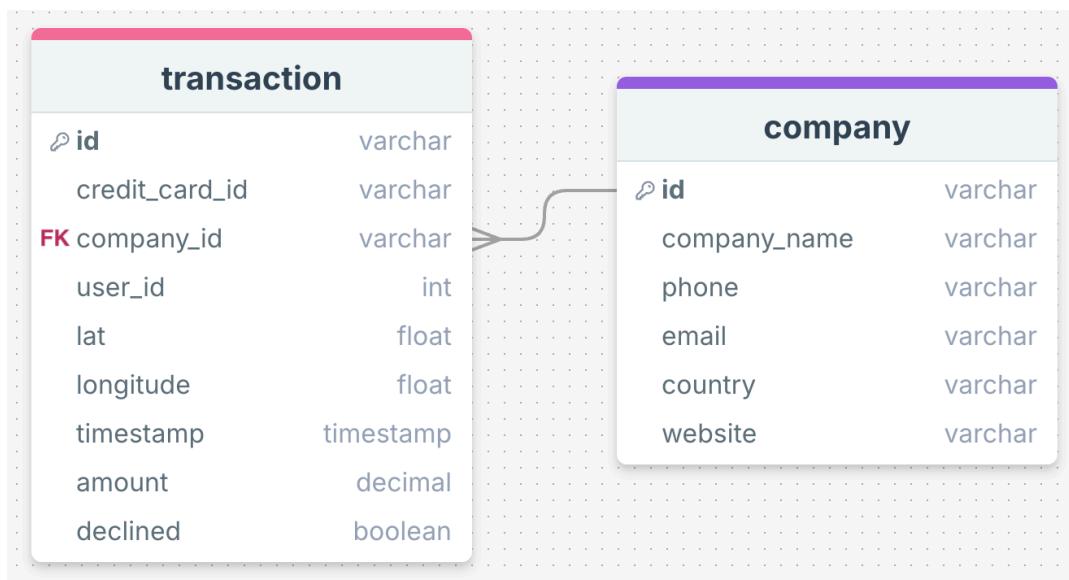


Sprint 2

Nivell 1

- Exercici 1

A partir dels documents adjunts (estructura_dades i dades_introduir), importa les dues taules. Mostra les característiques principals de l'esquema creat i explica les diferents taules i variables que existeixen. Assegura't d'incloure un diagrama que il·lustri la relació entre les diferents taules i variables.



La base de datos Transactions, tiene 2 tablas, transaction y company.

La primary key de la tabla transaction es “id”.

La primary key de la tabla company es “id”.

La foreign key que vincula las dos tablas es company_id (de la tabla transaction) a id (de la tabla company), tienen una relación de N:1.

- Exercici 2

Utilitzant JOIN realitzaràs les següents consultes:

- Llistat dels països que estan fent compres.
- ```
SELECT DISTINCT country
 FROM company
 JOIN transaction ON company.id=transaction.company_id;

 -- aseguro que no haya diferencias con paises con compras rechazadas
```
- ```
SELECT DISTINCT country
  FROM transaction
  JOIN company ON transaction.company_id = company.id
  WHERE transaction.declined = FALSE;
```

Result Grid Filter Rows: Search Export:

country

▶ Canada
Germany
Italy
United Kingdom
Sweden
Ireland
United States
Norway
France
New Zealand
Netherlands
Belgium
Australia
China
Spain

Result 60 Read Only

Action Output

	Time	Action	Response	Duration / Fetch Time
83	12:26:00	SELECT DISTINCT country...	15 row(s) returned	0.0074 sec / 0.00003...

(No había diferencia en el resultado de las 2 queries)

- Des de quants països es realitzen les compres.
- ```
SELECT COUNT(DISTINCT country)
 FROM company
 JOIN transaction ON company.id=transaction.company_id;

-- aseguro de que no haya diferencias con paises con compras rechazadas por si a caso
```
- ```
SELECT COUNT(DISTINCT country)
  FROM company
 JOIN transaction ON company.id=transaction.company_id
 WHERE transaction.declined = FALSE;
```

Result Grid Filter Rows: Search Export:

COUNT(DISTINCT countr...)

▶ 15

Result 59 Read Only

Action Output

	Time	Action	Response	Duration / Fetch Time
82	12:23:47	SELECT COUNT(DISTINCT...	1 row(s) returned	0.0020 sec / 0.00001...

(No había diferencia entre el resultado de las 2 queries)

- Identifica la companyia amb la mitjana més gran de vendes.
- ```
SELECT company.company_name, AVG(transaction.amount) AS mitjana_vendes
 FROM transaction
 JOIN company ON transaction.company_id = company.id
 WHERE transaction.declined = FALSE
 GROUP BY company.company_name
 ORDER BY mitjana_vendes DESC
 LIMIT 1;
```

| Result Grid                            |  | Filter Rows:   | Search | Export:                   | Fetch rows: |                   |  |                         |             |
|----------------------------------------|--|----------------|--------|---------------------------|-------------|-------------------|--|-------------------------|-------------|
|                                        |  |                |        |                           |             |                   |  |                         | Result Grid |
|                                        |  |                |        |                           |             |                   |  |                         | Result Grid |
| company_name                           |  | mitjana_vendes |        |                           |             |                   |  |                         |             |
| ▶ Eget Ipsum Ltd                       |  | 481.860000     |        |                           |             |                   |  |                         |             |
| Result 61                              |  |                |        |                           |             |                   |  |                         | Read Only   |
| Action Output                          |  |                |        |                           |             |                   |  |                         |             |
|                                        |  | Time           |        | Action                    |             | Response          |  | Duration / Fetch Time   |             |
| <input checked="" type="checkbox"/> 84 |  | 12:27:58       |        | SELECT company.company... |             | 1 row(s) returned |  | 0.018 sec / 0.000021... |             |

## - Exercici 3

Utilitzant només subconsultes (sense utilitzar JOIN):

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

Entiendo que por "todas las transacciones" se incluye también a las transacciones denegadas.

- ```
SELECT*
FROM transaction
WHERE company_id IN (SELECT id FROM company WHERE country = 'Germany');
```

Result Grid		Filter Rows:	Search	Edit:	Export/Import:				
									Result Grid
									Result Grid
id		credit_card_id							
EA2C3281-C9C1-A387-44F8-729FB4B51C76		CcU-2938							
0DD2E608-5C9E-1B3C-4999-B99F43AD735A		CcU-2959							
AB069F53-965E-A2A8-CE06-CAB8C4FD92501		CcU-2959							
0466A42E-47CF-8D24-FD01-C0B689713128		CcU-4219							
0A476ED9-0C13-1962-878B-D3563924B539		CcU-4359							
122DC333-E19F-D629-DCD8-9C54CF1EBB9A		CcU-4366							
135267BA-2E7D-957C-C42C-6450A2B3ED54		CcU-4520							
14CAE5B5-8FB1-3E4A-4C85-0EA4167534F4		CcU-4849							
158A3ACB-541C-DDBC-65BD-6373CC67BF1C		CcU-4849							
162C7E78-2B6B-7971-A1E4-D2124E732451		CcU-4527							
1717FD6B-ADAD-7082-A748-9112BE892CCC		CcU-4219							
1753A288-9FC1-52E6-5C39-A1FFB97B0D3A		CcU-4345							
186F53DE-DE27-B1FE-B82F-15B61CCEB7726		CcU-4310							
18C4E2DD-1E4C-F35E-2198-C660BD81DC25		CcU-4849							
18CCBA7C-ABC1-813D-FAF3-4BA97429368		CcU-4219							
19E1EC3E-2119-1EFD-8AAE-593D4A4E63F		CcU-4219							
1B11D749-936C-BA6C-E94B-30C3293A239		CcU-4219							
1B521826-5860-5A86-5364-6EB61675CC21B7		CcU-4226							
1C3B3CC4-B919-7616-6A57-EEBDD7B7B68B		CcU-4415							
2075B12D-69AB-7022-57BB-33ED49B72766		CcU-4247							
241827A6-E87C-6DA3-5AC9-BBCDF42B7D2A		CcU-4849							
2585891B-C4C7-075E-358B-B575339E5177		CcU-4450							
263035AA-8758-E413-8CC4-6D8F81BBF899		CcU-4338							
2C9A4725-4B19-621C-4EE4-AE9E31CFE5B0		CcU-4219							
33525F74-4864-C19F-7D23-A8D7866B87C4		CcU-4492							
34368DE0-D181-B15C-6698-8DF585C06421		CcU-4219							
34AA1D64-2989-DE1C-8705-C66C8DBB19DD		CcU-4219							
369213C7-BD65-0715-6644-D5E4FB9D9914		CcU-4219							
3A3E00C1-C191-02EF-AD8E-42C9DA644E4A		CcU-4849							
3E495EC1-E1C5-26F1-0E3E-2D13E44A2593A		CcU-4282							
41932C77-45B5-C786-6B3F-DBB619B2D535		CcU-4219							
442713DA-4B6E-132A-51B8-AC44EA6D5839		CcU-4436							

transaction 100								Apply	
Action Output									Revert
		Time		Action		Response		Duration / Fetch Time	
<input checked="" type="checkbox"/> 123		10:34:26		SELECT* FROM transaction WHERE company_id IN (SELECT id FROM company...		118 row(s) returned		0.0047 sec / 0.00007...	

Sino, también lo he intentado usando un filtro para quitar las transacciones denegadas.

- ```
SELECT*
FROM transaction
WHERE company_id IN (SELECT id FROM company WHERE country = 'Germany')
AND transaction.declined = FALSE;
```

El resultado es diferente ya que aquí hay 7 transacciones menos.

| Result Grid                           |                | Filter Rows: | Search  | Edit:    | Export/Import: |                     |        |          |
|---------------------------------------|----------------|--------------|---------|----------|----------------|---------------------|--------|----------|
| id                                    | credit_card_id | company_id   | user_id | lat      | longitude      | timestamp           | amount | declined |
| ► 108B1D1-DB23-A76C-55EF-C568E49A05DD | CcU-2938       | b-2222       | 275     | 83.7839  | -178.86        | 2021-07-07 17:43:16 | 293.57 | 0        |
| AB069F53-965E-A2A8-CE06-CA8C4FD92501  | CcU-2959       | b-2234       | 275     | 1.64819  | -158.007       | 2021-04-15 13:37:18 | 60.99  | 0        |
| 0466A42E-47CF-8D24-FD01-C0B689713128  | CcU-4219       | b-2302       | 170     | -43.9695 | -117.525       | 2021-07-26 07:29:18 | 49.53  | 0        |
| 0A476ED9-0C13-1962-F87B-D3563924B539  | CcU-4359       | b-2302       | 221     | -56.4901 | 114.801        | 2022-02-26 20:33:54 | 430.49 | 0        |
| 122DC333-E19F-D629-DCD8-9C54CF1EB9A   | CcU-4366       | b-2302       | 221     | 29.6372  | -166.173       | 2021-06-09 06:04:14 | 172.01 | 0        |
| 135267BA-2E7D-957C-C42C-6450A2B3ED54  | CcU-4520       | b-2302       | 210     | 20.8724  | 14.9732        | 2021-12-29 20:38:23 | 17.97  | 0        |
| 14CAE5B5-8FB1-3E4A-4C85-0EA4167534F4  | CcU-4849       | b-2302       | 189     | -53.6202 | 93.0533        | 2021-12-31 00:29:42 | 388.04 | 0        |
| 158A3ACB-541C-DBC5-65BD-6373CC67BF1C  | CcU-4849       | b-2302       | 183     | 42.5424  | -170.347       | 2022-03-08 05:02:19 | 240.29 | 0        |
| 162C7E78-2B6B-7971-A1E4-D2124E732451  | CcU-4527       | b-2302       | 210     | -69.1381 | 58.0017        | 2021-04-11 05:59:18 | 231.26 | 0        |
| 1717FD6B-ADAD-7082-A748-9112BE8920CC  | CcU-4219       | b-2302       | 172     | 69.4892  | -138.411       | 2021-12-29 16:18:54 | 249.91 | 0        |
| 1753A288-9FC1-52E6-5C39-A1FFB97BD03A  | CcU-4345       | b-2302       | 222     | 57.9422  | -114.729       | 2021-08-17 05:32:08 | 497.84 | 0        |
| 186F53DE-DE27-B1FE-B82F-15B61CEB7726  | CcU-4310       | b-2302       | 225     | -72.7448 | 36.6211        | 2021-12-20 13:13:45 | 238.16 | 0        |
| 18C4E2DD-1E4C-F35E-2198-C660B81DC25   | CcU-4849       | b-2302       | 177     | 68.0133  | 91.4839        | 2021-09-24 18:55:25 | 237.04 | 0        |
| 18CCBA7C-ABC1-813D-FAF3-4BAB97429368  | CcU-4219       | b-2302       | 173     | 51.3881  | -156.371       | 2021-06-21 03:21:34 | 58.16  | 0        |
| 19E1EC3E-2119-1EFD-8AAE-5930D4A4E63F  | CcU-4219       | b-2302       | 154     | -56.0839 | 116.987        | 2021-07-06 21:40:15 | 29.63  | 0        |
| 1B117D49-936C-B4AC-E94B-30C3293A239   | CcU-4219       | b-2302       | 163     | -75.099  | 109.034        | 2021-05-09 23:56:04 | 371.35 | 0        |
| 1B52126-5860-5A86-5364-6EB6A5CC21B7   | CcU-4226       | b-2302       | 231     | -53.4613 | 49.1484        | 2021-08-14 02:39:50 | 476.33 | 0        |
| 1C3B3CC4-B919-7616-6A57-EEBDD7B7B68B  | CcU-4415       | b-2302       | 217     | 81.1737  | 62.8835        | 2021-09-27 16:07:34 | 462.35 | 0        |
| 2075B12D-69AB-7022-57BB-33ED49B72766  | CcU-4247       | b-2302       | 229     | -9.03682 | 88.9005        | 2022-02-13 04:07:29 | 87.44  | 0        |
| 241827A6-E87C-6DA3-5AC9-BBCFD42B7D2A  | CcU-4849       | b-2302       | 190     | -12.1172 | -175.322       | 2021-08-04 04:44:35 | 487.64 | 0        |
| 2585891B-C4C7-075E-358B-B575339E5177  | CcU-4450       | b-2302       | 215     | 32.9171  | -40.6059       | 2021-08-24 05:32:36 | 253.49 | 0        |
| 263035AA-8758-E413-8CC4-6D8F81B1BF899 | CcU-4338       | b-2302       | 223     | 36.61    | 83.1953        | 2021-06-21 11:23:01 | 499.23 | 0        |
| 2C9A4725-4B19-621C-4EE4-AE9E31CFE5B0  | CcU-4219       | b-2302       | 149     | -46.7357 | 162.102        | 2021-08-14 09:23:34 | 28.95  | 0        |
| 33525F74-4864-C19F-7D23-A8D7866BB7C4  | CcU-4492       | b-2302       | 212     | 10.3105  | 13.9999        | 2021-12-15 12:22:03 | 423.71 | 0        |
| 34368DE0-D181-1B5C-6698-8DF585C06421  | CcU-4219       | b-2302       | 153     | -8.20452 | 89.9882        | 2021-07-05 10:54:54 | 86.69  | 0        |
| 34AA1D64-2989-DE1C-8705-C66C8DDB19DD  | CcU-4219       | b-2302       | 166     | -17.0772 | -169.006       | 2022-03-02 05:30:41 | 275.45 | 0        |
| 369213C7-BD65-0715-6644-D5E4F9BD9914  | CcU-4219       | b-2302       | 147     | 88.7859  | -148.023       | 2021-12-29 18:54:29 | 458.66 | 0        |
| 3A3E00C1-C191-02EF-AD8E-42C9DA644E4A  | CcU-4849       | b-2302       | 175     | 0.340013 | 174.033        | 2021-11-10 19:14:50 | 451.66 | 0        |
| 3E495EC1-E1C5-26F1-0E3E-2D13EAA2593A  | CcU-4282       | b-2302       | 227     | -50.5725 | -172.508       | 2022-03-03 14:29:15 | 417.70 | 0        |
| 41932C77-45B5-C786-6B3F-DBB619B2D535  | CcU-4219       | b-2302       | 142     | -8.37247 | -67.8776       | 2022-02-12 09:12:05 | 358.36 | 0        |
| 442713DA-4B6E-132A-51B8-AC44E6D5839   | CcU-4436       | b-2302       | 216     | -22.3294 | -22.0184       | 2022-01-29 17:12:59 | 59.67  | 0        |
| 5218E51C-E258-BF4A-BE23-AF815F66FAF8  | CcU-4219       | b-2302       | 157     | 18.9732  | 66.3985        | 2021-09-07 21:38:45 | 234.52 | 0        |

transaction 103

Action Output

| Time         | Action                                                                  | Response            | Duration / Fetch Time   |
|--------------|-------------------------------------------------------------------------|---------------------|-------------------------|
| 126 10:56:40 | SELECT* FROM transaction WHERE company_id IN (SELECT id FROM company... | 111 row(s) returned | 0.0031 sec / 0.00005... |

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

```
• SELECT company_name
FROM company
WHERE id IN (SELECT company_id FROM transaction WHERE amount > (SELECT AVG(amount) from transaction));
```

| Result Grid                      |  | Filter Rows: | Search | Export: |  |
|----------------------------------|--|--------------|--------|---------|--|
| company_name                     |  |              |        |         |  |
| ► Ac Fermentum Incorporated      |  |              |        |         |  |
| Magna A Neque Industries         |  |              |        |         |  |
| Fusce Corp.                      |  |              |        |         |  |
| Ante Iaculis Nec Foundation      |  |              |        |         |  |
| Donec Ltd                        |  |              |        |         |  |
| Sed Nunc Ltd                     |  |              |        |         |  |
| Nascetur Ridiculus Mus Inc.      |  |              |        |         |  |
| Vestibulum Lorem PC              |  |              |        |         |  |
| Gravida Sagittis LLP             |  |              |        |         |  |
| Mus Aenean Eget Foundation       |  |              |        |         |  |
| Dis Parturient Institute         |  |              |        |         |  |
| Sed LLC                          |  |              |        |         |  |
| Arcu LLP                         |  |              |        |         |  |
| Fringilla LLC                    |  |              |        |         |  |
| Elit Etiam Laoreet Associates    |  |              |        |         |  |
| Nunc Interdum Incorporated       |  |              |        |         |  |
| Augue Foundation                 |  |              |        |         |  |
| Non Magna LLC                    |  |              |        |         |  |
| A Institute                      |  |              |        |         |  |
| Quam A Felis Industries          |  |              |        |         |  |
| Integer Mollis Corp.             |  |              |        |         |  |
| Enim Condimentum Ltd             |  |              |        |         |  |
| Donec Fringilla PC               |  |              |        |         |  |
| Amet Institute                   |  |              |        |         |  |
| Magna Incorporated               |  |              |        |         |  |
| Fringilla Porttitor Incorporated |  |              |        |         |  |
| Ut Semper Foundation             |  |              |        |         |  |
| Ac Industries                    |  |              |        |         |  |
| Lorem Eu Incorporated            |  |              |        |         |  |
| Mauris Institute                 |  |              |        |         |  |
| Erat LLP                         |  |              |        |         |  |

company 106

Action Output

| Time         | Action                    | Response           | Duration / Fetch Time   |
|--------------|---------------------------|--------------------|-------------------------|
| 129 11:07:08 | SELECT company_name FR... | 70 row(s) returned | 0.0052 sec / 0.00003... |

Ahora compruebo que no haya diferencias al quitar las transacciones denegadas. El resultado muestra que hay 20 empresas menos usando esta query.

- `SELECT company_name  
FROM company  
WHERE id IN (SELECT company_id FROM transaction WHERE amount > (SELECT AVG(amount) FROM transaction)  
AND declined = FALSE);`

Result Grid   Filter Rows:  Search   Export:

|                                  |
|----------------------------------|
| company_name                     |
| Lorem Eu Incorporated            |
| Non Institute                    |
| Ut Semper Foundation             |
| Nunc Interdum Incorporated       |
| Ac Fermentum Incorporated        |
| Enim Condimentum Ltd             |
| Tortor Nunc Commodo Company      |
| Malesuada PC                     |
| Arcu LLP                         |
| Aliquet Diam Limited             |
| Mauris Institute                 |
| Sed Nunc Ltd                     |
| Fringilla LLC                    |
| Neque Tellus Incorporated        |
| Non Magna LLC                    |
| Sed LLC                          |
| Quam A Felis Industries          |
| Rutrum Non Inc.                  |
| Amet Luctus Vulpitate Foundation |
| Eget Ipsum Ltd                   |
| Sapien Nunc Pulvinar LLP         |
| Amet Institute                   |
| Ac Industries                    |
| Viverra Donec Foundation         |
| Placerat LLP                     |
| Sed Id Limited                   |
| Netus Et Malesuada Ltd           |
| Elit Etiam Laoreet Associates    |
| Pede Cum Ltd                     |
| Magna A Neque Industries         |
| ▶ Vestibulum Lorem PC            |
| company 107                      |

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

- `SELECT company_name  
 FROM company  
 WHERE id NOT IN (SELECT company_id FROM transaction);`

Result Grid   Filter Rows:  Export:

| company_name |
|--------------|
| company 68   |

Action Output

|    | Time     | Action                                  | Response          | Duration / Fetch Time   |
|----|----------|-----------------------------------------|-------------------|-------------------------|
| 91 | 13:14:18 | SELECT company_name FROM company WHE... | 0 row(s) returned | 0.0016 sec / 0.00001... |

Result Grid

No hay ninguna empresa sin ninguna transacción registrada.

## Nivell 2

### - 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.

```
78 • SELECT DATE(transaction.timestamp), sum(amount) as ingressos
79 FROM transaction
80 WHERE declined = FALSE
81 GROUP BY DATE(timestamp)
82 ORDER BY ingressos DESC
83 LIMIT 5;
84
```

The screenshot shows a MySQL query results interface. At the top, the SQL query is displayed:

```
78 • SELECT DATE(transaction.timestamp), sum(amount) as ingressos
79 FROM transaction
80 WHERE declined = FALSE
81 GROUP BY DATE(timestamp)
82 ORDER BY ingressos DESC
83 LIMIT 5;
84
```

The results grid displays the following data:

| DATE(transaction.timestamp) | ingressos |
|-----------------------------|-----------|
| 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   |

Below the results, the status bar shows "Result 113" and "Read Only". The action output section shows the query details:

| Action | Time     | Action                                          | Response          | Duration / Fetch Time   |
|--------|----------|-------------------------------------------------|-------------------|-------------------------|
| 138    | 11:32:28 | SELECT DATE(transaction.timestamp), sum(amou... | 5 row(s) returned | 0.0030 sec / 0.00001... |

### - Exercici 2

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

```
87 • SELECT country, AVG(transaction.amount) AS avg_vendas
88 FROM company
89 JOIN transaction ON transaction.company_id=company.id
90 WHERE declined = FALSE
91 GROUP BY country
92 ORDER BY avg_vendas DESC;
93
```

The screenshot shows a MySQL query results interface. At the top, the SQL query is displayed:

```
87 • SELECT country, AVG(transaction.amount) AS avg_vendas
88 FROM company
89 JOIN transaction ON transaction.company_id=company.id
90 WHERE declined = FALSE
91 GROUP BY country
92 ORDER BY avg_vendas DESC;
93
```

The results grid displays the following data:

| country        | avg_vendas |
|----------------|------------|
| United States  | 287.531111 |
| Ireland        | 285.825357 |
| Sweden         | 276.668382 |
| United Kingdom | 271.767527 |
| Canada         | 261.941930 |
| Belgium        | 255.217500 |
| Norway         | 251.114918 |
| Italy          | 243.342222 |
| Germany        | 242.239189 |
| Netherlands    | 240.940000 |
| China          | 222.240000 |
| Australia      | 177.331667 |
| France         | 169.410000 |
| New Zealand    | 167.061667 |
| Spain          | 26.220000  |

Below the results, the status bar shows "Result 115" and "Read Only". The action output section shows the query details:

| Action | Time     | Action                                           | Response           | Duration / Fetch Time   |
|--------|----------|--------------------------------------------------|--------------------|-------------------------|
| 140    | 11:37:02 | SELECT country, AVG(transaction.amount) AS av... | 15 row(s) returned | 0.0069 sec / 0.00001... |

## - 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.

- Mostra el llistat aplicant JOIN i subconsultes.

- **SELECT\***

**FROM transaction**

**JOIN company ON company.id=transaction.company\_id**

**WHERE company.country = (SELECT country FROM company WHERE company\_name = 'Non Institute');**

| Result Grid                          |                |            |         |                |           |                     |  |
|--------------------------------------|----------------|------------|---------|----------------|-----------|---------------------|--|
|                                      |                | Edit:      |         | Export/Import: |           |                     |  |
| Filter Rows:  Search                 |                |            |         |                |           |                     |  |
| id                                   | credit_card_id | company_id | user_id | lat            | longitude | timestamp           |  |
| ACD2011A-A2B1-C365-41E1-2AB0UC6514/A | CcU-2980       | b-2246     | 275     | -54.4792       | -82.7974  | 2022-03-05 20:41:20 |  |
| 4334349E-CEB0-3D68-A4D4-FEB7718A1ACE | CcU-3092       | b-2310     | 275     | -20.4859       | 150.87    | 2021-05-03 22:37:23 |  |
| BC2B9A38-77B4-28CD-1FE8-14DED863E773 | CcU-3092       | b-2310     | 275     | -78.0295       | 18.5295   | 2021-10-18 07:27:35 |  |
| 1479B3D2-B7BA-C7B8-4CE3-8D7C2DE85ABB | CcU-2994       | b-2326     | 133     | 66.2672        | 172.399   | 2021-08-09 00:58:07 |  |
| 152598C2-029D-D684-4B66-91EDF393EBFF | CcU-2994       | b-2326     | 126     | -67.0189       | -141.672  | 2021-07-05 03:10:00 |  |
| 1B636B58-A2E8-7C69-D9C9-C54535DAFD3B | CcU-2994       | b-2326     | 131     | 70.2543        | -13.1336  | 2021-07-06 08:48:46 |  |
| 20418DE5-B804-BE98-BD7A-A95C1BFDBF5C | CcU-2994       | b-2326     | 126     | -79.1145       | 1.51481   | 2022-01-03 15:59:29 |  |
| 239B8576-6C0E-137A-C2F6-3180A188A2D3 | CcU-2994       | b-2326     | 126     | 23.6174        | 137.222   | 2021-08-26 06:04:05 |  |
| 267C4A86-7B47-1C5E-0718-2824983C87DD | CcU-2994       | b-2326     | 126     | -17.5259       | 104.915   | 2021-10-01 21:08:53 |  |
| 3142C93E-B3B7-49E4-EE2D-29CA834B198D | CcU-2994       | b-2326     | 126     | -67.8476       | -119.978  | 2021-04-08 17:24:44 |  |
| 3578688E-7B1D-B887-3BC7-20B8673AA31E | CcU-2994       | b-2326     | 126     | 87.0665        | -22.7339  | 2021-07-26 22:59:24 |  |
| 360C7814-F7AF-B43A-0946-AB38D2683C86 | CcU-2994       | b-2326     | 116     | -7.93005       | -79.0733  | 2021-08-21 10:19:58 |  |
| 391E1CFD-D653-E45B-A729-F2EB93247B58 | CcU-2994       | b-2326     | 118     | 60.5512        | 103.904   | 2021-10-09 00:50:38 |  |
| 3C4D7C2A-A402-B941-625A-D64CA53526E8 | CcU-2994       | b-2326     | 117     | 23.1627        | -10.381   | 2021-04-25 19:11:52 |  |
| 3ED634C2-01CA-D6E9-2DBD-24B53A7912F7 | CcU-4219       | b-2326     | 137     | 69.0549        | 96.5033   | 2021-03-29 11:38:38 |  |
| 3FEC4131-9BED-2EA6-1776-82674C80DDBB | CcU-2994       | b-2326     | 126     | -7.28469       | 179.063   | 2021-07-25 04:59:17 |  |
| 41C13F08-471E-D475-3E14-760DF3F79B42 | CcU-4219       | b-2326     | 138     | -51.7289       | 55.3294   | 2022-01-16 16:48:55 |  |
| 41EC591D-808E-D85C-F05F-08BC3DE7A618 | CcU-2994       | b-2326     | 126     | 5.38535        | -78.3917  | 2022-01-06 07:47:39 |  |
| 4217E857-1D51-5D25-B645-EC24D23C8759 | CcU-2994       | b-2326     | 129     | 65.4733        | -20.2735  | 2021-04-23 13:07:58 |  |
| 45CA3E45-6B42-CAC4-7683-EBB69D523B3E | CcU-4219       | b-2326     | 140     | 85.7055        | 36.1497   | 2021-04-29 06:17:02 |  |
| 49CD105D-E569-3733-C8C8-3908ED7E1838 | CcU-3393       | b-2326     | 108     | -47.8783       | 168.275   | 2021-12-24 23:43:59 |  |
| 4ABE3D77-BF86-12D3-E1C5-22663D37C199 | CcU-3120       | b-2326     | 273     | -63.6087       | 69.6023   | 2021-11-13 04:18:28 |  |
| 4B74B94B-D123-7C7E-A9CE-7DA26F91F55  | CcU-2994       | b-2326     | 128     | 25.6024        | 53.4543   | 2022-02-12 14:27:28 |  |
| 4D8E4891-1711-7D30-E4CB-645A8DF59A43 | CcU-2994       | b-2326     | 120     | 5.71915        | -155.369  | 2021-12-26 01:49:19 |  |
| 4E562A2B-99E9-8C82-2340-B6623BC9FE2F | CcU-3120       | b-2326     | 273     | -65.8033       | 158.1     | 2021-03-23 15:43:37 |  |
| 5F473B8E-B392-A2E2-1E8E-C4A812C6A95C | CcU-2994       | b-2326     | 126     | -57.1143       | -154.767  | 2022-01-10 05:12:55 |  |
| 61EC87A4-CF88-B392-F83B-75E7F2C93537 | CcU-3393       | b-2326     | 110     | 88.4626        | 85.6351   | 2021-06-01 20:23:57 |  |
| 634E63C6-C2D6-EC48-4CCF-6B4A60AAEEB7 | CcU-2994       | b-2326     | 125     | -77.8923       | -167.683  | 2021-09-17 15:02:25 |  |
| 65DB2765-E85D-2B74-2BDA-A8AEFD248928 | CcU-2994       | b-2326     | 126     | -19.9162       | 2.61475   | 2021-12-08 09:25:11 |  |
| 71CB87BE-F93E-4877-DF6D-1BD3B312ED29 | CcU-3393       | b-2326     | 110     | -27.1212       | -105.573  | 2021-10-21 20:41:56 |  |
| 7D0819EC-7363-6767-36C0-97C7E77D5E65 | CcU-3393       | b-2326     | 107     | -26.2616       | 26.8733   | 2021-05-09 15:36:26 |  |
| 83E6BA9E-E737-37D0-5385-585F1B8A31B8 | CcU-2994       | b-2326     | 124     | 67.1904        | 117.617   | 2021-05-24 22:17:30 |  |

transaction 118 Apply

Action Output Duration / Fetch Time

|                                     | Time         | Action                                                            | Response | Duration / Fetch Time  |
|-------------------------------------|--------------|-------------------------------------------------------------------|----------|------------------------|
| <input checked="" type="checkbox"/> | 143 12:23:18 | SELECT* FROM transaction WHERE company_id ... 100 row(s) returned |          | 0.0049 sec / 0.0000... |

- Mostra el llistat aplicant solament subconsultes.

- **SELECT\***

**FROM transaction**

**WHERE company\_id IN**

**(SELECT id**

**FROM company**

**WHERE country = (SELECT country**

**FROM company**

**WHERE company\_name = 'Non Institute'));**

Result Grid Filter Rows: Search Export:

| id                                   | credit_card_id | company_id | user_id | lat      | longitude | timestamp           |
|--------------------------------------|----------------|------------|---------|----------|-----------|---------------------|
| A0D2011A-A2B1-C005-41E1-2AB00C05147A | CcU-2990       | b-2240     | 210     | -34.4732 | -06.1914  | 2022-03-03 20:41:20 |
| 4334349E-CEB0-3D68-A4D4-FEB7718A1ACE | CcU-3092       | b-2310     | 275     | -20.4859 | 150.87    | 2021-05-03 22:37:23 |
| BC2B9A38-77B4-28CD-1FE8-14DED863E773 | CcU-3092       | b-2310     | 275     | -78.0295 | 18.5295   | 2021-10-18 07:27:35 |
| 1479B3D2-B7BA-C7BB-4CE3-8D7C2DE85ABB | CcU-2994       | b-2326     | 133     | 66.2672  | 172.399   | 2021-08-09 00:58:07 |
| 152598C2-029D-D684-4B66-91EDF393EBFF | CcU-2994       | b-2326     | 126     | -67.0189 | -141.672  | 2021-07-05 03:10:00 |
| 1B636B58-A2E8-7C69-D9C9-C54535DAFD3B | CcU-2994       | b-2326     | 131     | 70.2543  | -13.1336  | 2021-07-06 08:48:46 |
| 20418DE5-B804-BE9B-BD7A-A95C1BFDBF5C | CcU-2994       | b-2326     | 126     | -79.1145 | 1.51481   | 2022-01-03 15:59:29 |
| 239B8576-6C0E-137A-C2F6-3180A188A2D3 | CcU-2994       | b-2326     | 126     | 23.6174  | 137.222   | 2021-08-26 06:04:05 |
| 267C4A86-7B47-1C5E-0718-2824983C87DD | CcU-2994       | b-2326     | 126     | -17.5259 | 104.915   | 2021-10-01 21:08:53 |
| 3142C93E-B3B7-49E4-EE2D-29CA834B198D | CcU-2994       | b-2326     | 126     | -67.8476 | -119.978  | 2021-04-06 17:24:44 |
| 3578688E-7B1D-B887-3BC7-20B8673AA31E | CcU-2994       | b-2326     | 126     | 87.0665  | -22.7339  | 2021-07-26 22:59:24 |
| 360C7814-F7AF-B43A-0946-AB38D2683C86 | CcU-2994       | b-2326     | 116     | -7.93005 | -79.0733  | 2021-08-21 10:19:58 |
| 391E1CFD-D653-E45B-A729-F2EB93247B58 | CcU-2994       | b-2326     | 118     | 60.5512  | 103.904   | 2021-10-09 00:50:38 |
| 3C4D7C2A-A402-B941-625A-D64CA53526E8 | CcU-2994       | b-2326     | 117     | 23.1627  | -10.381   | 2021-04-25 19:11:52 |
| 3ED634C2-01CA-D6E9-2DBD-24B53A7912F7 | CcU-4219       | b-2326     | 137     | 69.0549  | 96.5033   | 2021-03-29 11:38:38 |
| 3FEC4131-9BED-2EA6-1776-82674C80DDBB | CcU-2994       | b-2326     | 126     | -7.28469 | 179.063   | 2021-07-25 04:59:17 |
| 41C13F08-471E-D475-3E14-760DF3F79B42 | CcU-4219       | b-2326     | 138     | -51.7289 | 55.3294   | 2022-01-16 16:48:55 |
| 41EC591D-808E-D85C-F05F-08BC3DE7A618 | CcU-2994       | b-2326     | 126     | 5.38535  | -78.3917  | 2022-01-06 07:47:39 |
| 4217E857-1D51-5D25-B645-EC24D23C8759 | CcU-2994       | b-2326     | 129     | 65.4733  | -20.2735  | 2021-04-23 13:07:58 |
| 45CA3E45-B642-CAC4-7683-EBB69D523B3E | CcU-4219       | b-2326     | 140     | 85.7055  | 36.1497   | 2021-04-29 06:17:02 |
| 49CD105D-E569-3733-C8C8-3908ED7E1838 | CcU-3393       | b-2326     | 108     | -47.8783 | 168.275   | 2021-12-24 23:43:59 |
| 4ABE3D77-BF86-12D3-E1C5-22663D37C199 | CcU-3120       | b-2326     | 273     | -63.6087 | 69.6023   | 2021-11-13 04:18:28 |
| 4B74B94B-D123-7C7E-A9CE-7DA26F911F55 | CcU-2994       | b-2326     | 128     | 25.6024  | 53.4543   | 2022-02-12 14:27:28 |
| 4D8E4891-1711-7D30-E4CB-645A8DF59A43 | CcU-2994       | b-2326     | 120     | 5.71915  | -155.369  | 2021-12-26 01:49:19 |
| 4E562A2B-99E9-2340-B6623BC9FE2F      | CcU-3120       | b-2326     | 273     | -65.8033 | 158.1     | 2021-03-23 15:43:37 |
| 5F4738BE-B392-A2E2-1E8E-C4A812C6A95C | CcU-2994       | b-2326     | 126     | -57.1143 | -154.767  | 2022-01-10 05:12:55 |
| 61EC87A4-CF88-B392-F83B-75EF2C93537  | CcU-3393       | b-2326     | 110     | 88.4626  | 85.6351   | 2021-06-01 20:23:57 |
| 634E63C6-C2D6-EC48-4CCF-6B4A60AAEEB7 | CcU-2994       | b-2326     | 125     | -77.8923 | -167.683  | 2021-09-17 15:02:25 |
| 65DB2765-E85D-2B74-2BDA-A8AEFD248928 | CcU-2994       | b-2326     | 126     | -19.9162 | 2.61475   | 2021-12-08 09:25:11 |
| 71CB87BE-F93E-4877-DF6D-1BD3B312ED29 | CcU-3393       | b-2326     | 110     | -27.1212 | -105.573  | 2021-10-21 20:41:56 |
| 7D0819EC-7363-6767-36C0-97C7E77D5E65 | CcU-3393       | b-2326     | 107     | -26.2616 | 26.8733   | 2021-05-09 15:36:26 |
| 83E6BA9E-E737-37D0-5385-585F1B8A318B | CcU-2994       | b-2326     | 124     | 67.1904  | 117.617   | 2021-05-24 22:17:30 |

Result 117 Read Only

Action Output Duration / Fetch Time

| Time         | Action                                         | Response            | Duration / Fetch Time  |
|--------------|------------------------------------------------|---------------------|------------------------|
| 142 12:22:10 | SELECT* FROM transaction JOIN company ON co... | 100 row(s) returned | 0.040 sec / 0.00037... |

## Nivell 3

### - 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. Ordена els resultats de major a menor quantitat.

- ```
SELECT company.company_name, company.phone, company.country, DATE(transaction.timestamp), transaction.amount
FROM company
JOIN transaction ON company.id = transaction.company_id
WHERE transaction.amount BETWEEN 100 AND 200
AND DATE(transaction.timestamp) IN ('2021-04-29', '2021-07-20', '2022-03-13')
AND transaction.declined = FALSE
ORDER BY transaction.amount DESC;
```

Result Grid Filter Rows: Search Export:

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 119 Read Only

Action Output Duration / Fetch Time

Time	Action	Response	Duration / Fetch Time
144 12:27:25	SELECT company.company_name, company.phon...	5 row(s) returned	0.0043 sec / 0.0000...

- 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 específiquis si tenen més de 4 transaccions o menys.

```
• SELECT company.company_name, COUNT(transaction.id) as num_trans,  
    CASE  
        WHEN COUNT(transaction.id) > 4 THEN '+ DE 4 TRANSACCIONES'  
        WHEN COUNT(transaction.id) = 4 THEN '4 TRANSACCIONES'  
        ELSE '- DE 4 TRANSACCIONES'  
    END AS Especificación  
FROM company  
JOIN transaction ON company.id = transaction.company_id  
GROUP BY company.company_name  
ORDER BY num_trans DESC;
```

Result Grid Filter Rows: Search Export:

company_name	num_trans	Especificación
Nunc Interdum Incorporated	105	+ DE 4 TRANSACCIONES
Ut Semper Foundation	59	+ DE 4 TRANSACCIONES
Enim Condimentum Ltd	57	+ DE 4 TRANSACCIONES
Arcu LLP	56	+ DE 4 TRANSACCIONES
Lorem Eu Incorporated	54	+ DE 4 TRANSACCIONES
Malesuada PC	52	+ DE 4 TRANSACCIONES
Non Institute	30	+ DE 4 TRANSACCIONES
Amet Nulla Donec Corporation	2	- DE 4 TRANSACCIONES
Nascetur Ridiculus Mus Inc.	2	- DE 4 TRANSACCIONES
Vestibulum Lorem PC	2	- DE 4 TRANSACCIONES
Gravida Sagittis LLP	2	- DE 4 TRANSACCIONES
Mus Aenean Eget Foundation	2	- DE 4 TRANSACCIONES
Dis Parturient Institute	2	- DE 4 TRANSACCIONES
Sed LLC	2	- DE 4 TRANSACCIONES
Sed Nunc Ltd	2	- DE 4 TRANSACCIONES
Pretium Neque Corp.	2	- DE 4 TRANSACCIONES
Fringilla LLC	2	- DE 4 TRANSACCIONES
Quisque Libero LLC	2	- DE 4 TRANSACCIONES
Auctor Mauris Vel LLP	2	- DE 4 TRANSACCIONES
Elit Etiam Laoreet Associates	2	- DE 4 TRANSACCIONES
Donec Ltd	2	- DE 4 TRANSACCIONES
Augue Foundation	2	- DE 4 TRANSACCIONES
Non Magna LLC	2	- DE 4 TRANSACCIONES
A Institute	2	- DE 4 TRANSACCIONES
Quam A Felis Industries	2	- DE 4 TRANSACCIONES
Integer Mollis Corp.	2	- DE 4 TRANSACCIONES
Ante Iaculis Nec Foundation	2	- DE 4 TRANSACCIONES
Donec Fringilla PC	2	- DE 4 TRANSACCIONES
Amet Institute	2	- DE 4 TRANSACCIONES
Magna Incorporated	2	- DE 4 TRANSACCIONES
Fringilla Portitor Incorporated	2	- DE 4 TRANSACCIONES

Result 120 Read Only

Action Output

	Time	Action	Response	Duration / Fetch Time
145	12:30:12	SELECT company.company_name, COUNT(transa...	100 row(s) returned	0.0075 sec / 0.00003...