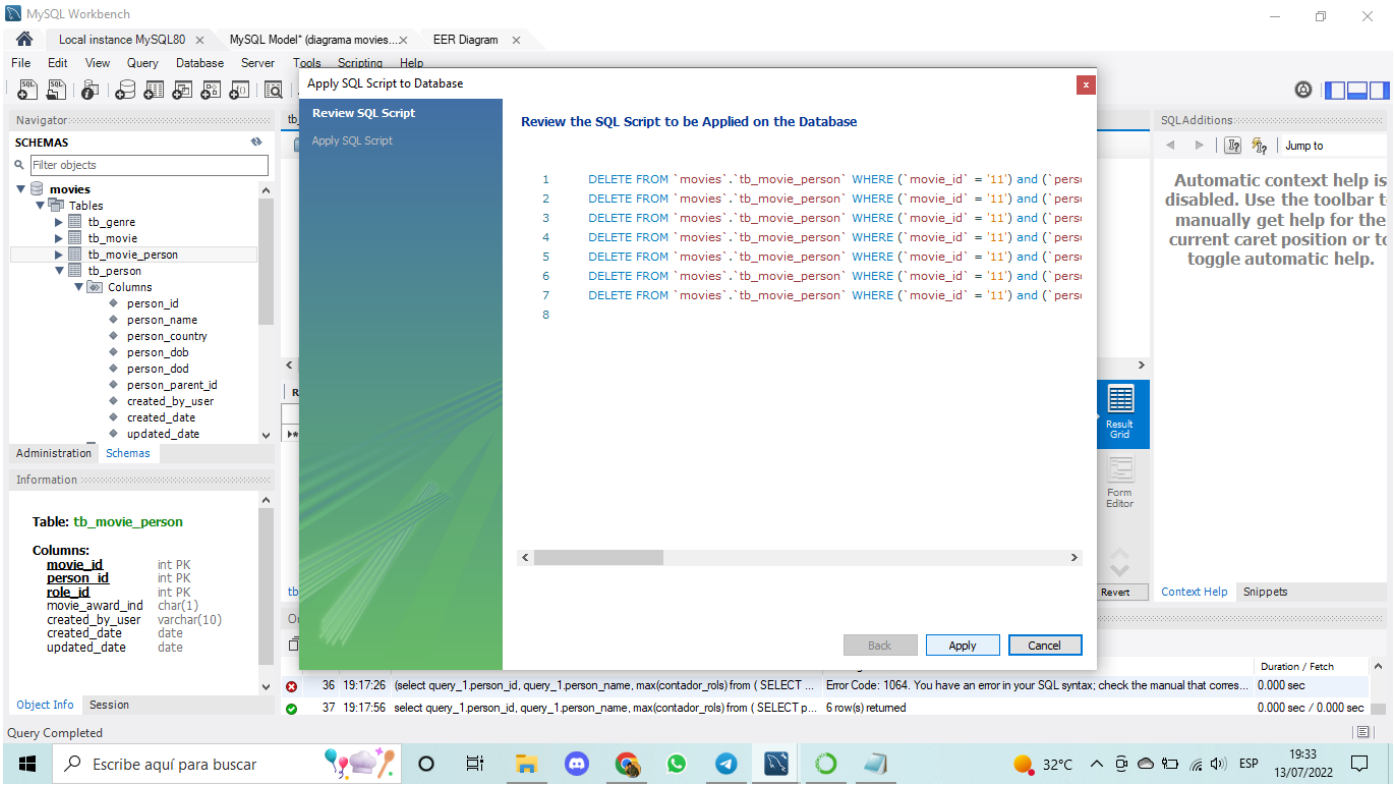
In [33]:

```
movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

#eliminar ="DELETE FROM movies.tb_movie WHERE movie_title = 'La Gran Familia Española'"
#valors = ("La Gran Familia Española")

#movies.execute(eliminar)
#mydb.commit()
#print(movies.rowcount, "valor eliminat.")
'''
Fent-ho així em sortia el següent error:
IntegrityError: 1451 (23000): Cannot delete or update a parent row: a foreign key constrai

Per tant, primer haig d'eliminar les conexions en altres taules que formen part de la pel
'''
```

Out[33]:

```
"\nFent-ho així em sortia el següent error:\nIntegrityError: 1451 (23000): Cannot delete o
r update a parent row: a foreign key constraint fails (`movies`.`tb_movie_person`, CONSTRA
INT `fk_movper_movie` FOREIGN KEY (`movie_id`) REFERENCES `tb_movie` (`movie_id`)) \n\nPer
tant, primer haig d'eliminar les conexions en altres taules que formen part de la pel·lícu
la en qüestió\n"
```

He eliminat les columnes anteriors a través del MySQL workbench (adjunto foto)



In [34]:

```
# Ara sí que puc eliminar la película
movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

eliminar ="DELETE FROM movies.tb_movie WHERE movie_title = 'La Gran Familia Española'"
#valors = ("La Gran Familia Española")

movies.execute(eliminar)
```

```
mydb.commit()
print(movies.rowcount, "valor eliminat.")
```

```
1 valor eliminat.
```

In [35]:

```
movies = mydb.cursor()

seleccio = "SELECT * FROM movies.tb_movie"

movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Apocalypse Now', datetime.date(1979, 5, 10), 'Film', 11, 'OS_SGAD', None, None)
(2, 'Star Wars:Episode IV - A New Hope', datetime.date(1977, 5, 25), 'Film', 2, 'OS_SGAD',
None, None)
(3, 'Indiana Jones and the Temple of Doom', datetime.date(1984, 5, 8), 'Film', 1, 'OS_SGA
D', None, None)
(4, 'The Terminal', datetime.date(2004, 6, 18), 'Digital', 3, 'OS_SGAD', None, None)
(5, 'Jaws', datetime.date(1975, 1, 1), 'Film', 10, 'OS_SGAD', None, None)
(6, 'ET The Extraterrestrial', datetime.date(1982, 7, 25), 'Film', 5, 'OS_SGAD', None, Non
e)
(7, 'Psycho', datetime.date(1960, 5, 6), 'Film', 9, 'OS_SGAD', None, None)
(8, 'Ocho Apellidos Vascos', datetime.date(2014, 3, 14), 'Digital', 3, 'OS_SGAD', None, No
ne)
(9, 'Ocho Apellidos Catalanes', datetime.date(2016, 6, 9), 'Digital', 8, 'OS_SGAD', None,
None)
(10, 'El otro lado de la cama', datetime.date(2002, 9, 4), 'Digital', 8, 'OS_SGAD', None,
None)
(12, 'El dia de la bestia', datetime.date(1994, 12, 25), 'Film', 1, 'OS_SGAD', None, None)
(13, 'Braveheart', datetime.date(1995, 8, 8), 'Film', 4, 'OS_SGAD', None, None)
(14, 'The Shawshank Redemption', datetime.date(1992, 1, 7), 'Film', 4, 'OS_SGAD', None, No
ne)
(15, 'Las brujas de Zugarramurdi', datetime.date(2009, 10, 7), 'Digital', 9, 'OS_SGAD', No
ne, None)
(16, 'Blade Runner', datetime.date(1982, 12, 25), 'Digital', 2, 'OS_SGAD', None, None)
```

Exercici 7

Realitza la següent operació sobre la base de dades acabada de crear:

Canvia el gènere de la pel·lícula "Ocho apellidos catalanes" perquè consti com a comèdia i no com a romàntica.

In [29]:

```
# Importo llibreria, que ja ho tinc fet al principi de tot i crido el dataset exacte amb e
import mysql.connector

mydb = mysql.connector.connect(
  host="localhost",
  user="root",
  password="Trenca9s!",
  database="movies"
)

movies = mydb.cursor()
```

In [33]:
```
movies = mydb.cursor()  #cada vegada crido aquest mètode per no haver de reiniciar tot el

modificar ="UPDATE tb_movie SET movie_genre_id = 3 WHERE movie_id = 9"

movies.execute(modificar)
mydb.commit()
print(movies.rowcount, "record updated")
```

```
0 record updated
```

In [34]:
```
movies = mydb.cursor()

seleccio = "SELECT * FROM movies.tb_movie"

movies.execute(seleccio)
resultat = movies.fetchall()

for x in resultat:
  print(x)
```

```
(1, 'Apocalypse Now', datetime.date(1979, 5, 10), 'Film', 11, 'OS_SGAD', None, None)
(2, 'Star Wars:Episode IV - A New Hope', datetime.date(1977, 5, 25), 'Film', 2, 'OS_SGAD',
None, None)
(3, 'Indiana Jones and the Temple of Doom', datetime.date(1984, 5, 8), 'Film', 1, 'OS_SGA
D', None, None)
(4, 'The Terminal', datetime.date(2004, 6, 18), 'Digital', 3, 'OS_SGAD', None, None)
(5, 'Jaws', datetime.date(1975, 1, 1), 'Film', 10, 'OS_SGAD', None, None)
(6, 'ET The Extraterrestrial', datetime.date(1982, 7, 25), 'Film', 5, 'OS_SGAD', None, Non
e)
(7, 'Psycho', datetime.date(1960, 5, 6), 'Film', 9, 'OS_SGAD', None, None)
(8, 'Ocho Apellidos Vascos', datetime.date(2014, 3, 14), 'Digital', 3, 'OS_SGAD', None, No
ne)
(9, 'Ocho Apellidos Catalanes', datetime.date(2016, 6, 9), 'Digital', 3, 'OS_SGAD', None,
None)
(10, 'El otro lado de la cama', datetime.date(2002, 9, 4), 'Digital', 8, 'OS_SGAD', None,
None)
(12, 'El dia de la bestia', datetime.date(1994, 12, 25), 'Film', 1, 'OS_SGAD', None, None)
(13, 'Braveheart', datetime.date(1995, 8, 8), 'Film', 4, 'OS_SGAD', None, None)
(14, 'The Shawshank Redemption', datetime.date(1992, 1, 7), 'Film', 4, 'OS_SGAD', None, No
ne)
(15, 'Las brujas de Zugarramurdi', datetime.date(2009, 10, 7), 'Digital', 9, 'OS_SGAD', No
ne, None)
(16, 'Blade Runner', datetime.date(1982, 12, 25), 'Digital', 2, 'OS_SGAD', None, None)
```

In [ ]:
```

```