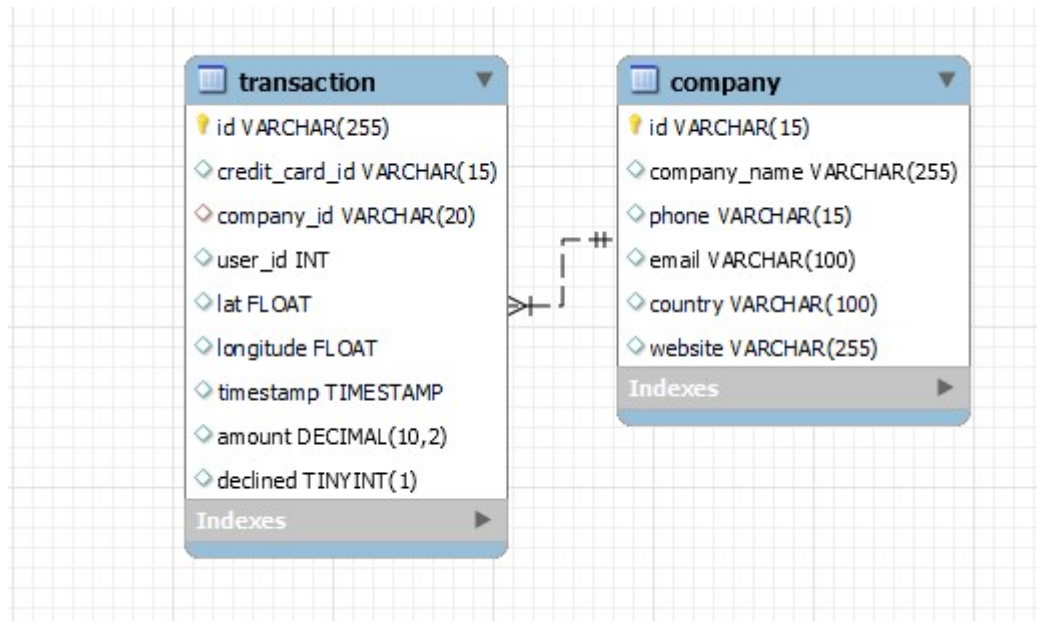


## NIVEL 1

### Ejercicio 1



La Base de datos Transactions consta de 2 tablas "transaction" y "company"

#### **Las características que tiene la tabla de transaction:**

**Clave Primaria (PK)** es el ID varchar (15) digitos,

**credit\_card\_id(FK)** hace referencia a la tabla de **credit\_card(id)**,

**company\_id(FK)** es la clave **Foranea** que hace referencia a la tabla **Company**,

**user\_id(FK)** hace referencia a la tabla **User(id)**

**lat** es la latitud de tipo **Float**,

**longitude** es la longitud de tipo **Float**,

**timestamp** es de tipo **Timestamp** es la donde se puede consultar la fecha de las transacciones,

**amount** es la cantidad de tipo **DECIMAL**(10,2) en donde el 10 son los digitos y el 2 significa que es 2 digitos despues de la coma,

**declined** es la transaction rechazado de tipo **Boleano**,

#### **Las características que tiene la tabla de company:**

**Clave Primaria(PK)** es el ID de tipo VARCHAR(15) digitos,

company\_name es de tipo Varchar,

Phone es de tipo Varchar,

email es de tipo Varchar,

country es de tipo varchar,

website es de tipo Varchar

Varchar es una cadena donde los digitos que se encuentran en parentesis() es la cantidad de digitos establecidos.

Ambas tablas pueden ser relacionadas atravez de la PK de company y en la tabla Transaction es por medio de la company\_id (FK)

## Ejercicio 2

### 2.1

```
4 #2.1 Lista los paises que estan generando ventas
5 • select distinct(c.country)
6 from company c #left join transaction t
7 #on c.id = t.company_id
```



Result Grid

| country       |
|---------------|
| Germany       |
| Australia     |
| United States |
| New Zealand   |
| Norway        |

Result 38 x

Output

Action Output

| # | Time     | Action  | Message            |
|---|----------|---|--------------------|
| 1 | 13:10:38 | select distinct(c.country) from company c #left join transaction t #on c.id = t.co... | 15 row(s) returned |

### 2.2

```

10 #2.2 Desde cuántos países se generan las ventas
11 • select count(distinct(c.country))
12 from company c left join transaction t
13 on c.id = t.company_id

```

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

|   | count(distinct(c.country)) |
|---|----------------------------|
| ▶ | 15                         |

Result 39 x

Output

Action Output

| #   | Time     | Action   | Message           |
|-----|----------|--|-------------------|
| ✓ 1 | 13:12:07 | select count(distinct(c.country)) from company c left join transaction t on c.id = t.... | 1 row(s) returned |

## 2.3

```

16 #2.3 Identifica la compañía con la mediana mas grande de ventas
17 • select c.company_name, avg(t.amount) as mediana_ventas
18 from company c left join transaction t
19 on c.id = t.company_id
20 group by c.company_name
21 #having avg(t.amount);
22 order by mediana_ventas desc
23 limit 1;

```

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

|   | company_name              | mediana_ventas |
|---|---------------------------|----------------|
| ▶ | Ac Fermentum Incorporated | 284.867160     |

Result 40 x

Output

Action Output

| #   | Time     | Action  | Message           |
|-----|----------|---|-------------------|
| ✓ 1 | 13:12:52 | select c.company_name, avg(t.amount) as mediana_ventas from company c left... | 1 row(s) returned |

## Ejercicio 3

### 3.1

```

27 #Utiliza solo subconsultas(sin utilizar join)
28 #3.1- Muestra todas las transacciones realizadas por empresas de Alemania
29 • select *
30 from transaction t
31 where t.company_id in (select c.id from company c where c.id = t.company_id and c.country like "Germany");
32

```

Result Grid

|   | id                                   | credit_card_id | company_id | user_id | lat     | longitude | timestamp           | amount | declined |
|---|--------------------------------------|----------------|------------|---------|---------|-----------|---------------------|--------|----------|
| ▶ | 00138D3B-206D-4C03-94B7-63A2676EB9B4 | CcS-4899       | b-2222     | 318     | 41.3781 | 12.447    | 2020-03-25 10:43:43 | 426.36 | 0        |
|   | 0013C1B6-3B84-4D6C-8154-E2B3FEBCA8E9 | CcS-5070       | b-2222     | 489     | 41.3814 | 2.18176   | 2020-12-17 18:15:37 | 316.90 | 0        |
|   | 00201A11-2E62-44C4-941D-198FC8DB77F0 | CcU-3512       | b-2222     | 193     | 55.5704 | -3.65129  | 2021-01-22 23:44:27 | 453.04 | 0        |
|   | 00235618-0A5C-4D49-9DCB-B3A9405D8923 | CcS-8137       | b-2222     | 3556    | 59.8421 | 18.729    | 2020-09-09 15:43:19 | 263.14 | 0        |
|   | 005A5A7B-1F1A-4B6C-9B15-1625A78C9C38 | CcS-8998       | b-2222     | 4417    | 41.1591 | -8.63905  | 2024-05-15 09:10:11 | 442.01 | 0        |
|   | 00687139-48B2-4FFA-8E73-B20376F04AB4 | CcS-4870       | b-2222     | 289     | 51.1966 | 10.4669   | 2019-03-09 19:37:49 | 524.84 | 0        |
|   | 0074F4DD-32F1-4827-8758-55896314623A | CcS-8081       | b-2222     | 3500    | 39.7016 | -8.50325  | 2016-12-26 23:06:57 | 491.90 | 0        |
|   | 00AAB9CD-39D6-4DCB-8A1D-13BE73DC90A9 | CcS-6797       | b-2222     | 2216    | 55.7652 | -3.76245  | 2021-04-25 03:06:59 | 167.15 | 0        |
|   | 00BE09D4-6920-47D8-ABE8-325E2269829D | CcS-4983       | b-2222     | 402     | 38.708  | -9.12993  | 2019-02-27 15:25:16 | 141.66 | 0        |
|   | 00DA0383-E048-4577-8ED1-3C56C258FF2F | CcS-9223       | b-2222     | 4642    | 51.1742 | 10.2027   | 2019-03-21 11:47:34 | 325.62 | 0        |

transaction 42 x

Output

Action Output

| #   | Time     | Action   | Message              |
|-----|----------|--|----------------------|
| ✓ 1 | 13:13:42 | select * from transaction t where t.company_id in (select c.id from company c w... | 1000 row(s) returned |

## 3.2

```

33 #3.2 Lista las empresas que han realizar transacciones por una cantidad superior a la mediana de todas las transacciones
34 • select distinct(c.company_name)
35 from company c
36 where id in (select t.company_id
37 from transaction t
38 where amount > (select AVG(t.amount)
39 from transaction t));
40
41

```

Result Grid

|   | company_name                 |
|---|------------------------------|
| ▶ | Ac Fermentum Incorporated    |
|   | Magna A Neque Industries     |
|   | Fusce Corp.                  |
|   | Convallis In Incorporated    |
|   | Ante Iaculis Nec Foundation  |
|   | Donec Ltd                    |
|   | Sed Nunc Ltd                 |
|   | Amet Nulla Donec Corporation |
|   | Nascetur Ridiculus Mus Inc.  |
|   | Vestibulum Lorem PC          |

Result 43 x

Output

Action Output

| #   | Time     | Action  | Message             | Dura  |
|-----|----------|---|---------------------|-------|
| ✓ 1 | 13:14:29 | select distinct(c.company_name) from company c where id in (select t.company... | 100 row(s) returned | 0.076 |

## 3.3

```

42 #3.3 Eliminaran del sistema las empresas que no tienen transacciones registradas, entrega el listado de aquellas empresas
43 • select t.declined
44 from transaction t
45 where not exists (select c.id from company c where c.id = t.company_id)
46 and t.declined = "0"
47 ;

```

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

| declined |
|----------|
|          |

transaction 44 x

Output

Action Output

| # | Time     | Action   | Message           | Durat |
|---|----------|--|-------------------|-------|
| 1 | 13:15:05 | select t.declined from transaction t where not exists (select c.id from company c... | 0 row(s) returned | 0.078 |

## NIVEL 2

### Ejercicio 1

```

52 #Identifica los cinco dias que se va a generar la cantidad mas grande de ingresos
53 #a la empresa por ventas.
54 #Muestra los datos de cada transaccion juntamente con el total de las ventas.
55 • select date(t.timestamp) as fecha, sum(t.amount) as total_ingresos
56 from transaction t
57 #on c.id = t.company_id
58 group by fecha
59 order by total_ingresos Desc
60 limit 5

```

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

|   | fecha      | total_ingresos |
|---|------------|----------------|
| ▶ | 2022-12-13 | 14337.44       |
|   | 2019-11-18 | 13591.32       |
|   | 2023-02-20 | 13332.59       |
|   | 2017-12-20 | 13318.43       |
|   | 2019-03-18 | 12680.95       |

Result 45 x

Output

Action Output

| # | Time     | Action   | Message           |
|---|----------|--|-------------------|
| 1 | 13:16:09 | select date(t.timestamp) as fecha, sum(t.amount) as total_ingresos from transacti... | 5 row(s) returned |

### Ejercicio 2

```

64 #Cual es la mediana de ventas por pais? Presenta los resultados ordenados de mayor a menor media.
65 • select avg(t.amount) as ventas, c.country
66 from company c left join transaction t
67 on c.id = t.company_id
68 group by c.country
69 order by ventas desc

```

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

|   | ventas     | country       |
|---|------------|---------------|
| ▶ | 265.190742 | Australia     |
|   | 264.977877 | United States |
|   | 261.153042 | Belgium       |
|   | 260.841391 | Germany       |
|   | 260.644761 | Ireland       |
|   | 260.468125 | Spain         |
|   | 259.979185 | France        |
|   | 259.586176 | New Zealand   |

Result 46 x

Output

Action Output

| #   | Time     | Action   | Message            |
|-----|----------|--|--------------------|
| ✓ 1 | 13:17:04 | select avg(t.amount) as ventas, c.country from company c left join transaction t ... | 15 row(s) returned |

## Ejercicio 3

### 3.1.1

```

76 En tu empresa, se plantea un nuevo proyecto para lanzar algunas campañas
77 publicitarias para hacer competencia a la compañía "Non Institute".
78 Para lo cual, te piden la lista de todas las transacciones realizadas
79 por empresas que están situadas en el mismo país que esta compañía.
80 */
81 #Muestra el listado aplicando JOIN y subconsultas.
82 • select *
83 from company c Left Join transaction t
84 On c.id = t.company_id
85 where c.country In (select c.country
86 from company c
87 where c.company_name like "Non Institute"
88 #and c.country like "United Kingdom"
89 )
90 ;

```

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

|   | id     | company_name | phone          | email          | country        | website             | id                                   | credit_card_id | company |
|---|--------|--------------|----------------|----------------|----------------|---------------------|--------------------------------------|----------------|---------|
| ▶ | b-2246 | Sed Nunc Ltd | 02 62 64 73 48 | nibh@yahoo.org | United Kingdom | https://cnn.com/one | 008629B4-C9A9-406C-A3D2-71FDA47BC546 | CcS-7063       | b-2246  |
|   | b-2246 | Sed Nunc Ltd | 02 62 64 73 48 | nibh@yahoo.org | United Kingdom | https://cnn.com/one | 00B72BA4-54A3-4B8E-813F-2D57535AA17A | CcS-8475       | b-2246  |
|   | b-2246 | Sed Nunc Ltd | 02 62 64 73 48 | nibh@yahoo.org | United Kingdom | https://cnn.com/one | 01F075B1-D7AE-4D02-AAD9-5FFD72A43F3C | CcS-8700       | b-2246  |
|   | b-2246 | Sed Nunc Ltd | 02 62 64 73 48 | nibh@yahoo.org | United Kingdom | https://cnn.com/one | 023FFCE8-E618-4938-BF56-C8DF80540ADD | CcS-7816       | b-2246  |
|   | b-2246 | Sed Nunc Ltd | 02 62 64 73 48 | nibh@yahoo.org | United Kingdom | https://cnn.com/one | 026838EB-EF91-4564-957B-D6F1662AB7C5 | CcS-9471       | b-2246  |
|   | b-2246 | Sed Nunc Ltd | 02 62 64 73 48 | nibh@yahoo.org | United Kingdom | https://cnn.com/one | 02C2F29E-CEF2-4C1E-A594-F476E8F279C0 | CcS-9082       | b-2246  |

Result 47 x

Output

Action Output

| #   | Time     | Action   | Message              | Duration |
|-----|----------|--|----------------------|----------|
| ✓ 1 | 13:18:12 | select * from company c Left Join transaction t On c.id = t.company_id where c.... | 1000 row(s) returned | 0.000 s  |

### 3.1.2



```

92 #Muestra el listado aplicando solo subconsultas.
93 • select *
94 from transaction t
95 where t.company_id IN (select c.id
96                        from company c
97                        where c.id = t.company_id
98                        #and c.company_name like "Non Institute"
99                        and c.country = (select c.country
100                                       from company c
101                                       where c.company_name like "Non Institute"))
102 ;

```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: | Fetch rows:

|   | id                                   | credit_card_id | company_id | user_id | lat     | longitude | timestamp           | amount | declined |
|---|--------------------------------------|----------------|------------|---------|---------|-----------|---------------------|--------|----------|
| ▶ | 008629B4-C9A9-406C-A3D2-71FDA47BC546 | CcS-7063       | b-2246     | 2482    | 45.7666 | 4.83048   | 2015-07-30 12:12:42 | 486.44 | 0        |
|   | 00B72BA4-54A3-4B8E-B13F-2D57535AA17A | CcS-8475       | b-2246     | 3894    | 55.6212 | -3.7546   | 2017-10-26 22:08:26 | 414.06 | 0        |
|   | 01F075B1-D7AE-4D02-AAD9-5FFD72A43F3C | CcS-8700       | b-2246     | 4119    | 55.856  | -3.15783  | 2018-01-27 13:44:36 | 103.73 | 0        |
|   | 023FFCE8-E618-4938-BF56-C8DF80540ADD | CcS-7816       | b-2246     | 3235    | 46.3568 | 1.82755   | 2016-12-19 11:53:45 | 219.28 | 0        |
|   | 026838EB-EF91-4564-957B-D6F1662AB7C5 | CcS-9471       | b-2246     | 4890    | 42.1332 | 12.396    | 2017-01-10 21:09:29 | 326.87 | 0        |
|   | 02C2F29E-CEF2-4C1E-A594-F476E8F279C0 | CcS-9082       | b-2246     | 4501    | 39.4662 | -0.373246 | 2020-05-24 01:17:29 | 155.72 | 0        |
|   | 02F468DC-426C-47C2-8B0A-D8B25B7A81AF | CcS-6913       | b-2246     | 2332    | 52.175  | 19.3508   | 2023-03-17 16:36:27 | 305.35 | 0        |

transaction 48 x

Output

Action Output

| # | Time     | Action  | Message              |
|---|----------|---|----------------------|
| 1 | 13:19:11 | select * from transaction t where t.company_id IN (select c.id from company c ... | 1000 row(s) returned |

## NIVEL 3

### Ejercicio 1

```

106 | Ejercicio 1
107 | Presenta el nombre, teléfono, país, fecha y amount, de aquellas
108 | empresas que realizaron transacciones con un valor comprendido
109 | entre 350 y 400 euros y en alguna de estas fechas:
110 | 29 de abril del 2015, 20 de julio del 2018 y 13 de marzo del 2024.
111 | Ordena los resultados de mayor a menor cantidad.
112 | */
113 | • select c.company_name, c.phone, c.country, date(t.timestamp), t.amount
114 | from company c left join transaction t
115 | on c.id = t.company_id
116 | where t.amount between 350.28 and 401
117 | and date(t.timestamp) In ('2015-04-29', '2018-07-20', '2024-03-13')
118 | order by t.amount Desc
119 | ;
120 |

```

| Result Grid  |                         |                |                |                   |        |
|--|-------------------------|----------------|----------------|-------------------|--------|
| Filter Rows: <input type="text"/>                      |                         |                |                |                   |        |
| Export: <input type="button" value="Export"/>          |                         |                |                |                   |        |
| Wrap Cell Content: <input type="button" value="Wrap"/> |                         |                |                |                   |        |
|  | company_name            | phone          | country        | date(t.timestamp) | amount |
| ▶  | Aliquam PC              | 01 45 73 52 16 | Germany        | 2024-03-13        | 399.84 |
|  | Auctor Mauris Vel LLP   | 08 09 28 74 14 | United States  | 2018-07-20        | 399.51 |
|  | At Pedo Corp.           | 06 14 48 33 15 | Italy          | 2015-04-29        | 390.69 |
|  | Aliquam PC              | 01 45 73 52 16 | Germany        | 2024-03-13        | 388.29 |
|  | Ordi Adipiscing Limited | 03 18 00 77 81 | United Kingdom | 2018-07-20        | 373.71 |
|  | Fringilla LLC           | 08 29 15 93 57 | New Zealand    | 2015-04-29        | 367.62 |
|  | Pedo Cum Ltd            | 07 62 26 48 38 | Norway         | 2018-07-20        | 356.87 |

Result 49 x

Output

Action Output

| #   | Time     | Action   | Message           |
|-----|----------|--|-------------------|
| ✓ 1 | 13:20:08 | select c.company_name, c.phone, c.country, date(t.timestamp), t.amount from c... | 8 row(s) returned |

## Ejercicio 2



```

122 Ejercicio 2
123 Necesitamos optimizar la asignación de los recursos y dependerá de la capacidad
124 operativa que se requiera, por lo cual te piden la información sobre la
125 cantidad de transacciones que realicen las empresas, pero el departamento
126 de recursos humanos es exigente y quiere un listado de las empresas donde
127 especifiques si tienen más de 400 transacciones o menos.
128 */
129 • select c.company_name, If(count(t.amount)>= 400, "SI", "NO") as listado
130 from company c left join transaction t
131 on c.id = t.company_id
132 #where t.amount >= 400
133 group by c.company_name
134 order by c.company_name;
135
136

```

<

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

|   | company_name                | listado |
|---|-----------------------------|---------|
| ▶ | A Institute                 | SI      |
|   | Ac Fermentum Incorporated   | SI      |
|   | Ac Industries               | SI      |
|   | Ac Libero Inc.              | SI      |
|   | Aliquam Erat Volutpat LLP   | SI      |
|   | Aliquam Iaculis Lacus Corp. | SI      |
|   | Aliquam PC                  | SI      |

Result 50 x

Output

Action Output ▼

| #   | Time     | Action   | Message             |
|-----|----------|--|---------------------|
| ✓ 1 | 13:20:35 | select c.company_name, If(count(t.amount)>= 400, "SI", "NO") as listado from ... | 100 row(s) returned |