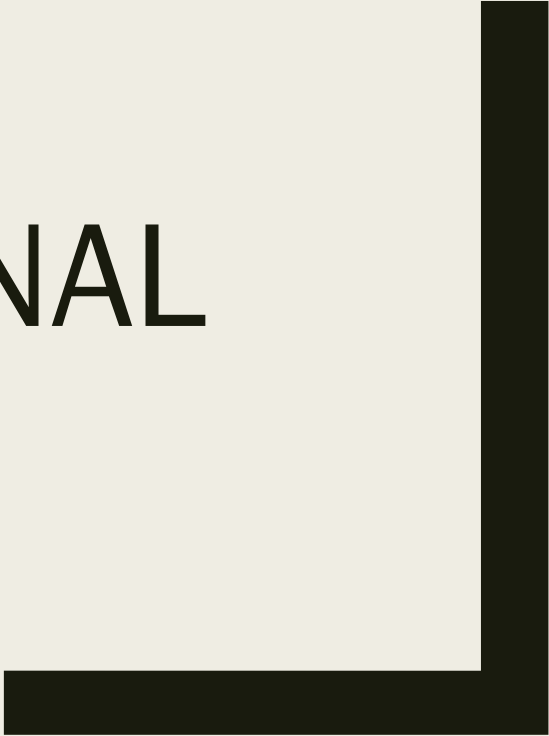




# PROYECTO FINAL

Fundamentos de Bases de Datos

Carlos Iván Montero Torres

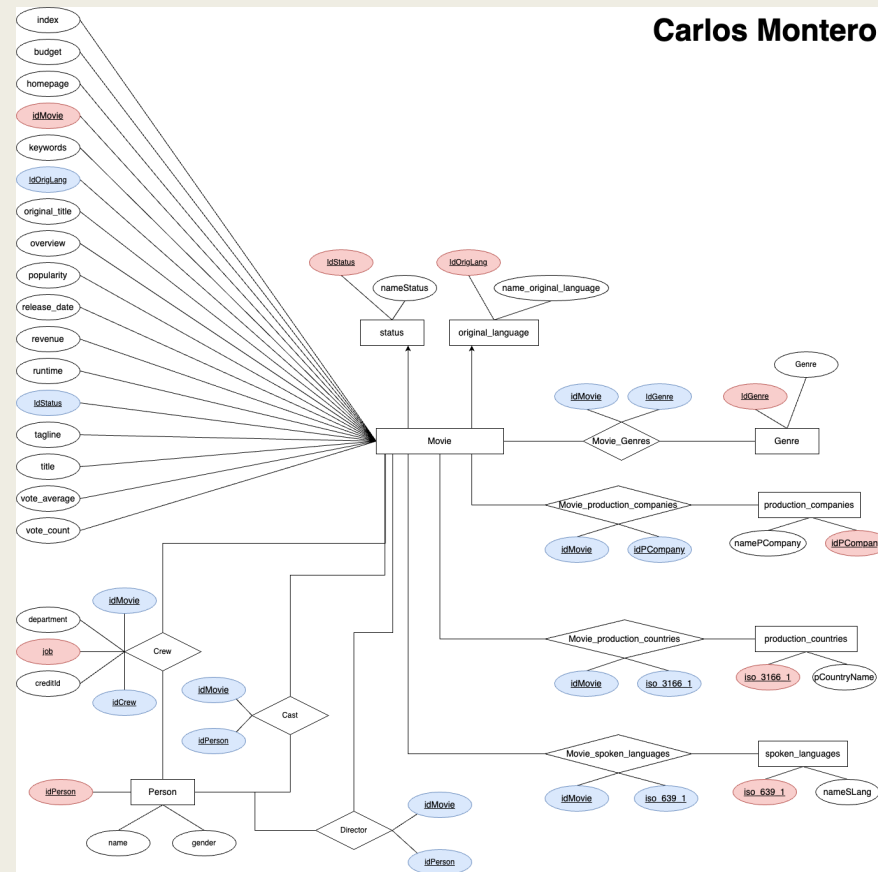


MODELOS

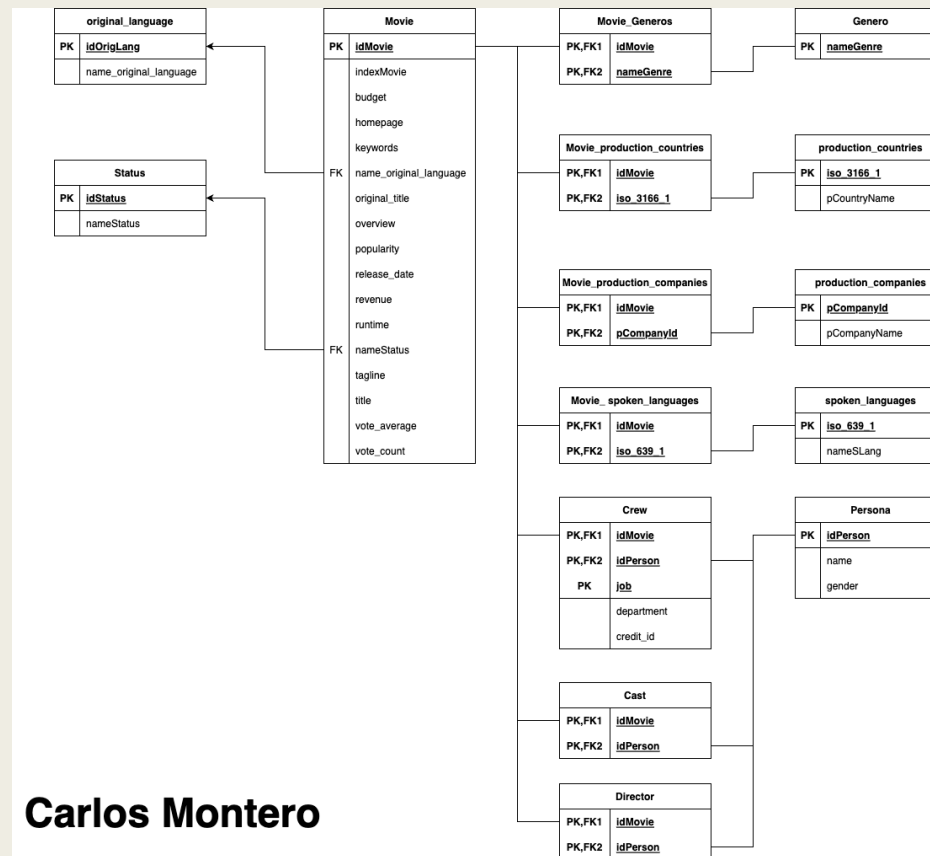


# MODELO CONCEPTUAL

Carlos Montero

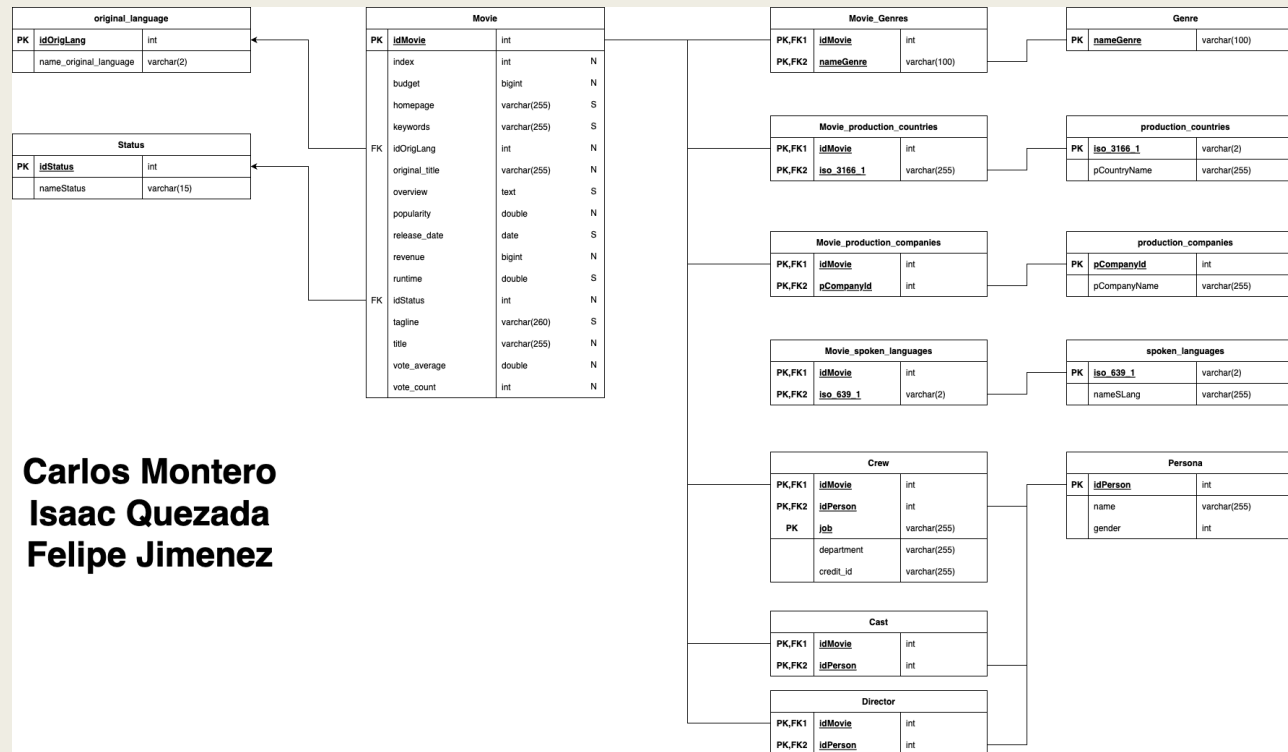


# MODELO LOGICO



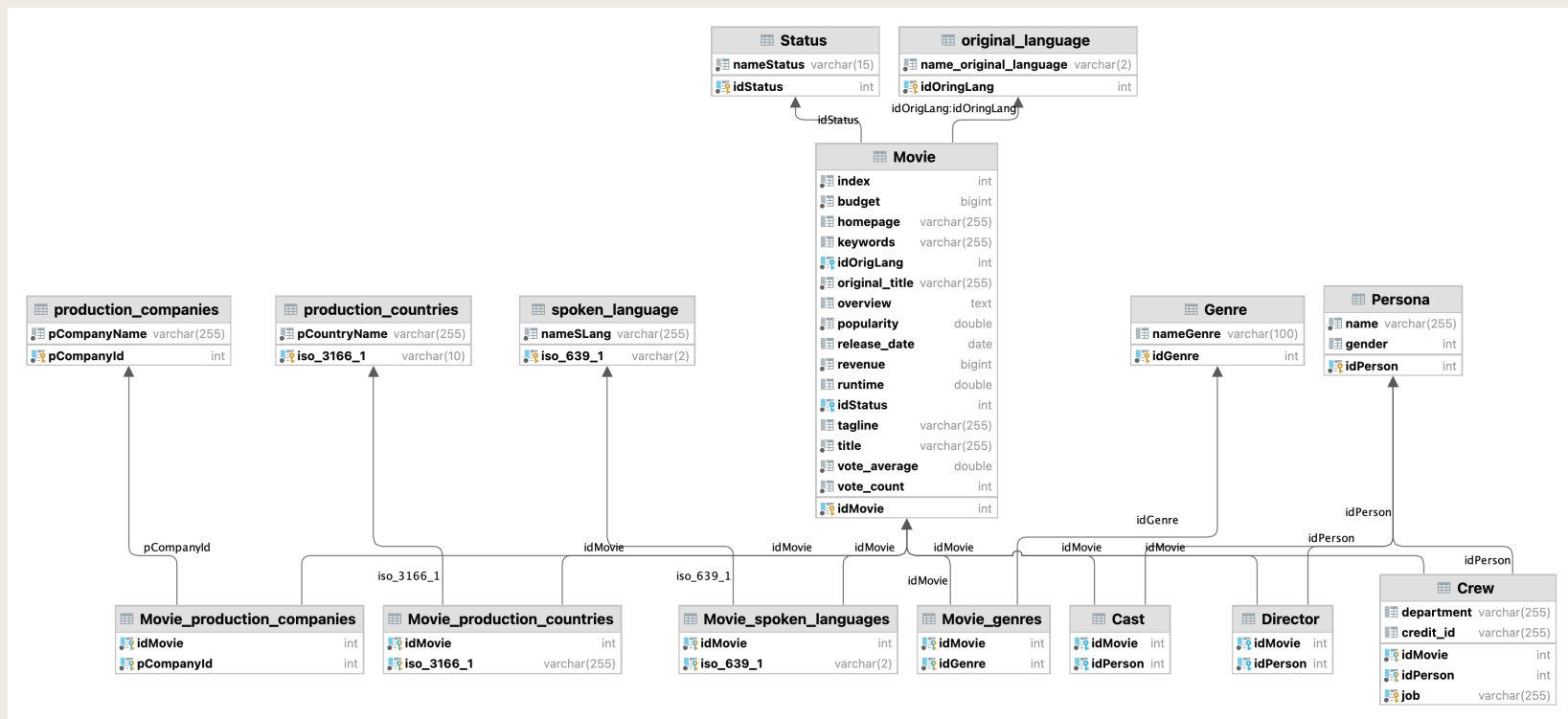
Carlos Montero

# MODELO FISICO



Carlos Montero  
Isaac Quezada  
Felipe Jimenez

# MODELO FISICO



# LIMPIEZA “CREW”

```
● ● ● LIMPIEZA CREW

SELECT id,
JSON_VALID(CONVERT (
REPLACE(REPLACE(REPLACE(REPLACE(REPLACE(REPLACE(crew,
'', '\'),
'{', '{'),
'\': \', ': '),
\, \, ', '),
\': ', ': '),
', \', ', ')
USING UTF8mb4 )) AS Valid_YN,
CONVERT (
REPLACE(REPLACE(REPLACE(REPLACE(REPLACE(crew,
'', '\'),
'{', '{'),
'\': \', ': '),
\, \, ', '),
\': ', ': '),
', \', ', ')
USING UTF8mb4 ) AS crew_new,
crew AS crew_old
FROM movie_dataset ;
```

# CREACION DE TABLAS

```
CREATE TABLE original_language(  
    idOringLang INT AUTO_INCREMENT PRIMARY KEY NOT NULL,  
    name_original_language VARCHAR(2) NOT NULL  
);  
  
CREATE TABLE Status(  
    idStatus INT AUTO_INCREMENT PRIMARY KEY NOT NULL,  
    nameStatus VARCHAR(15) NOT NULL  
);
```



# CREACION DE TABLAS

```
CREATE TABLE Movie(  
  idMovie INT PRIMARY KEY NOT NULL,  
  `index` INT NOT NULL ,  
  budget BIGINT NOT NULL,  
  homepage VARCHAR(255),  
  keywords VARCHAR(255),  
  idOrigLang INT NOT NULL,  
  original_title VARCHAR(255) NOT NULL,  
  overview TEXT,  
  popularity DOUBLE NOT NULL,  
  release_date DATE,  
  revenue BIGINT NOT NULL,  
  runtime DOUBLE,  
  idStatus INT NOT NULL,  
  tagline VARCHAR(255),  
  title VARCHAR(255) NOT NULL,  
  vote_average DOUBLE NOT NULL,  
  vote_count INT NOT NULL,  
  FOREIGN KEY (idOrigLang) REFERENCES original_language(idOringLang),  
  FOREIGN KEY (idStatus) REFERENCES status(idStatus)  
);
```

# CREACION DE TABLAS

```
CREATE TABLE production_countries(  
    iso_3166_1 VARCHAR(10) PRIMARY KEY NOT NULL,  
    pCountryName VARCHAR(255) NOT NULL  
);  
  
CREATE TABLE production_companies(  
    pCompanyId INT PRIMARY KEY NOT NULL,  
    pCompanyName VARCHAR(255) NOT NULL  
);  
  
CREATE TABLE spoken_language(  
    iso_639_1 VARCHAR(2) PRIMARY KEY NOT NULL,  
    nameSLang VARCHAR(255) NOT NULL  
);
```

# CREACION DE TABLAS

```
CREATE TABLE Movie_production_countries(  
    idMovie INT NOT NULL,  
    iso_3166_1 VARCHAR(255) NOT NULL,  
    PRIMARY KEY (idMovie, iso_3166_1),  
    FOREIGN KEY (idMovie) REFERENCES Movie(idMovie),  
    FOREIGN KEY (iso_3166_1) REFERENCES production_countries(iso_3166_1)  
);  
  
CREATE TABLE Movie_production_companies(  
    idMovie INT NOT NULL,  
    pCompanyId INT NOT NULL,  
    PRIMARY KEY (idMovie, pCompanyId),  
    FOREIGN KEY (idMovie) REFERENCES Movie(idMovie),  
    FOREIGN KEY (pCompanyId) REFERENCES production_companies(pCompanyId)  
);  
  
CREATE TABLE Movie_spoken_languages(  
    idMovie INT NOT NULL,  
    iso_639_1 VARCHAR(2) NOT NULL,  
    PRIMARY KEY (idMovie, iso_639_1),  
    FOREIGN KEY (idMovie) REFERENCES Movie(idMovie),  
    FOREIGN KEY (iso_639_1) REFERENCES spoken_language(iso_639_1)  
);
```

# CREACION DE TABLAS

```
CREATE TABLE Persona(  
    idCrew INT PRIMARY KEY NOT NULL,  
    name VARCHAR(255) NOT NULL,  
    gender INT  
);
```

```
CREATE TABLE Movie_Persona(  
    idMovie INT NOT NULL,  
    idCrew INT NOT NULL,  
    job VARCHAR(255) NOT NULL,  
    department VARCHAR(255),  
    credit_id VARCHAR(255),  
    PRIMARY KEY (idMovie, idCrew, job),  
    FOREIGN KEY (idMovie) REFERENCES Movie(idMovie),  
    FOREIGN KEY (idCrew) REFERENCES Persona(idCrew)  
);
```

# CURSORES & PROCEDURES

```
#####  
# original_language  
  
DROP PROCEDURE IF EXISTS TablaOriginalLanguage;  
  
DELIMITER $$  
CREATE PROCEDURE TablaOriginalLanguage()  
BEGIN  
  
    DECLARE done INT DEFAULT FALSE;  
    DECLARE nameOL VARCHAR(2);  
  
    -- Declarar el cursor  
    DECLARE CursorOL CURSOR FOR  
        SELECT DISTINCT original_language AS names from movie_dataset;  
  
    -- Declarar el handler para NOT FOUND (esto es marcar cuando el cursor ha  
    llegado a su fin)  
    DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;
```

# CURSORES & PROCEDURES

```
-- Abrir el cursor
OPEN CursorOL;
CursorOL_loop: LOOP
    FETCH CursorOL INTO nameOL;

-- Si alcanzo el final del cursor entonces salir del ciclo repetitivo
    IF done THEN
        LEAVE CursorOL_loop;
    END IF;

    SET @_oStatement = CONCAT('INSERT INTO original_language
(name_original_language) VALUES (\'',
nameOL, '\');');
    PREPARE sent1 FROM @_oStatement;
    EXECUTE sent1;
    DEALLOCATE PREPARE sent1;

END LOOP;
CLOSE CursorOL;
END $$
DELIMITER ;
```

```
CALL TablaOriginalLanguage();
SELECT * FROM original_language;
```

# CURSORES & PROCEDURES

```
DELIMITER $$
CREATE PROCEDURE TablaMovie()
BEGIN

DECLARE done INT DEFAULT FALSE;

DECLARE Mov_idMovie INT;
DECLARE Mov_index INT;
DECLARE Mov_budget BIGINT;
DECLARE Mov_homepage VARCHAR(255);
DECLARE Mov_keywords VARCHAR(255);
DECLARE Mov_name_original_language VARCHAR(2);
DECLARE Mov_original_title VARCHAR(255);
DECLARE Mov_overview TEXT;
DECLARE Mov_popularity DOUBLE;
DECLARE Mov_release_date DATE;
DECLARE Mov_revenue BIGINT;
DECLARE Mov_runtime DOUBLE;
DECLARE Mov_nameStatus VARCHAR(15);
DECLARE Mov_tagline VARCHAR(255);
DECLARE Mov_title VARCHAR(255);
DECLARE Mov_vote_average DOUBLE;
DECLARE Mov_vote_count INT;

DECLARE Status_idStatus int;
DECLARE OL_idOriginal_language int;
```



# CURSORES & PROCEDURES

```
-- Declarar el cursor
DECLARE CursorMovie CURSOR FOR
    SELECT id, `index`, budget, homepage, keywords, original_language,
    original_title, overview,
           popularity, release_date, revenue, runtime, `status`, tagline,
    title,
           vote_average, vote_count FROM movie_dataset;

-- Declarar el handler para NOT FOUND (esto es marcar cuando el cursor ha
llegado a su fin)
DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

-- Abrir el cursor
OPEN CursorMovie;
CursorMovie_loop: LOOP
    FETCH CursorMovie INTO Mov_idMovie, Mov_index, Mov_budget, Mov_homepage,
    Mov_keywords, Mov_name_original_language,
           Mov_original_title, Mov_overview, Mov_popularity, Mov_release_date,
    Mov_revenue, Mov_runtime,
           Mov_nameStatus, Mov_tagline, Mov_title, Mov_vote_average,
    Mov_vote_count;

    -- Si alcanzo el final del cursor entonces salir del ciclo repetitivo
    IF done THEN
        LEAVE CursorMovie_loop;
    END IF;

    SELECT `idStatus` INTO Status_idStatus FROM Status WHERE nameStatus =
    Mov_nameStatus;
```



# CURSORES & PROCEDURES

```
SELECT `idOrigLang` INTO OL_idOriginal_language FROM original_language
WHERE name_original_language = Mov_name_original_language;

INSERT INTO Movie
(`idMovie`, `index`, budget, homepage, keywords, idOrigLang, original_title, overview,
popularity, release_date, revenue, runtime, idStatus,
tagline, title, vote_average, vote_count)
VALUES (Mov_idMovie, Mov_index, Mov_budget, Mov_homepage,
Mov_keywords, OL_idOriginal_language,
Mov_original_title, Mov_overview, Mov_popularity, Mov_release_date,
Mov_revenue, Mov_runtime,
Status_idStatus, Mov_tagline, Mov_title, Mov_vote_average,
Mov_vote_count);

END LOOP;
CLOSE CursorMovie;
END $$
DELIMITER ;

CALL TablaMovie ();

SELECT * FROM Movie;
```

# CURSORES & PROCEDURES

```
DROP PROCEDURE IF EXISTS TablaMovie_production_countries;

DELIMITER $$
CREATE PROCEDURE TablaMovie_production_countries ()
BEGIN

    DECLARE done INT DEFAULT FALSE;
    DECLARE idMovie int;
    DECLARE idProdCoun text;
    DECLARE idJSON text;
    DECLARE i INT;

    -- Declarar el cursor
    DECLARE myCursor
    CURSOR FOR
        SELECT id, production_countries FROM movie_dataset;

    -- Declarar el handler para NOT FOUND (esto es marcar cuando el cursor ha
    -- llegado a su fin)
    DECLARE CONTINUE HANDLER
    FOR NOT FOUND SET done = TRUE ;

    -- Abrir el cursor
    OPEN myCursor ;

    drop table if exists MovieProdCompTemp;

    SET @sql_text = 'CREATE TABLE MovieProdCompTemp ( id int, idGenre
varchar(255) );';
    PREPARE stmt FROM @sql_text;
    EXECUTE stmt;
    DEALLOCATE PREPARE stmt;
```

# CURSORES & PROCEDURES

```
cursorLoop: LOOP

    FETCH myCursor INTO idMovie, idProdCoun;

    -- Controlador para buscar cada uno de los arrays
    SET i = 0;

    -- Si alcanzo el final del cursor entonces salir del ciclo repetitivo
    IF done THEN
        LEAVE cursorLoop ;
    END IF ;

    WHILE (JSON_EXTRACT(idProdCoun, CONCAT('$[', i, '].iso_3166_1')) IS NOT
NULL) DO

        SET idJSON = JSON_EXTRACT(idProdCoun,  CONCAT('$[', i, '].iso_3166_1')) ;
        SET i = i + 1;

        SET @sql_text = CONCAT('INSERT INTO MovieProdCompTemp VALUES (', idMovie,
', ', REPLACE(idJSON, '\'', ''), '); ');
        PREPARE stmt FROM @sql_text;
        EXECUTE stmt;
```

# CURSORES & PROCEDURES

```
DEALLOCATE PREPARE stmt;

END WHILE;

END LOOP ;

select distinct * from MovieProdCompTemp;
INSERT INTO Movie_production_countries
SELECT DISTINCT id, idGenre
FROM MovieProdCompTemp;
drop table if exists MovieProdCompTemp;
CLOSE myCursor ;

END$$
DELIMITER ;

call TablaMovie_production_countries();

SELECT COUNT(*) FROM Movie_production_countries;
```

# POBLACIÓN DE TABLAS



# Población de tablas

MoviesProjectBaseDeDats		idMovie	idPerson	job	department	credit_id
tables 17	1	5	138	Director	Directing	52fe420dc3a36847f800013f
Cast	2	5	138	Executive Producer	Production	52fe420dc3a36847f800014b
Crew	3	5	138	Writer	Writing	52fe420dc3a36847f80001db
Director	4	5	156	Editor	Editing	52fe420dc3a36847f8000205
directorTemp	5	5	2294	Director	Directing	52fe420dc3a36847f8000139
Genre	6	5	2294	Editor	Editing	52fe420dc3a36847f800020b
Movie	7	5	2294	Writer	Writing	52fe420dc3a36847f80001d5
movie_dataset	8	5	2545	Producer	Production	52fe420dc3a36847f8000145
Movie_genres	9	5	3110	Director	Directing	52fe420dc3a36847f800012d
Movie_production_compa	10	5	3110	Writer	Writing	52fe420dc3a36847f80001c9
Movie_production_countri	11	5	3111	Director	Directing	52fe420dc3a36847f8000133
Movie_spoken_languages	12	5	3111	Executive Producer	Production	52fe420dc3a36847f8000151
original_language	13	5	3111	Writer	Writing	52fe420dc3a36847f80001cf
Persona	14	5	3113	Director of Photography	Camera	52fe420dc3a36847f80001e7
production_companies	15	5	3114	Director of Photography	Camera	52fe420dc3a36847f80001ed
production_countries	16	5	3115	Director of Photography	Camera	52fe420dc3a36847f80001f3
spoken_language						
Status						

	idMovie	idPerson
1	5	3110
2	11	1
3	12	7
4	13	24
5	14	39
6	16	42
7	18	59
8	19	68
9	20	90
10	22	1704
11	24	138
12	25	39
13	28	1776
14	33	190
15	35	197
16	38	201
17	55	223

# Población de tablas

idGenre	nameGenre
1	Action
2	Adventure
3	Fantasy
4	Science-Fiction
5	Crime
6	Drama
7	Thriller
8	Animation
9	Family
10	Western
11	Comedy
12	Romance
13	Horror
14	Mystery
15	History
16	War

MoviesProjectoBaseDeDatos		idMovie	index	budget	homepage	keywords
tables 17	1	5	3766	4000000	<null>	hotel new year's eve witch
Cast	2	11	2912	11000000	http://www.starwars.com/films/star-w...	android galaxy hermit dea
Crew	3	12	328	94000000	http://movies.disney.com/finding-nemo	father son relationship h
Director	4	13	809	55000000	<null>	vietnam veteran hippie me
directorTemp	5	14	2516	15000000	http://www.dreamworks.com/ab/	male nudity female nudity
Genre	6	16	2799	12800000	<null>	individual dancing usa ro
Movie	7	18	322	90000000	<null>	clone taxi cyborg egypt f
movie_dataset	8	19	2638	92620000	<null>	man vs machine underground
Movie_genres	9	20	4023	0	http://www.clubcultura.com/clubcine/...	farewell responsibility d
movie_production_compa	10	22	199	140000000	http://disney.go.com/disneyvideos/li...	exotic island blacksmith
Movie_production_countri	11	24	828	30000000	http://www.miramax.com/movie/kill-bi...	japan coma martial arts k
Movie_spoken_languages	12	25	557	72000000	<null>	sniper marine corps saudi
original_language	13	28	1525	31500000	http://www.apocalypsenow.com	guerrilla river vietnam v
Persona	14	33	2664	14000000	<null>	prostitute sheriff bounty
production_companies	15	35	558	75000000	http://www.simpsonsmovie.com/	father son relationship l
production_countries	16	38	2152	20000000	http://www.eternalsunshine.com	deja vu regret jealousy a
spoken_language						
Status						

# Población de tablas

		idMovie	pCompanyId
tables	1	11	1
> Cast	2	85	1
> Crew	3	87	1
> Director	4	89	1
> directorTemp	5	217	1
> Genre	6	838	1
> Movie	7	1891	1
> movie_dataset	8	1892	1
> Movie_genres	9	1893	1
> Movie_production_compa	10	1894	1
> Movie_production_countri	11	1895	1
> Movie_spoken_languages	12	10658	1
> original_language	13	12144	1
> Persona	14	72431	1
> production_companies	15	333355	1
> production_countries	16	22	2
> spoken_language			
> Status			

		idMovie	iso_3166_1
tables	1	25132	AE
> Cast	2	35169	AE
> Crew	3	38363	AE
> Director	4	39538	AE
> directorTemp	5	50014	AE
> Genre	6	50780	AE
> Movie	7	56292	AE
> movie_dataset	8	71676	AE
> Movie_genres	9	74534	AE
> Movie_production_compa		133694	AE
> Movie_production_countries	11	134411	AE
> Movie_spoken_languages	12	228194	AE
> original_language	13	241239	AE
> Persona	14	266102	AE
> production_companies	15	14757	AF
> production_countries	16	45649	A0
> spoken_language			
> Status			



# Población de tablas

idMovie ÷ iso_639_1		
tables 17	1	868 af
> Cast	2	1123 af
> Crew	3	1372 af
> Director	4	17654 af
> directorTemp	5	22600 af
> Genre	6	59961 af
> Movie	7	192136 af
> movie_dataset	8	9839 am
> Movie_genres	9	25 ar
> Movie_production_compa	10	85 ar
> Movie_production_countri	11	231 ar
> Movie_spoken_languages	12	409 ar
> original_language	13	435 ar
> Persona	14	612 ar
> production_companies	15	691 ar
> production_countries	16	708 ar
> spoken_language		
> Status		

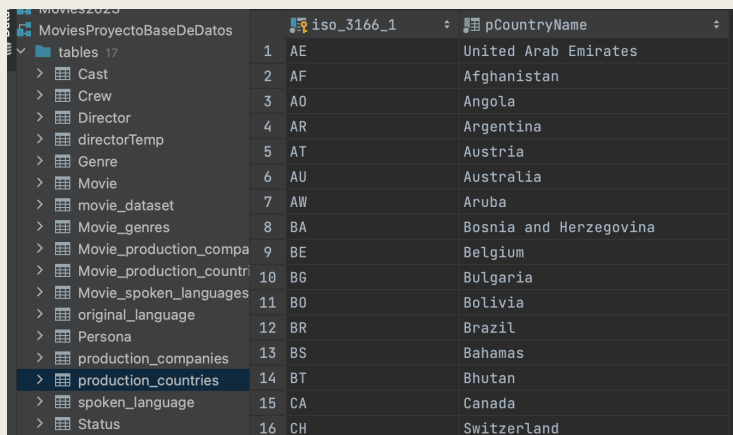
idOriginalLang ÷ name_original_language		
tables 17	1	1 en
> Cast	2	2 ja
> Crew	3	3 fr
> Director	4	4 zh
> directorTemp	5	5 es
> Genre	6	6 de
> Movie	7	7 hi
> movie_dataset	8	8 ru
> Movie_genres	9	9 ko
> Movie_production_compa	10	10 te
> Movie_production_countri	11	11 cn
> Movie_spoken_languages	12	12 it
> original_language	13	13 nl
> Persona	14	14 ta
> production_companies	15	15 sv
> production_countries	16	16 th
> spoken_language		
> Status		

# Población de tablas

MoviesProyectoBaseDeDatos		idPerson		name	gender
tables	17	1		George Lucas	2
> Cast		2		Harrison Ford	2
> Crew		3		Andrew Stanton	2
> Director		4		Lee Unkrich	2
> directorTemp		5		Graham Walters	2
> Genre		6		Bob Peterson	2
> Movie		7		David Reynolds	2
> movie_dataset		8		Albert Brooks	2
> Movie_genres		9		Robert Zemeckis	2
> Movie_production_compa		10		Winston Groom	2
> Movie_production_countri		11		Eric Roth	2
> Movie_spoken_languages		12		Wendy Finerman	1
> original_language		13		Steve Tisch	2
> Persona		14		Steve Starkey	2
> production_companies		15		Tom Hanks	2
> production_countries		16		Gary Sinise	2
> spoken_language					
> Status					

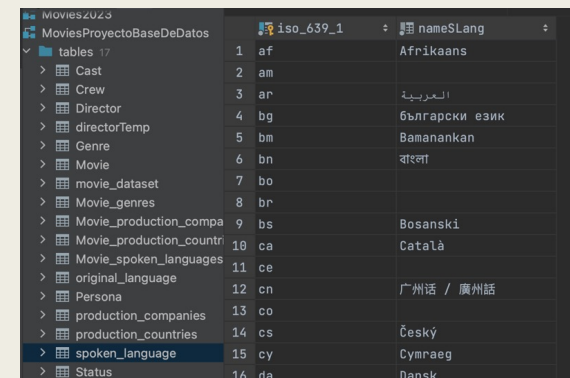
MoviesProyectoBaseDeDatos		pCompanyId		pCompanyName
tables	17	1		Lucasfilm
> Cast		2		Walt Disney Pictures
> Crew		3		Pixar Animation Studios
> Director		4		Paramount Pictures
> directorTemp		5		Columbia Pictures
> Genre		6		RKO Radio Pictures
> Movie		7		DreamWorks
> movie_dataset		8		Fine Line Features
> Movie_genres		9		Gaumont
> Movie_production_compa		10		WingNut Films
> Movie_production_countri		11		New Line Cinema
> Movie_spoken_languages		12		Universal Studios
> original_language		13		Miramax Films
> Persona		14		Gracie Films
> production_companies		15		Imagine Entertainment
> production_countries		16		Mikona Productions GmbH & Co. KG
> spoken_language				
> Status				

# Población de tablas



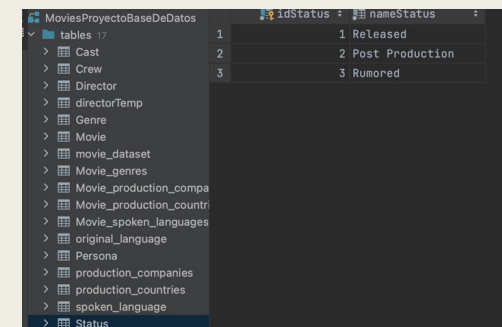
The screenshot shows a database interface with a list of tables on the left and a detailed view of the 'production\_countries' table on the right. The table has columns for an index, ISO 3166-1 code, and country name.

	iso_3166_1	pCountryName
1	AE	United Arab Emirates
2	AF	Afghanistan
3	AO	Angola
4	AR	Argentina
5	AT	Austria
6	AU	Australia
7	AW	Aruba
8	BA	Bosnia and Herzegovina
9	BE	Belgium
10	BG	Bulgaria
11	BO	Bolivia
12	BR	Brazil
13	BS	Bahamas
14	BT	Bhutan
15	CA	Canada
16	CH	Switzerland



The screenshot shows a database interface with a list of tables on the left and a detailed view of the 'spoken\_languages' table on the right. The table has columns for an index, ISO 639-1 code, and language name.

	iso_639_1	nameSLang
1	af	Afrikaans
2	am	
3	ar	العربية
4	bg	български език
5	bm	Bamanankan
6	bn	বাংলা
7	bo	
8	br	
9	bs	Bosanski
10	ca	Català
11	ce	
12	cn	广州话 / 廣州話
13	co	
14	cs	Český
15	cy	Cymraeg
16	da	Dansk



The screenshot shows a database interface with a list of tables on the left and a detailed view of the 'Status' table on the right. The table has columns for an index, ID status, and name status.

	IdStatus	nameStatus
1	1	Released
2	2	Post Production
3	3	Rumored

CONSULTAS



# CONSULTAS

```
792 ✓ SELECT *
793 FROM Movie_production_companies mpc
794 WHERE idMovie = 19995;
```

Output MoviesProyectoBaseDe...\_production\_companies

	idMovie	pCompanyId
1	19995	289
2	19995	306
3	19995	444
4	19995	574

```
792 ✓ SELECT mpc.idMovie, pd.pCompanyName
793 FROM Movie_production_companies mpc, production_companies pd
794 WHERE mpc.pCompanyId = pd.pCompanyId AND idMovie = 19995;
```

Output Result 326

	idMovie	pCompanyName
1	19995	Ingenious Film Partners
2	19995	Twentieth Century Fox Film Corporation
3	19995	Dune Entertainment
4	19995	Lightstorm Entertainment