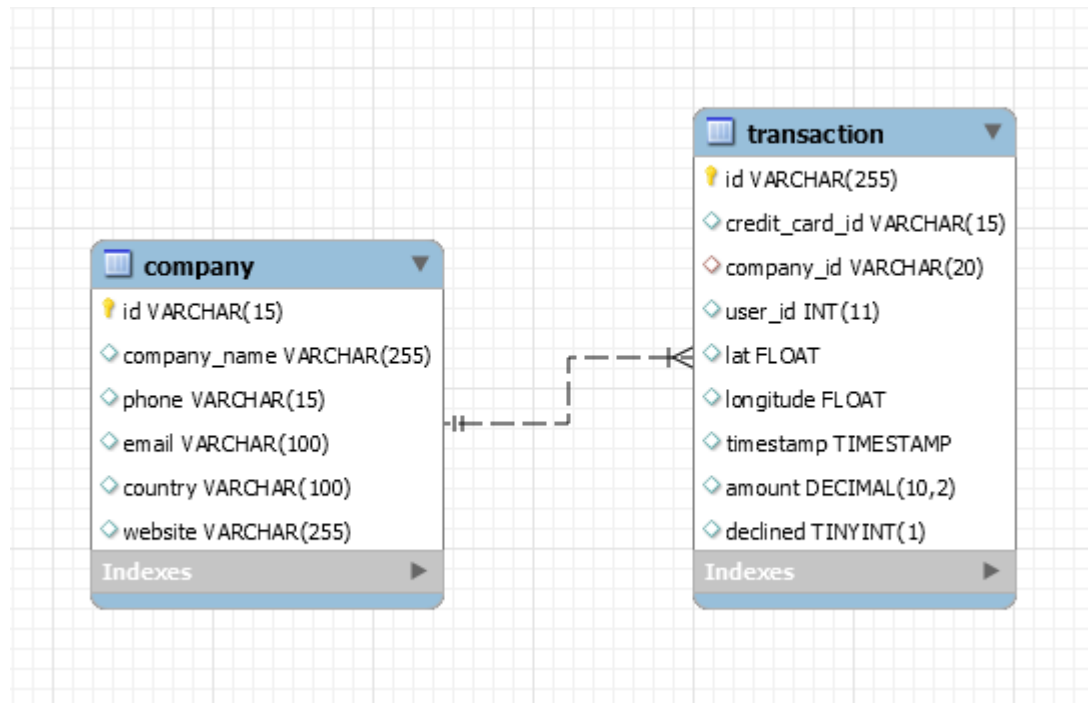


Desiree Viviana Borneo

Sprint 2

Nivel 1

Ejercicio 1



Modelo dimensional en donde la tabla *transaction* es la tabla de hechos y *company* es una tabla dimensional. La clave primaria de *company* es *company.id*, y la clave primaria de *transaction* es *transaction.id*. La tabla de hechos (*transaction*) incluye los datos con los que se realizarán las funciones de agregación, así como la clave foránea *company_id* que permite combinar (JOIN) los registros de la tabla *transaction* con los registros de la tabla *company*.

La cardinalidad de las relaciones en este modelo es de 1 (tabla dimensional) a N (tabla de hechos). Por ejemplo: una (1) compañía puede realizar muchas transacciones (N) pero una misma transacción no puede ser realizada por múltiples compañías.

Ejercicio 2

```
/* Utilitzant JOIN realitzaràs les següents consultes */

-- 1. Llistat dels països que estan fent compres.

select distinct company.country as Païses_Que_Compran
from transaction
inner join company on transaction.company_id = company.id;

-- (Decidí incloure totes les transaccions, així hagin sigut declinades o no)
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Países_Que_Compran
▶	Germany
	Australia
	United States
	New Zealand
	Norway

Result 62 x

Output :

Action Output ▼

	#	Time	Action	Message
✓	107	12:26:48	select company.company_name, count(transaction.id), case when count(transaction.id) > 4 then "Má...	100 row(s) returned
✓	108	12:27:54	select distinct company.country as Países_Que_Compran from transaction inner join company on tran...	15 row(s) returned

-- 2. Des de quants països es realitzen les compres.

```
select count(distinct company.country) as Número_de_Países_Donde_Compran
from company
inner join transaction on company.id = transaction.company_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Número_de_Países_Donde_Compran
▶	15

Result 63 x

Output

Action Output

	#	Time	Action	Message
✓	108	12:27:54	select distinct company.country as Países_Que_Compran from transaction inner join company on tran...	15 row(s) returned
✓	109	12:28:25	select count(distinct company.country) as Número_de_Países_Donde_Compran from company inner ...	1 row(s) returned

```
-- 3. Identifica la companyia amb la mitjana més gran de vendes.
```

```
select company.company_name, AVG(transaction.amount)
from company
join transaction on company.id = transaction.company_id
where declined = 0
group by company.company_name
order by 2 desc
limit 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	company_name	AVG(transaction.amount)
▶	Eget Ipsum Ltd	481.860000

Result 64 x

Output

Action Output ▼

	#	Time	Action	Message
✓	109	12:28:25	select count(distinct company.country) as Número_de_Países_Donde_Compran from company inner ...	1 row(s) returned
✓	110	12:28:46	select company.company_name, AVG(transaction.amount) from company join transaction on compa...	1 row(s) returned

Ejercicio 3

```
/* Utilitzant només subconsultes (sense utilitzar JOIN): */

-- 1. Mostra totes les transaccions realitzades per empreses d'Alemanya.

select transaction.id
from transaction
where transaction.company_id in (
    select company.id
    from company
    where company.country = "Germany");
```

Result Grid		Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:
	id				
▶	108B1D1D-5B23-A76C-55EF-C568E49A05DD				
	EA2C3281-C9C1-A387-44F8-729FB4B51C76				
	0DD2E608-5C9E-D1B3-4999-B99F43AD735A				
	AB069F53-965E-A2A8-CE06-CA8C4FD92501				
	0466A42E-47CF-8D24-FD01-C0B689713128				
transaction 65 x					
Output					
Action Output					
	#	Time	Action	Message	
✓	110	12:28:46	select company.company_name, AVG(transaction.amount) from company join transaction on compa...	1 row(s) returned	
✓	111	12:29:39	select transaction.id from transaction where transaction.company_id in (select company.id from co...	118 row(s) returned	

-- 2. Llista les empreses que han realitzat transaccions per un amount superior a la mitjana de totes les transaccions.

```
select distinct company.company_name
from company
where company.id in (
    select transaction.company_id
    from transaction
    where transaction.declined = 0 and transaction.amount > (
        select avg(transaction.amount)
        from transaction
        where transaction.declined = 0
    )
);
```

-- (Decidí quitar todas las transacciones declinadas)

-- 3. Eliminaran del sistema les empreses que no tenen transaccions registrades, entrega el llistat d'aquestes empreses.

```
/*
select company.company_name
from company
where company.id not in (
    select distinct transaction.company_id
    from transaction);
```

·NO HAY NINGUNA EMPRESA SIN TRANSACCIONES.*/

SET SQL_SAFE_UPDATES = 0;

/* I want to update every row in the table, so I'm disabling safe mode.
·I would have to run it every time I log in. */

```
delete from company
where company.id not in (
    select distinct transaction.company_id
    from transaction);
```

-- Otra opción:

```
delete from company
where not exists
    (select transaction.company_id
    from transaction);
```


Output



Action Output



	#	Time	Action	Message
✓	113	12:30:53	delete from company where company.id not in (select distinct transaction.company_id from transac...	0 row(s) affected
✓	114	12:30:55	delete from company where not exists (select transaction.company_id from transaction)	0 row(s) affected

Nivel 2

Ejercicio 1

-- Exercici 1

/* Identifica els cinc dies que es va generar la quantitat més gran d'ingressos a l'empresa per vendes.
Mostra la data de cada transacció juntament amb el total de les vendes. */

```
select date(transaction.timestamp), SUM(transaction.amount)
from transaction
where declined = 0
group by 1
order by 2 desc
limit 5;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
date(transaction.timestamp)	SUM(transaction.amount)		
2021-12-20	1532.36		
2021-04-22	1397.96		
2021-05-09	1344.37		
2022-02-26	1337.62		
2021-03-29	1325.12		

Result 67 x

Output

Action Output

#	Time	Action	Message
114	12:30:55	delete from company where not exists (select transaction.company_id from transaction)	0 row(s) affected
115	12:31:34	select date(transaction.timestamp), SUM(transaction.amount) from transaction where declined = 0 gro...	5 row(s) returned

Ejercicio 2

-- Exercici 2

-- Quina és la mitjana de vendes per país? Presenta els resultats ordenats de major a menor mitjà.

```
select company.country, avg(transaction.amount)
from company
inner join transaction on company.id = transaction.company_id
where declined = 0
group by 1
order by 2 desc;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
country	avg(transaction.amount)			
United States	287.531111			
Ireland	285.825357			
Sweden	276.668382			
United Kingdom	271.767527			
Canada	261.941930			

Result 68 x

Output

Action Output

#	Time	Action	Message
✓ 115	12:31:34	select date(transaction.timestamp), SUM(transaction.amount) from transaction where declined = 0 gro...	5 row(s) returned
✓ 116	12:31:55	select company.country, avg(transaction.amount) from company inner join transaction on company.i...	15 row(s) returned

Ejercicio 3

Usando join y subqueries

-- Exercici 3

/*
En la teva empresa, es planteja un nou projecte per a llançar algunes campanyes publicitàries per a fer competència a la companyia "Non Institute".
Per a això, et demanen la llista de totes les transaccions realitzades per empreses que estan situades en el mateix país que aquesta companyia.
*/

-- Usando join y subqueries.

-- A. No incluyo las transacciones declinadas.

```
select *  
from transaction  
inner join company on company.id = transaction.company_id  
where company.company_name <> "Non Institute" and transaction.declined = "0" and company.country =  
  (select country  
   from company  
   where company_name = "Non Institute");
```

Result Grid										
Filter Rows:		Export:		Wrap Cell Content: IA						
	id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined	
▶	2B928E1C-EC14-A760-0A75-871477649D6A	CcU-2980	b-2246	275	-41.0496	161.685	2021-08-10 08:14:49	383.73	0	t
	4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CcU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0	t
	1479B3D2-B7BA-C7BB-4CE3-8D7C2DE85ABB	CcU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0	t
	152508C2-070D-D684-4B66-015DE303E8EE	CcU-3004	b-2326	136	67.0180	141.677	2021-07-05 03:10:00	305.43	0	t
<										
Result 45 x										
Output										
Action Output										
	#	Time	Action				Message			
✓	90	12:16:12	select * from transaction inner join company on company.id = transaction.company_id where company...				63 row(s) returned			

```
-- B. Incluyo las transacciones declinadas.

select *
from transaction
inner join company on company.id = transaction.company_id
where company.company_name <> "Non Institute" and company.country =
] (select country
   from company
   where company_name = "Non Institute");
```

Result Grid										
		Filter Rows:			Export:	Wrap Cell Content:				
	id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined	
▶	2B928E1C-EC14-A760-0A75-871477649D6A	CcU-2980	b-2246	275	-41.0496	161.685	2021-08-10 08:14:49	383.73	0	t
	ACD2011A-A2B1-C365-41E1-2AB00C65147A	CcU-2980	b-2246	275	-54.4792	-82.7974	2022-03-05 20:41:20	60.07	1	t
	4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CcU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0	t
	BC780A38-77B4-28CD-1EE8-1ADEB8635773	CcU-3092	b-2310	275	-78.0205	18.5205	2021-10-18 07:27:25	477.05	1	t
<										
Result 47 ×										
Output										
Action Output										
	#	Time	Action				Message			
✓	92	12:16:58	select * from transaction inner join company on company.id = transaction.company_id where company...				70 row(s) returned			

Sólo usando subqueries


```
-- B. Incluyo las transacciones declinadas.

select *
from transaction
where transaction.company_id in (
    select company.id
    from company
    where company.company_name <> "Non Institute" and company.country = (
        select company.country
        from company
        where company_name = "Non Institute"
    )
);
```

Result Grid									
Filter Rows:		Edit:		Export/Import:		Wrap Cell Content:			
	id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
▶	2B928E1C-EC14-A760-0A75-871477649D6A	CcU-2980	b-2246	275	-41.0496	161.685	2021-08-10 08:14:49	383.73	0
	ACD2011A-A2B1-C365-41E1-2AB00C65147A	CcU-2980	b-2246	275	-54.4792	-82.7974	2022-03-05 20:41:20	60.07	1
	4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CcU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0
	BC2B9A38-77B4-28CD-1FE8-14DED863E773	CcU-3092	b-2310	275	-78.0295	18.5295	2021-10-18 07:27:35	477.95	1
transaction 53 ×									
Output									
Action Output									
	#	Time	Action	Message					
✓	98	12:21:32	select * from transaction where transaction.declined = "0" and transaction.company_id in (select com...	63 row(s) returned					
✓	99	12:21:56	select * from transaction where transaction.company_id in (select company.id from company where c...	70 row(s) returned					

Nivel 3

Ejercicio 1

```
-- Exercici 1

/*
Presenta el nom, telèfon, país, data i amount, d'aquelles empreses que
van realitzar transaccions amb un valor comprès entre 100 i 200 euros
i en alguna d'aquestes dates: 29 d'abril del 2021, 20 de juliol del 2021 i 13 de març del 2022.
Ordena els resultats de major a menor quantitat.
*/

select company_name, company.phone, company.country, date(transaction.timestamp), transaction.amount
from company
inner join transaction on company.id = transaction.company_id
where date(transaction.timestamp) in ("2021-04-29", "2021-07-20", "2022-03-13") and transaction.amount between 100 and 200
order by 5 desc;
```

Result Grid Filter Rows: Export: Wrap Cell Content:					
	company_name	phone	country	date(transaction.timestamp)	amount
▶	Interdum Feugiat Sed Associates	04 88 40 32 52	United Kingdom	2021-07-20	164.86
	Nunc Interdum Incorporated	05 18 15 48 13	Germany	2022-03-13	164.32
	Enim Condimentum Ltd	09 55 51 66 25	United Kingdom	2021-04-29	149.89
	Lorem Eu Incorporated	01 83 66 62 07	Canada	2021-07-20	133.39
	Nunc Interdum Incorporated	05 18 15 48 13	Germany	2021-04-29	111.51

Result 55 x

Output

Action Output

#	Time	Action	Message
✓ 100	12:23:57	select company.company_name, company.phone, company.country, date(transaction.timestamp), tra...	5 row(s) returned
✓ 101	12:24:08	select company.company_name, company.phone, company.country, date(transaction.timestamp), tra...	5 row(s) returned

Ejercicio 2

```
-- Exercici 2
/*
Necessitem optimitzar l'assignació dels recursos i dependrà de la capacitat operativa que es requereixi,
per la qual cosa et demanen la informació sobre la quantitat de transaccions que realitzen les empreses,
però el departament de recursos humans és exigent
i vol un llistat de les empreses on especifiquis si tenen més de 4 transaccions o menys.
*/

-- A. Incluyo las transacciones declinadas.

select company.company_name, count(transaction.id),
case
    when count(transaction.id) > 4 then "Más de cuatro transacciones"
    else "Cuatro o menos transacciones"
end as "Número de transacciones"
from transaction
inner join company on company.id = transaction.company_id
group by company.company_name
order by 3 desc;
```

Result Grid			
Filter Rows:		Export:	Wrap Cell Content:
	company_name	count(transaction.id)	Número de transacciones
▶	Enim Condimentum Ltd	57	Más de cuatro transacciones
	Nunc Interdum Incorporated	105	Más de cuatro transacciones
	Ut Semper Foundation	59	Más de cuatro transacciones
	Lorem Eu Incorporated	54	Más de cuatro transacciones
	Arcu LLP	56	Más de cuatro transacciones
	Malesuada PC	52	Más de cuatro transacciones
	Non Institute	30	Más de cuatro transacciones
	Fusce Corp.	2	Cuatro o menos transacciones
	Convallis In Incorporated	2	Cuatro o menos transacciones
	Ante Iaculis Nec Foundation	2	Cuatro o menos transacciones
	Quam Ltd	2	Cuatro o menos transacciones

Result 57 x

Output

Action Output

#	Time	Action	Message
✓ 102	12:25:09	select company.company_name, count(transaction.id), case when count(transaction.id) > 4 then "Má...	100 row(s) returned
✓ 103	12:25:20	select company.company_name, count(transaction.id), case when count(transaction.id) > 4 then "Má...	100 row(s) returned

```
-- B. No incluyo las transacciones declinadas.

select company.company_name, count(transaction.id),
case
    when count(transaction.id) > 4 then "Más de cuatro transacciones"
    else "Cuatro o menos transacciones"
end as "Número de transacciones"
from transaction
inner join company on company.id = transaction.company_id
where transaction.declined = 0
group by company.company_name
order by 3 desc;
```

Result Grid			
	Filter Rows:		Export: Wrap Cell Content:
	company_name	count(transaction.id)	Número de transacciones
▶	Lorem Eu Incorporated	53	Más de cuatro transacciones
	Nunc Interdum Incorporated	104	Más de cuatro transacciones
	Malesuada PC	51	Más de cuatro transacciones
	Non Institute	30	Más de cuatro transacciones
	Ut Semper Foundation	58	Más de cuatro transacciones
	Arcu LLP	55	Más de cuatro transacciones
	Enim Condimentum Ltd	56	Más de cuatro transacciones

Result 61 x

Output

Action Output

	#	Time	Action	Message
✓	106	12:26:41	select company.company_name, count(transaction.id), case when count(transaction.id) > 4 then "Má...	100 row(s) returned
✓	107	12:26:48	select company.company_name, count(transaction.id), case when count(transaction.id) > 4 then "Má...	100 row(s) returned