

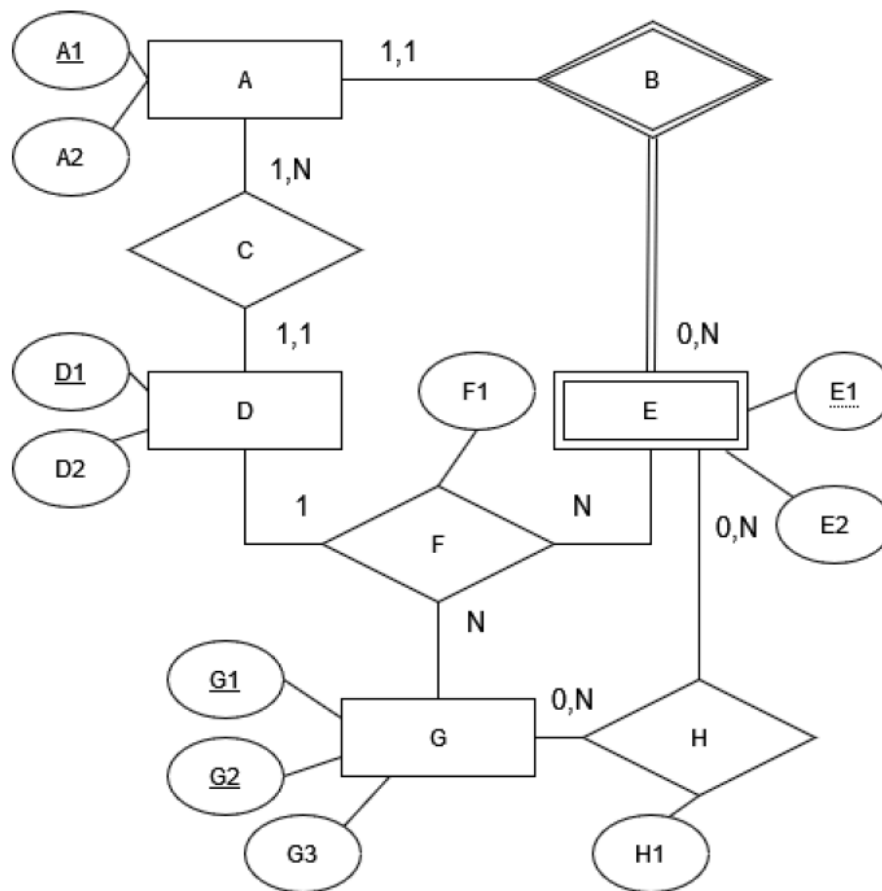
1º PARCIALITO
BASE DE DATOS
(TA044)

Cuatrimestre: 1º Cuatrimestre 2025

Curso: 1 - Román

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1. Pasaje de Modelos



Relación	Clave Primaria	Claves Candidatas	Claves Foráneas
A (A1, A2)	{A1}	{ {A1} }	-
B -	-	-	-
C (A1, D1)	{A1}	{ {A1} }	{A1 ref. A}, {D1 ref. D}
D (D1, D2)	{D1}	{ {D1} }	-
E (A1, E1, E2)	{A1, E1}	{ {A1, E1} }	{A1 ref. A}
F (A1, D1, E1, F1, G1, G2)	{A1, E1, G1, G2}	{ {A1, E1, G1, G2} }	{D1 ref. D}, {A1, E1 ref. E}, {G1, G2 ref. G}
G (G1, G2, G3)	{G1, G2}	{ {G1, G2} }	-
H (A1, E1, G1, G2, H1)	{A1, E1, G1, G2}	{ {A1, E1, G1, G2} }	{A1, E1 ref. E}, {G1, G2 ref. G}

2. Álgebra Relacional

a) Punto a:

```

ALFRED_DIRECTOR =  $\sigma$  directors.first_name = 'Alfred (I)'  $\wedge$  directors.last_name = 'Hitchcock' (directors)
ID_ALFRED_DIRECTOR =  $\pi$  directors.id (ALFRED_DIRECTOR)
DIRECTED_ALFRED = movies_directors  $\bowtie$  (movies_directors.director_id = directors.id) ID_ALFRED_DIRECTOR
MOVIE_ID_DIRECTED =  $\pi$  movies_directors.movie_id (DIRECTED_ALFRED)
ALFRED_ACTOR =  $\sigma$  actors.first_name='Alfred (I)'  $\wedge$  actors.last_name='Hitchcock' (actors)
ID_ALFRED_ACTOR =  $\pi$  actors.id (ALFRED_ACTOR)
ACTED_ALFFRED = roles  $\bowtie$  (roles.actor_id = actors.id) ID_ALFRED_ACTOR
MOVIE_ID_ACTED =  $\pi$  roles.movie_id (ACTED_ALFFRED)
DIRECTED_AND_ACTED_1 = MOVIE_ID_DIRECTED  $\cap$  MOVIE_ID_ACTED
DIRECTED_AND_ACTED_2 = (movies  $\bowtie$  (movies.id = movie_id) DIRECTED_AND_ACTED_1)
ID_AND_NAME =  $\pi$  movies.id, movies.name (DIRECTED_AND_ACTED_2)
ID_AND_NAME
  
```

RESULTADO:

movies.id	movies.name
235062	'North by Northwest'
235676	'Notorious'
266574	'Psycho'
273543	'Rear Window'
316323	'Strangers on a Train'
352639	'Vertigo'

b) Punto b:

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DRAMA_MOVIES_1 = σ movies_genres.genre = 'Drama' (movies_genres)
ID_DRAMA_MOVIES = π movies_genres.movie_id (DRAMA_MOVIES_1)
DRAMA_MOVIES_2 = movies ⋈ (movies.id = movies_genres.movie_id) ID_DRAMA_MOVIES
DRAMA_MOVIES_2A = ρ DRAMA_MOVIES_2A (DRAMA_MOVIES_2)
DRAMA_MOVIES_2B = ρ DRAMA_MOVIES_2B (DRAMA_MOVIES_2)
NEWEST_DRAMA_MOVIES = DRAMA_MOVIES_2A ⋈ (DRAMA_MOVIES_2A.year > DRAMA_MOVIES_2B.year) DRAMA_MOVIES_2B
ID_NEWEST_DRAMA_MOVIES = π DRAMA_MOVIES_2A.id (NEWEST_DRAMA_MOVIES)
ID_OLDEST_DRAMA_MOVIE = ID_DRAMA_MOVIES - ID_NEWEST_DRAMA_MOVIES
OLDEST_DRAMA_MOVIE = movies ⋈ (movies.id = movie_id) ID_OLDEST_DRAMA_MOVIE
OLDEST_DRAMA_MOVIE_NAME_AND_YEAR = π movies.name, movies.year (OLDEST_DRAMA_MOVIE)
OLDEST_DRAMA_MOVIE_NAME_AND_YEAR
```

RESULTADO:

movies.name	movies.year
'Metropolis'	1927