

Sprint 2: SQL avanzado: subconsultas

Descripción

Realizarás distintos scripts para mostrar la información que se te solicita desde la base de datos que usaste en el sprint anterior.

NIVEL 1

Ejercicio 1

Muestra todas las transacciones realizadas por empresas de Alemania.

```
4 • SELECT
5     id,
6     (SELECT company_name FROM company WHERE company_id = id) AS company,
7     credit_card_id, DATE(timestamp), amount, declined,
8     (SELECT country FROM company WHERE company_id = id) AS country
9 FROM transaction
10 WHERE company_id IN (
11     SELECT id
12     FROM company
13     WHERE country = 'Germany');
14
```

Result Grid | Filter Rows: | Export: | Wrap Cell Contents: [\[icon\]](#)

| id | company | credit_card_id | DATE(timestamp) | amount | declined | country |
|--------------------------------------|----------------------------|----------------|-----------------|--------|----------|---------|
| 108B1D1D-5B23-A76C-55EF-C568E49A05DD | Ac Fermentum Incorporated | CdU-2938 | 2021-07-07 | 293.57 | 0 | Germany |
| EA2C3281-C9C1-A387-44F8-729FB4B51C76 | Ac Fermentum Incorporated | CdU-2938 | 2021-05-09 | 119.36 | 1 | Germany |
| 0DD2E608-5C9E-D1B3-4999-B99F43AD735A | Convallis In Incorporated | CdU-2959 | 2021-04-17 | 252.47 | 1 | Germany |
| AB069F53-965E-A2A8-CE06-CA8C4FD92501 | Convallis In Incorporated | CdU-2959 | 2021-04-15 | 60.99 | 0 | Germany |
| 0466A42E-47CF-8D24-FD01-C0B689713128 | Nunc Interdum Incorporated | CdU-4219 | 2021-07-26 | 49.53 | 0 | Germany |
| 0A476ED9-0C13-1962-F87B-D3563924B539 | Nunc Interdum Incorporated | CdU-4359 | 2022-02-26 | 430.49 | 0 | Germany |
| 122DC333-E19F-D629-DCD8-9C54CF1EBB9A | Nunc Interdum Incorporated | CdU-4366 | 2021-06-09 | 172.01 | 0 | Germany |
| 135267BA-2E7D-957C-C42C-6450A2B3ED54 | Nunc Interdum Incorporated | CdU-4520 | 2021-12-29 | 17.97 | 0 | Germany |
| 14CAE5B5-8FB1-3E4A-4C85-0EA4167534F4 | Nunc Interdum Incorporated | CdU-4849 | 2021-12-31 | 388.04 | 0 | Germany |
| 158A3ACB-541C-DBCC-65BD-6373CC67BF1C | Nunc Interdum Incorporated | CdU-4849 | 2022-03-08 | 240.29 | 0 | Germany |

result 1 x

Ejercicio 2

Marketing está preparando algunos informes de cierres de gestión, te piden que les pases un listado de las empresas que han realizado transacciones por una suma superior a la media de todas las transacciones.

```
22 • SELECT
23     id,
24     company_name,
25     phone,
26     email,
27     country,
28     website,
29     (SELECT ROUND(AVG(amount),2) FROM transaction WHERE company.id = transaction.company_id) AS avg_amount
30 FROM
31     company
32 WHERE
33     (SELECT ROUND(AVG(amount),2) FROM transaction) <
34     (SELECT ROUND(AVG(amount),2) FROM transaction WHERE company.id = transaction.company_id)
35 ORDER BY
36     avg_amount DESC;
```

| Result Grid | | | | | | | |
|--------------|--------|------------------------------|----------------|-----------------------------------|----------------|--------------------------------|------------|
| Filter Rows: | | Export: | | Wrap Cell Contents: | | | |
| | id | company_name | phone | email | country | website | avg_amount |
| ▶ | b-2398 | Eget Ipsum Ltd | 03 67 44 56 72 | lacinia.at.iaculis@hotmail.net | United States | https://whatsapp.com/settings | 473.08 |
| | b-2310 | Non Magna LLC | 06 71 73 13 17 | nisl.quisque.fringilla@hotmail.ca | United Kingdom | https://whatsapp.com/site | 468.35 |
| | b-2410 | Sed Id Limited | 07 28 18 18 13 | iaculis.enim@outlook.net | United States | https://netflix.com/sub/cars | 461.21 |
| | b-2454 | Justo Eu Arcu Ltd | 08 42 56 71 52 | ac.facilisis@icloud.couk | Italy | https://nytimes.com/group/9 | 443.64 |
| | b-2458 | Eget Tincidunt Dui Institute | 05 35 93 32 44 | eget.laoreet@hotmail.org | Netherlands | https://wikipedia.org/user/110 | 442.52 |
| | b-2522 | Viverra Donec Foundation | 03 33 12 32 73 | dictum.eu@outlook.net | United Kingdom | https://nytimes.com/site | 442.28 |

Result 3 x

Output

Ejercicio 3

El departamento de contabilidad perdió la información de las transacciones realizadas por una empresa, pero no recuerdan su nombre, sólo recuerdan que su nombre iniciaba con la letra c. ¿Cómo puedes ayudarles? Coméntelo acompañándolo de la información de las transacciones.

```
46 ● SELECT
47     company_name,
48     country,
49     'Approved' AS transaction_status,
50     (SELECT DATE(timestamp) FROM transaction WHERE company.id = transaction.company_id AND declined = 0) AS transaction_date,
51     (SELECT ROUND(amount, 2) FROM transaction WHERE company.id = transaction.company_id AND declined = 0) AS amount
52 FROM company
53 WHERE company_name IN (
54     SELECT company_name
55     FROM company
56     WHERE company_name LIKE 'C%')
57
58 UNION ALL
59
60 SELECT
61     company_name,
62     country,
63     'Declined' AS transaction_status,
64     (SELECT DATE(timestamp) FROM transaction WHERE company.id = transaction.company_id AND declined = 1) AS transaction_date,
65     (SELECT ROUND(amount, 2) FROM transaction WHERE company.id = transaction.company_id AND declined = 1) AS amount
66 FROM company
67 WHERE company_name IN (
68     SELECT company_name
69     FROM company
70     WHERE company_name LIKE 'C%')
71 ORDER BY company_name;
72
```

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

| company_name | country | transaction_status | transaction_date | amount |
|----------------------------------|-------------|--------------------|------------------|--------|
| Convallis In Incorporated | Germany | Approved | 2021-04-15 | 60.99 |
| Convallis In Incorporated | Germany | Declined | 2021-04-17 | 252.47 |
| Cras Consulting | Belgium | Approved | 2021-03-18 | 60.93 |
| Cras Consulting | Belgium | Declined | 2021-11-28 | 230.41 |
| Cras Vehicula Aliquet Industries | Netherlands | Approved | 2021-10-27 | 181.87 |
| Cras Vehicula Aliquet Industries | Netherlands | Declined | 2021-07-23 | 158.05 |

result 4 x

output

Ejercicio 4

Eliminar del sistema las empresas que no tienen transacciones registradas, entrega el listado de estas empresas.

```
78 • SELECT id
79 FROM company
80 WHERE NOT EXISTS (SELECT company_id
81 FROM transaction);
```

NIVEL 2

Ejercicio 1

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.

```
96 • SELECT
97     (SELECT company_name FROM company WHERE id = company_id) AS company_name,
98     (SELECT country FROM company WHERE id = company_id) AS country,
99     transaction.*
100 FROM transaction
101 WHERE company_id IN (SELECT id
102 FROM company
103 WHERE country = (SELECT country
104 FROM company
105 WHERE company_name = 'Non Institute'));
```

| Result Grid | | | | | | | | | | | | |
|--|----------------------|----------------|--------------------------------------|----------------|------------|---------|----------|-----------|---------------------|--------|----------|--|
| Filter Rows: | | | | | | | | | | | | |
| Export: | | | | | | | | | | | | |
| Wrap Cell Contents: IA | | | | | | | | | | | | |
| | company_name | country | id | credit_card_id | company_id | user_id | lat | longitude | timestamp | amount | declined | |
| ▶ | Sed Nunc Ltd | United Kingdom | 2B928E1C-EC14-A760-0A75-871477649D6A | CcU-2980 | b-2246 | 275 | -41.0496 | 161.685 | 2021-08-10 08:14:49 | 383.73 | 0 | |
| | Sed Nunc Ltd | United Kingdom | ACD2011A-A2B1-C365-41E1-2A800C65147A | CcU-2980 | b-2246 | 275 | -54.4792 | -82.7974 | 2022-03-05 20:41:20 | 60.07 | 1 | |
| | Non Magna LLC | United Kingdom | 4334349E-CEB0-3D68-A4D4-FEB7718A1ACE | CcU-3092 | b-2310 | 275 | -20.4859 | 150.87 | 2021-05-03 22:37:23 | 458.74 | 0 | |
| | Non Magna LLC | United Kingdom | BC2B9A38-77B4-28CD-1FE8-14DED863E773 | CcU-3092 | b-2310 | 275 | -78.0295 | 18.5295 | 2021-10-18 07:27:35 | 477.95 | 1 | |
| | Enim Condimentum Ltd | United Kingdom | 1479B3D2-87BA-C7B8-4CE3-8D7C2DE85ABB | CcU-2994 | b-2326 | 133 | 66.2672 | 172.399 | 2021-08-09 00:58:07 | 309.45 | 0 | |
| | Enim Condimentum Ltd | United Kingdom | 152598C2-029D-D684-4B66-91EDF393EBFF | CcU-2994 | b-2326 | 126 | -67.0189 | -141.672 | 2021-07-05 03:10:00 | 395.43 | 0 | |
| | Enim Condimentum Ltd | United Kingdom | 1B636B58-A2E8-7C69-D9C9-C5453SDAFD3B | CcU-2994 | b-2326 | 131 | 70.2543 | -13.1336 | 2021-07-06 08:48:46 | 195.06 | 0 | |
| | Enim Condimentum Ltd | United Kingdom | 20418DE5-B804-BE9B-BD7A-A95C1BFD8F5C | CcU-2994 | b-2326 | 126 | -79.1145 | 1.51481 | 2022-01-03 15:59:29 | 479.52 | 0 | |
| | Enim Condimentum Ltd | United Kingdom | 239B8576-6C0E-137A-C2F6-3180A188A2D3 | CcU-2994 | b-2326 | 126 | 23.6174 | 137.222 | 2021-08-26 06:04:05 | 43.90 | 0 | |

Result 5 x

Output

Ejercicio 2

El departamento de contabilidad necesita que encuentres la empresa que ha realizado la transacción de mayor suma en la base de datos.

```
111 • SELECT *,
112         (SELECT MAX(amount) FROM transaction) AS monto_transaccion
113 FROM company
114 WHERE id = (SELECT company_id
115             FROM transaction
116             ORDER BY amount DESC
117             LIMIT 1);
```

| Result Grid Filter Rows: Export: Wrap Cell Content: | | | | | | |
|---|----------------------------|----------------|-----------------|---------|---|-------------------|
| id | company_name | phone | email | country | website | monto_transaccion |
| b-2302 | Nunc Interdum Incorporated | 05 18 15 48 13 | non@outlook.com | Germany | https://wikipedia.org/en-us | 499.23 |

NIVEL 3

Ejercicio 1

Se están estableciendo los objetivos de la empresa para el próximo trimestre, por lo que necesitan una base sólida para evaluar el rendimiento y medir el éxito en los diferentes mercados. Para ello, necesitan la lista de países cuyo promedio de transacciones sea superior al promedio general.

```
129 • SELECT (SELECT country FROM company c WHERE c.id=t.company_id) AS country,
130           ROUND(AVG(amount),2) AS avg_transactions
131 FROM transaction t
132 GROUP BY country
133 HAVING avg_transactions > (
134                               SELECT AVG(amount)
135                               FROM transaction
136                               )
137 ORDER BY avg_transactions DESC;
138
```

| Result Grid Filter Rows: Export: Wrap Cell Content: | | |
|---|------------------|--|
| country | avg_transactions | |
| United States | 309.18 | |
| Ireland | 277.31 | |
| United Kingdom | 270.73 | |
| Canada | 269.65 | |
| Sweden | 260.62 | |

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 donde especifiques si tienen más de 4 o menos transacciones.

```
147 • SELECT (SELECT company_name FROM company c WHERE c.id=t.company_id) AS company_name,
148         company_id,
149         SUM(CASE WHEN declined=0 THEN 1 ELSE 0 END) AS approved_transactions,
150         IFNULL(SUM(CASE WHEN declined=1 THEN 1 END),0) AS declined_transactions,
151         COUNT(*) AS total_transactions,
152         CASE
153             WHEN COUNT(*) < 4 THEN 'Menos de 4 transacciones'
154             WHEN COUNT(*) = 4 THEN '4 transacciones'
155             ELSE 'Más de 4 transacciones'
156         END AS total
157 FROM transaction t
158 GROUP BY company_id
159 ORDER BY total_transactions DESC, company_id;
```

| company_name | company_id | approved_transactions | declined_transactions | total_transactions | total |
|----------------------------|------------|-----------------------|-----------------------|--------------------|--------------------------|
| Nunc Interdum Incorporated | b-2302 | 104 | 1 | 105 | Más de 4 transacciones |
| Ut Semper Foundation | b-2346 | 58 | 1 | 59 | Más de 4 transacciones |
| Enim Condimentum Ltd | b-2326 | 56 | 1 | 57 | Más de 4 transacciones |
| Arcu LLP | b-2278 | 55 | 1 | 56 | Más de 4 transacciones |
| Lorem Eu Incorporated | b-2362 | 53 | 1 | 54 | Más de 4 transacciones |
| Malesuada PC | b-2494 | 51 | 1 | 52 | Más de 4 transacciones |
| Non Institute | b-2618 | 30 | 0 | 30 | Más de 4 transacciones |
| Ac Fermentum Incorporated | b-2222 | 1 | 1 | 2 | Menos de 4 transacciones |
| Magna A Neque Industries | b-2226 | 1 | 1 | 2 | Menos de 4 transacciones |

Result 9 x

Output