

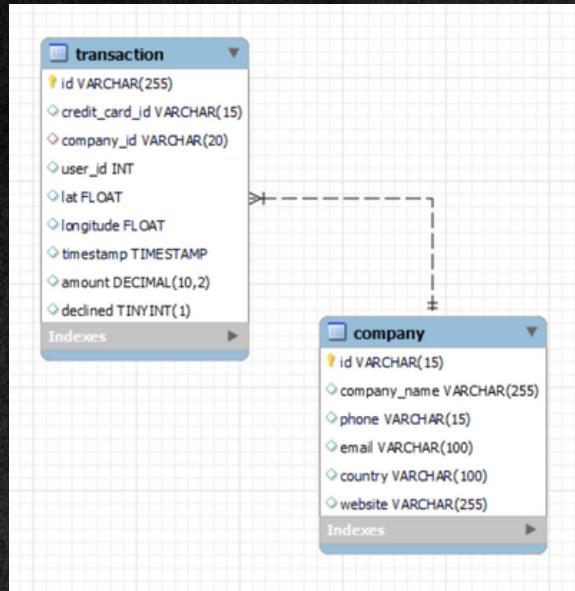
# Sprint 2 Andrés Vidal Monge

## 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
;
```

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 SQ

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-55EF-C568E49A05D0	CdU-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
EA2C32B1-C9C1-A387-44F9-729FB4B51C76	CdU-2938	b-2222	275	20.2004	-116.84	2021-05-01 10:25:08	119.36	1
0002E50B-5C6E-D13-4999-699F-03D735A	CdU-2939	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
A0458880-0000-400-9000-000000000000	CdU-2939	b-2234	275	35.8542	139.54	2021-04-17 05:30:17	252.47	0
046642E-4F27-0224-F011-C0971128	CdU-4219	b-2302	170	-43.9905	-117.525	2021-07-31 07:29:18	49.53	0
04749ED9-0C13-0363-F870-03563246539	CdU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
122DC332-E19F-0629-0CD9-9C54CF28959	CdU-4366	b-2302	221	29.6372	-166.173	2021-06-09 06:04:14	172.01	0
1352678A-2870-957C-C42-6450A28ED54	CdU-4320	b-2302	216	20.6724	14.972	2021-12-29 20:38:23	17.97	0
14CAE85-0F81-3FA4-4C83-0E4A167534F4	CdU-4849	b-2302	189	-53.6202	93.053	2021-12-31 00:29:42	388.04	0
15084C8C-5A1C-0E00-4000-0372C058FBF	CdU-4849	b-2302	183	42.5424	-170.347	2022-03-08 05:02:19	240.29	0
162C9088-0000-400-9000-000000000000	CdU-4927	b-2302	230	-69.4911	58.841	2021-07-31 07:29:18	231.26	0
1737068-AD4D-7982-A196-912B8920CC	CdU-4219	b-2302	172	69.4891	108.411	2021-12-29 16:18:54	49.51	0
1753A28P-9FC7-5286-4C39-41FF90802034	CdU-4345	b-2302	222	57.9422	-114.729	2021-01-17 05:32:08	497.84	0
186F53DE-0E27-B1PE-882P-1986ICE87726	CdU-4310	b-2302	225	-72.7448	36.6211	2021-12-20 13:13:45	238.16	0
18C4E2D0-1E4C-F35E-219B-C560B0810C25	CdU-4849	b-2302	177	68.0133	91.4839	2021-09-24 18:55:25	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

6 13:10:57 select \* from transaction t where t.company\_id in (select c.id from company c where c.id is null) 0 row(s) returned

# 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 13:23:37 select date(t.timestamp) as date, sum(t.amount) as total\_Ventas from transaction t where t.declined = 0 group by 1 order ... 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.... 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
26928E1C-EC14-A760-0A75-871477649D6A	b-2246	275	2021-08-10 08:14:49	383.73	0	United Kingdom	Sed Nunc Ltd
ACD2011A-A2B1-C365-41E1-2AB00C65147A	b-2246	275	2022-03-05 20:41:20	60.07	1	United Kingdom	Sed Nunc Ltd
4334349E-CEB0-3068-A4D4-FEB771BA1ACE	b-2310	275	2021-03-03 22:37:23	458.74	0	United Kingdom	Non Magna LLC
BC2B9A38-77B4-28CD-1FE8-14ED8636E773	b-2310	275	2021-10-18 07:27:35	477.95	1	United Kingdom	Non Magna LLC
147983D2-B78A-C78B-4CE3-8D7C2DE85A8B	b-2326	133	2021-08-09 00:58:07	309.45	0	United Kingdom	Enim Condimentum Ltd
152598C2-029D-D684-4B66-91EDF393EBFF	b-2326	126	2021-07-05 03:10:00	395.43	0	United Kingdom	Enim Condimentum Ltd
1B368658-A2E8-7C69-09C9-C54535DAFD38	b-2326	131	2021-07-06 08:48:46	195.06	0	United Kingdom	Enim Condimentum Ltd
20418DE5-B804-BE98-BD7A-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
267C4A86-7B87-1C5E-0718-2824983C87DD	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 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
26928E1C-EC14-A760-0A75-871477649D6A	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-CEB0-3068-A4D4-FEB771BA1ACE	CdU-3094	b-2310	275	-20.4859	150.87	2021-03-03 22:37:23	458.74	0
BC2B9A38-77B4-28CD-1FE8-14ED8636E773	CdU-3094	b-2310	275	-78.0295	18.5295	2021-10-18 07:27:35	477.95	1
147983D2-B78A-C78B-4CE3-8D7C2DE85A8B	CdU-2994	b-2326	133	66.2673	172.399	2021-08-09 00:58:07	309.45	0
152598C2-029D-D684-4B66-91EDF393EBFF	CdU-2994	b-2326	126	-67.0189	-141.673	2021-07-05 03:10:00	395.43	0
1B368658-A2E8-7C69-09C9-C54535DAFD38	CdU-2994	b-2326	131	70.2543	-13.1339	2021-07-06 08:48:46	195.06	0
20418DE5-B804-BE98-BD7A-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
267C4A86-7B87-1C5E-0718-2824983C87DD	CdU-2994	b-2326	126	-17.5259	104.915	2021-01-01 21:08:53	122.63	0
314293E-3B37-E9E4-EE2D-29CA34918D0	CdU-2994	b-2326	126	-67.8475	-119.978	2021-04-06 17:24:44	91.59	0
3578688E-71D-6887-30C7-2088673A3A1E	CdU-2994	b-2326	126	87.0665	-22.7339	2021-07-26 22:59:24	303.60	0
360C7814-F74F-B43A-0946-AE38D263C86	CdU-2994	b-2326	116	-7.93005	-79.0733	2021-08-21 10:19:58	494.82	0
391E1CD-0653-E480-A729-F2EB93247658	CdU-2994	b-2326	118	60.5512	103.904	2021-10-09 00:50:38	271.27	0
3C1D7CA-A402-8941-625A-04CA535268B	CdU-2994	b-2326	117	23.1627	-10.381	2021-04-25 19:11:52	441.27	0

12 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 c... 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
▶	44D08881-975E-86AA-75DA-BDAFED65F368	Loem Eu Incorporated	Canada	2021-07-20	133.39
	45CA3E45-6B42-CAC4-7683-EB869D523B3E	Enim Condimentum Ltd	United Kingdom	2021-04-29	149.89
	SBA81852-2D60-169A-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
Loem 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
```