

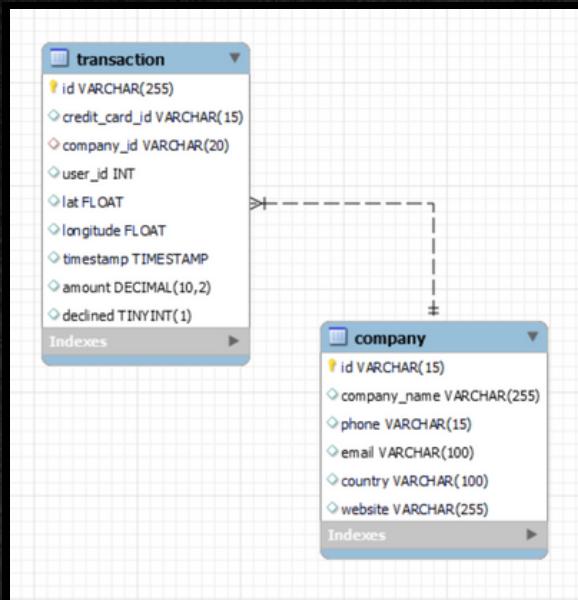
Sprint 2 Andrés Vidal Monge

Nivel 1

Ejercicio 1

Diagrama de la Base de Datos Transactions

id (**PK**) de la tabla company se conecta con la tabla transaction a traves de company_id (**FK**)



En la base de datos que estamos usando podemos encontrar las siguientes tablas:

- Transaction
- Company

En la tabla transaction se identifica que credit_card_id es una clave foranea (**FK**) de una tabla de “credit cards” y que user_id (**FK**) es otra clave foranea de una tabla “user”.

Se puede identificar que company es una tabla de dimensiones, con 6 columnas y que contiene los datos de cada compañía que ha hecho transacciones.

Podemos asumir que la tabla transaction es la clave de hechos de un modelo en estrella con la tabla company y las tablas que todavía tenemos (“user” y “credit_card”) como tablas de dimensiones.

Tabla Company contiene 100 lineas y 6 columnas

```
id Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 15, precision = 6, scale = 0
company_name Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 255, precision = 35, scale = 0
phone Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 15, precision = 14, scale = 0
email Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 100, precision = 38, scale = 0
country Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 100, precision = 14, scale = 0
website Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 255, precision = 31, scale = 0
```

Tabla Transaction contiene 587 lineas y 9 columnas

```
id Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 255, precision = 36, scale = 0
credit_card_id Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 15, precision = 8, scale = 0
company_id Schema = transactions, type = VARCHAR, character set = utf8mb4, display size = 20, precision = 6, scale = 0
user_id Schema = transactions, type = INT, character set = binary, display size = 11, precision = 3, scale = 0
lat Schema = transactions, type = FLOAT, character set = binary, display size = 12, precision = -21, scale = 31
longitude Schema = transactions, type = FLOAT, character set = binary, display size = 12, precision = -22, scale = 31
timestamp Schema = transactions, type = TIMESTAMP, character set = binary, display size = 19, precision = 19, scale = 0
amount Schema = transactions, type = DECIMAL, character set = binary, display size = 12, precision = 4, scale = 2
declined Schema = transactions, type = TINYINT, character set = binary, display size = 1, precision = 1, scale = 0
```

Ejercicio 2

```
# Nivell
# Ejercicio 2

# * Listado de los países que están realizando compras.

select distinct country
from company
;
```

1 13:12:52 select distinct country from company 15 row(s) returned

```
# * Desde cuántos países se realizan las compras.

select count(distinct c.country) as paisesQueRealizanCompras
from company c
;|
```

2 13:13:37 select count(distinct c.country) as Compras_Paises from company c 1 row(s) returned

```
# * Identifica a la compañía con la mayor media de ventas.
select c.company_name, round(avg(amount),2) as Media_Ventas
from company c
join transaction t
on c.id = t.company_id
where t.declined = 0
group by c.company_name
order by avg(amount) DESC
limit 1
;
```

company_name	Media_Ventas
Eget Ipsum Ltd	481.86

3 13:14:33 select c.company_name, round(avg(amount),2) as Media_Ventas from company c join transaction t on c.id = t.company_id... 1 row(s) returned

Ejercicio 3

```
# Ejercicio 3
# Muestra todas las transacciones realizadas por empresas de Alemania. SIN USAR JOIN, solo WHERE
select t.*
from transaction t
where t.company_id in (select id
from company c
where c.country = 'Germany')
;
```

ID	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
10881D ID-5B23-A76C-53EF-C568E49A05D0	C0U-2938	b-2222	275	83.7839	-178.86	2021-07-13T16:29:16	293.57	0
EA2C32B1-C0C3-A387-4F8-729FB4B51C76	C0U-2938	b-2222	275	20.2004	-116.84	2021-05-09T10:25:08	119.36	1
00026508-C0E6-01B3-4999-B99F43AD735A	C0U-2959	b-2234	275	9.68811	130.282	2021-04-17T05:30:17	252.47	1
1A000000-0000-0000-0000-000000000000	C0U-2959	b-2234	275	10.00000	130.282	2021-04-17T05:30:17	252.47	1
0466A0E-E7C-8024-F001-C0B697112B	C0U-4219	b-2302	170	-43.9695	-117.535	2021-07-26T07:29:18	49.53	0
04478E09-0C12-1963-F786-0256324B539	C0U-4359	b-2302	221	-56.4901	114.801	2022-03-26T02:35:54	430.49	0
1220C133-11B-0429-0CD0-9C54D15B99A	C0U-4366	b-2302	221	29.4372	-166.173	2021-06-09T06:04:14	172.01	0
13527B19-2E7D-957C-C4D2-4450A282D54	C0U-4520	b-2302	210	20.6724	14.9732	2021-12-29T20:38:23	17.97	0
14CAE5B5-9B11-3E4A-C435-0E41617534F4	C0U-4849	b-2302	189	-53.6202	93.0553	2021-12-31T09:29:42	388.04	0
158A3ACB-5A1C-0BCC-65B0-6373C6C7BF1C	C0U-4527	b-2302	183	42.5424	-170.347	2022-03-08T05:02:19	240.29	0
162C7E7A-26B6-7971-1A4E-02124E723451	C0U-4527	b-2302	210	-69.138	58.0017	2021-04-11T05:59:18	231.26	0
1717PDEB-0A0D-7082-4749-9112B892CC0	C0U-4219	b-2302	172	69.4992	-138.411	2021-12-29T16:18:54	249.91	0
1753A2B8-9FC1-52E6-939-A1FFB97003A	C0U-4345	b-2302	222	57.9422	-114.729	2021-08-17T05:32:08	497.84	0
186F53D2-DE27-B4E-602F-15B61CB726	C0U-4310	b-2302	225	-72.7448	36.6211	2021-12-20T13:15:45	238.16	0
18C4E2D0-1E4C-F32E-119B-C660B08DC25	C0U-4049	b-2302	177	68.0133	91.4839	2021-09-24T15:55:25	237.04	0

49 12:52:31 select t.* from transaction t where t.company_id in (select id from company c where c.country = 'Germany') 118 row(s) returned

```
# * Lista las empresas que han realizado transacciones por un amount superior a la media de todas las transacciones.
select company_name
from company
where id in (select t.company_id
from transaction t
where t.amount > (select avg(t2.amount) from transaction t2)
)
;
```

48 12:49:55 select company_name from company where id in (select t.company_id from transaction t where t.amount > (select avg(t2.... 70 row(s) returned

```
# Eliminarán del sistema las empresas que carecen de transacciones registradas, entrega el listado de estas empresas.

select *
from transaction t
where t.company_id in (select c.id
from company c
where c.id is null)
;
```

ID	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

6 13:18:57 select * from transaction t where t.company_id in (select c.id from company c where c.id is null) 0 row(s) returned

Result Grid	
country	
► Germany	
Australia	
United States	
New Zealand	
Norway	
United Kingdom	
Italy	
Belgium	
Sweden	
Ireland	
China	
Canada	
France	
Netherlands	
Spain	

Nivel 2

Ejercicio 1

```
# Nivel 2
# Ejercicio 1
# Identifica los cinco días que se generó la mayor cantidad de ingresos en la empresa por ventas.
# Muestra la fecha de cada transacción junto con el total de las ventas.

select date(t.timestamp) as date, sum(t.amount) as total_Ventas
from transaction t
where t.declined = 0
group by 1
order by total_Ventas DESC
limit 5
;
```

date	total_Ventas
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

9 13:21:57 select date(timestamp) as date, sum(amount) as total_Ventas from transaction t where t.declined = 0 group by 1 order by total_Ventas limit 5 row(s) returned

Ejercicio 2

```
# Ejercicio 2
# ¿Cuál es la media de ventas por país? Presenta los resultados ordenados de mayor a menor medio.

select country, round(avg(amount),2) as media_Ventas
from company c
join transaction t
on c.id = t.company_id
where t.declined = 0
group by country
order by 2 desc
;
```

country	media_Ventas
United States	287.53
Ireland	285.83
Sweden	276.67
United Kingdom	271.77
Canada	261.94
Belgium	255.22
Norway	251.11
Italy	243.34
Germany	242.24
Netherlands	240.94
China	222.24
Australia	177.33
France	169.41
New Zealand	167.06
Spain	26.22

10 13:25:35 select country, round(avg(amount),2) as media_Ventas from company c join transaction t on c.id = t.company_id where t.declined = 0 group by country order by media_Ventas limit 15 row(s) returned

Ejercicio 3 °

```
# Ejercicio 3
# En tu empresa, se plantea un nuevo proyecto para lanzar algunas campañas publicitarias para hacer competencia a la compañía "Non Institute".
# Para ello, te piden la lista de todas las transacciones realizadas por empresas que están ubicadas en el mismo país que esta compañía.

# Muestra el listado aplicando JOIN y subconsultas.

select t.id as transactionID, t.company_id, user_id, t.timestamp, t.amount, t.declined, c.country, c.company_name
from company c
join transaction t
on t.company_id = c.id
where c.country=(select c2.country
                  from company c2
                  where c2.company_name = 'Non Institute'
                  and c2.company_name <> 'Non Institute')
;
```

transactionID	company_id	user_id	timestamp	amount	declined	country	company_name
2B928E1C-EC14-A760-0A75-871477649D06	b-2246	275	2021-08-10 08:14:49	383.73	0	United Kingdom	Sed Nunc Ltd
ACD2011A-A2B1-C365-41E1-2AB00C65147A	cdu-2980	275	2022-03-05 20:41:20	60.07	1	United Kingdom	Sed Nunc Ltd
4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	cdu-2310	275	2021-05-03 22:37:23	458.74	0	United Kingdom	Non Magna LLC
BC2B9A38-7784-28CD-1FEB863E773	b-2310	275	2021-10-18 07:27:35	477.95	1	United Kingdom	Non Magna LLC
147983D0-2B78A-C788-4CE3-8D7C2DE85AB8	b-2326	133	2021-08-09 00:58:07	309.45	0	United Kingdom	Enim Condimentum Ltd
152598C2-029D-D684-4B66-91ED939E8FF	b-2326	126	2021-07-05 03:10:00	395.43	0	United Kingdom	Enim Condimentum Ltd
1B636858-A2E8-7C69-D9C9-C5453D0AF03B	b-2326	131	2021-07-06 08:48:46	195.06	0	United Kingdom	Enim Condimentum Ltd
20418DE5-8804-BE9B-8D7A-A95C1BFDBF5C	b-2326	126	2022-01-03 15:59:29	479.52	0	United Kingdom	Enim Condimentum Ltd
23988576-6C0E-137A-C2F6-3180A188A2D3	b-2326	126	2021-08-26 06:04:05	43.90	0	United Kingdom	Enim Condimentum Ltd
267CA4B6-7BA7-1C5E-0718-2824983C87D0	b-2326	126	2021-10-01 21:08:53	122.63	0	United Kingdom	Enim Condimentum Ltd

11 13:27:05 select t.id as transactionID, t.company_id, user_id, t.timestamp, t.amount, t.declined, c.country, c.company_name from company c ... 70 row(s) returned

```
# Muestra el listado aplicando solo subconsultas.

select *
from transaction t
where t.company_id in (select c.id
                      from company c
                      where c.country = (select c3.country
                                         from company c3
                                         where c3.company_name = 'Non Institute')
                      and c.company_name <> 'Non Institute')
;
```

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
ZB928E1C-EC14-A760-0A75-871477649D06	cdu-2980	b-2246	275	-41.0496	161.685	2021-08-10 08:14:49	383.73	0
ACD2011A-A2B1-C365-41E1-2AB00C65147A	cdu-2980	b-2246	275	-54.4792	-82.7974	2022-03-05 20:41:20	60.07	1
4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	cdu-2310	275	-20.4859	150.87		2021-05-03 22:37:23	458.74	0
BC2B9A38-7784-28CD-1FEB863E773	cdu-3092	b-2310	275	-78.0295	18.5295	2021-10-18 07:27:35	477.95	1
147983D0-2B78A-C788-4CE3-8D7C2DE85AB8	cdu-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0
152598C2-029D-D684-4B66-91ED939E8FF	cdu-2994	b-2326	126	-67.0189	-141.672	2021-07-05 03:10:00	395.43	0
1B636858-A2E8-7C69-D9C9-C5453D0AF03B	cdu-2994	b-2326	131	20.2543	-13.1356	2021-07-06 08:48:46	195.06	0
20418DE5-8804-BE9B-8D7A-A95C1BFDBF5C	cdu-2994	b-2326	126	-79.1145	1.51481	2022-01-03 15:59:29	479.52	0
23988576-6C0E-137A-C2F6-3180A188A2D3	cdu-2994	b-2326	126	23.6174	137.222	2021-08-26 06:04:05	43.90	0
267CA4B6-7BA7-1C5E-0718-2824983C87D0	cdu-2994	b-2326	126	-17.5259	104.915	2021-10-01 21:08:53	122.63	0
314C93C8-8874-4E2D-29CA83B1980	cdu-2994	b-2326	116	-67.9305	-119.978	2021-04-06 17:24:44	91.59	0
35786888-761D-8887-3B7C-2088673AA31E	cdu-2994	b-2326	126	87.0665	-22.7339	2021-07-26 22:59:24	303.60	0
360C7814-F7AF-B43A-0946-A83B02683C8B	cdu-2994	b-2326	116	6.5512	103.904	2021-08-21 10:19:58	494.82	0
391E1CFD-0653-E45B-A729-F2B93247858	cdu-2994	b-2326	117	23.1627	-10.381	2021-04-25 19:11:52	441.27	0

87 13:18:37 select * from transaction t where t.company_id in (select c.id from company c where c.country = (select c3.country from company c3 where c3.company_name = 'Non Institute')) 70 row(s) returned

Nivel 3

Ejercicio 1

```
# Nivel 3
# Ejercicio 1
#Presenta el nombre, teléfono, país, fecha y amount, de aquellas empresas que realizaron transacciones con un valor comprendido entre
#100 y 200 euros y en alguna de estas fechas: 29 de abril de 2021, 20 de julio de 2021 y 13 de marzo de 2022.
# Ordena los resultados de mayor a menor cantidad.

select t.id as transactionID, c.company_name, c.country, date(t.timestamp) as date, t.amount
from company c
join transaction t
on c.id = t.company_id
where date(t.timestamp) in ( '2021-04-29', '2021-07-20', '2022-03-13')
and t.amount between 100 and 200
;
```

Result Grid					
	transactionID	company_name	country	date	amount
▶	44D08BBB1-975E-86AA-75DA-BDAFED65F368	Lorem Eu Incorporated	Canada	2021-07-20	133.39
	45CA3E45-6842-CAC4-7683-EB869D523B3E	Enim Condimentum Ltd	United Kingdom	2021-04-29	149.89
	5BA81852-2D60-169A-805B-E1FA120E9683	Nunc Interdum Incorporated	Germany	2022-03-13	164.32
	9D4AB77C-9F51-FD95-EAB4-A37163E6D3E2	Nunc Interdum Incorporated	Germany	2021-04-29	111.51
	B53165B9-7C93-0783-641C-5EA94E4C8683	Interdum Feugiat Sed Associates	United Kingdom	2021-07-20	164.86

```
13 13:29:46 select t.id as transactionID, c.company_name, c.country, date(t.timestamp) as date, t.amount from company c join transa... 5 row(s) returned
```

Ejercicio 2

```
# Ejercicio 2
#Necesitamos optimizar la asignación de los recursos y dependerá de la capacidad operativa que se requiera,
#por lo que te piden la información sobre la cantidad de transacciones que realizan las empresas,
#pero el departamento de recursos humanos es exigente y quiere un listado de las empresas en las que especifiques
#si tienen más de 4 transacciones o menos.
```

```
select c.company_name, count(t.amount) as transactionsAmount,
case
when count(t.id) > 4 then 'Más de cuatro transacciones'
else 'Menos de cuatro transacciones'
end as listadoTransacciones
from company c
join transaction t
on c.id = t.company_id
group by c.company_name
order by 2 desc
;
```

company_name	transactionsAmount	listadoTransacciones
Nunc Interdum Incorporated	105	Más de cuatro transacciones
Ut Semper Foundation	59	Más de cuatro transacciones
Enim Condimentum Ltd	57	Más de cuatro transacciones
Arcu LLP	56	Más de cuatro transacciones
Lorem Eu Incorporated	54	Más de cuatro transacciones
Malesuada PC	52	Más de cuatro transacciones
Non Institute	30	Más de cuatro transacciones
Fusce Corp.	2	Menos de cuatro transacciones
Convallis In Incorporated	2	Menos de cuatro transacciones
Ante Iaculis Nec Foundation	2	Menos de cuatro transacciones
Donec Ltd	2	Menos de cuatro transacciones
Sed Nunc Ltd	2	Menos de cuatro transacciones
Amet Nulla Donec Corporation	2	Menos de cuatro transacciones

```
14 13:30:25 select c.company_name, count(t.amount) as transactionsAmount, case when count(t.id) > 4 then 'Más de cuatro transa... 100 row(s) returned
```