

Roser Blasco
Sprint 2

25 Novembre 2024

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Nivell 1

- Exercici 1
- Exercici 2
 - o Llistat dels països que estan fent compres.
 - o Des de quants països es realitzen les compres.
 - o Identifica la companyia amb la mitjana més gran de vendes.
- Exercici 3
 - o Mostra totes les transaccions realitzades per empreses d'Alemanya.
 - o Llista les empreses que han realitzat transaccions per un amount superior a la mitjana de totes les transaccions.
 - o Eliminaran del sistema les empreses que no tenen transaccions registrades, entrega el llistat d'aquestes empreses.

Nivell 2

- Exercici 1
- Exercici 2
- Exercici 3

Nivell 3

- Exercici 1
- Exercici 2

Nivell 1

- Exercici 1: esquema

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. Assegurat d'incloure un diagrama que il·lustri la relació entre les diferents taules i variables.

Característiques principals de l'esquema creat:

- És una base de dades anomenada “transactions”
- L'esquema té dues taules: “company” i “transaction”

Explicació de les diferents taules i variables:

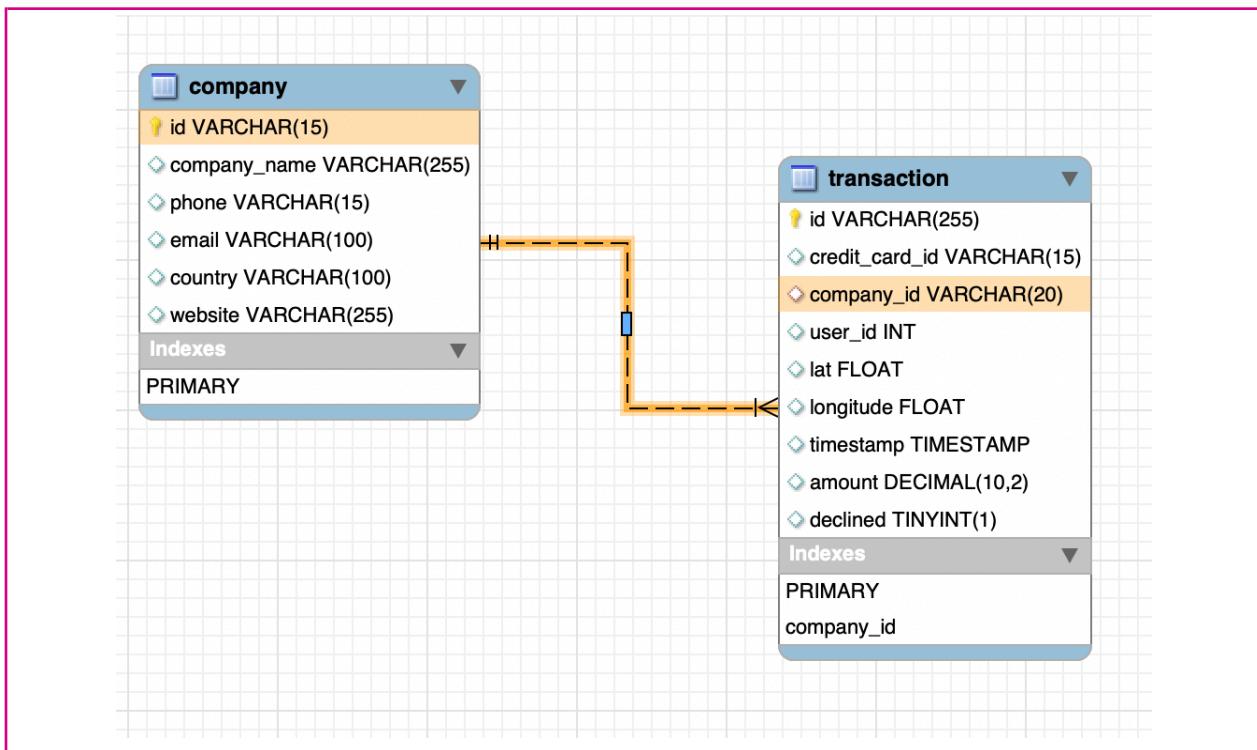
- La taula “**company**” conté dades de contacte de diferents empreses com el correu electrònic, telèfon, país i adresa de la seva pàgina web.
 - Totes són del tipus VARCHAR, és a dir, format text, i amb una limitació de caracters. El id d'empresa i el telèfon tenen una llargària màxima de 15 caracters. L'adresa electrònica i el país de 100, i el nom d'empresa i la web de 255.
- La taula “**transaction**” conté dades de pagaments amb targeta bancària, com import, ubicació geogràfica, si el pagament ha segut acceptat o declinat, i una referència al pagador i a l'empresa que reb el pagament.
 - Quasi tots els ids d'aquesta taula són del tipus VARCHAR també, format text. El id de la tarjeta de crèdit té una llargària màxima de 15 caracters. El id d'empresa de 20 caracters, és a dir, aquí es permetria que fos més llarg que a la taula anterior. L'id de transacció pot ser fins a 255 caracters.
 - En canvi, per a l'id d'usuari, de la persona que fa el pagament, s'ha elegit una variable INT, que és un número enter.
 - La variable “declined” és del tipus BOOLEAN, és a dir, només pot ser 0 o 1. Si és 0, es considera que el pagament ha segut correcte, i si és 1 que el pagament ha segut rebutjat pel banc, per exemple, per falta de fons al compte.
 - La variable “timestamp” és de tipus TIMESTAMP, capture el dia i hora en que es va realitzar el pagament. El format és YYYY-MM-DD hh:mm:ss en temps universal coordinat (UTC). Cal tenir en compte que aquest és un estàndard universal i no la hora local del lloc on s'ha fet el pagament.
 - La ubicació geogràfica es determina per dues variables, la latitud i la longitud. Ambdues són variables numèriques variables de tipus FLOAT, decimal de fins a

24 caracters decimals. La combinació de latitud i longitud ens dóna un punt en el globus terraqui.

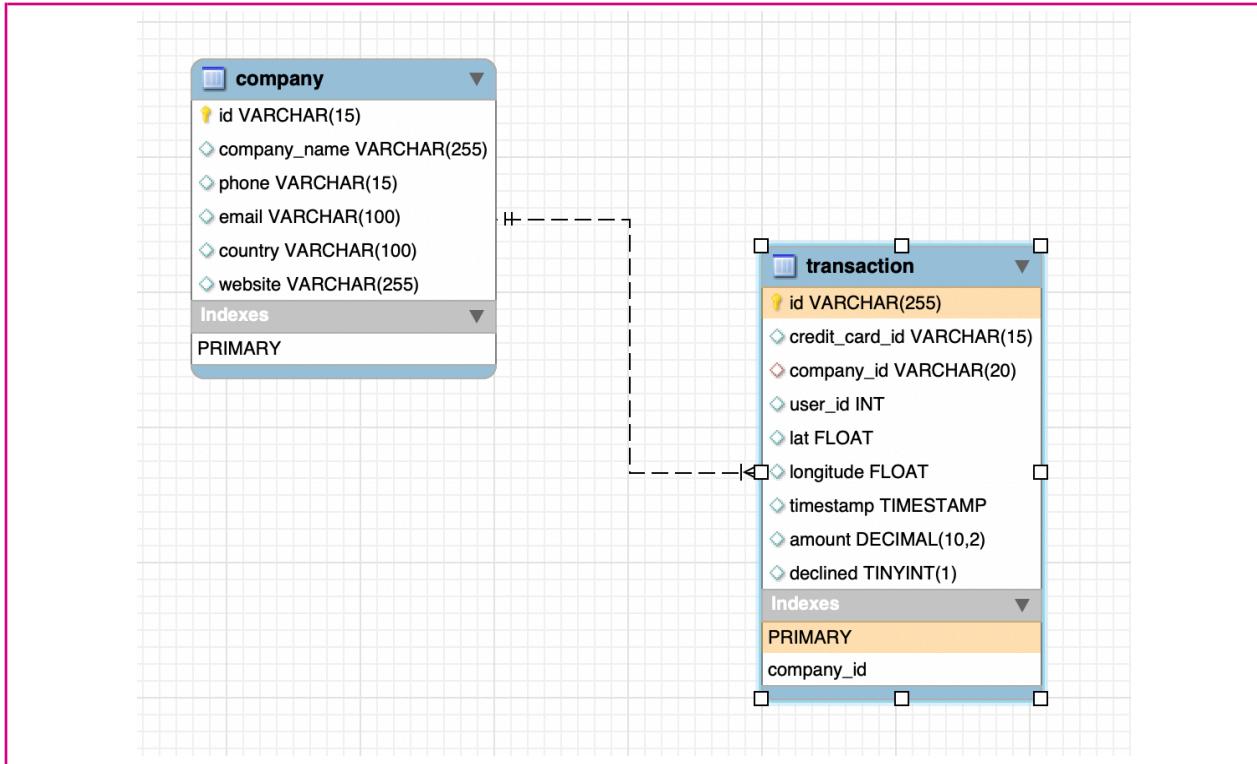
- Finalment, l'import de la transacció és una variable de tipus DECIMAL, és a dir també un nombre decimal. En aquest cas ens limiten el número total de caracters a 10 i a la dreta de la coma hi haurà un màxim de 2.

Diagrama relacional (relació entre les diferents taules i variables):

- Les dues taules es relacionen a través “company_id” de la taula transaction, on és la foreign key, i que proporciona aquest vincle amb el “id” de la taula “company” on és la primary key. Aquesta relació és de 1 a molts, i per tant pot aparèixer només una vegada a “company” però moltes vegades a “transaction”.



- La taula transacion té a la seva vegada una primary key que és el id de transacció, ja que cada transacció és única, i que no juga paper en la relació entre les taules.



- Exercici 2: joins

Utilitzant JOIN realitzaràs les següents consultes:

- Llistat dels països que estan fent compres.

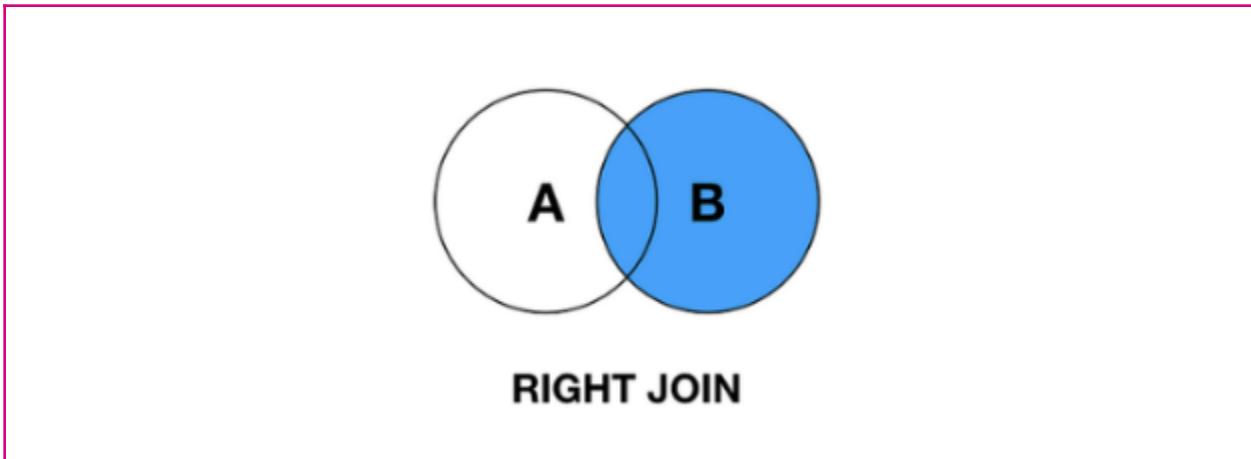
Entenem que totes les compres són nacionals i que el país de compra és el mateix que el de venda. Primer he donat un ull a la llista de països de la taula “company”

The screenshot shows the MySQL Workbench interface. On the left, the 'Schemas' tree view shows the 'transactions' schema selected, with the 'company' table expanded to show columns: id, company_name, phone, email, country, and website. The 'Result Grid' tab is active, displaying a list of countries from the 'company' table. A tooltip on the right explains: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.' The status bar at the bottom indicates 'Query Completed'.

```
1 # Nivell 1
2 # Exercici 2
3
4 # Utilitzant JOIN realitzaràs les següents consultes:
5 # Llistat dels països que estan fent compres.
6 # Des de quants països es realitzen les compres.
7 # Identifica la companyia amb la mitjana més gran de vendes.
8
9 • SELECT distinct country
10   FROM company
11   ORDER BY country ASC;
12
```

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

Aquest problema el solucionem amb RIGHT JOIN, unint les dues taules a través de l'id d'empresa, per a que surtin només els països de les empreses que apareixen en la taula transaccions



MySQL Workbench

Local Instance 3306 - Warning - not supported

Administration Schemas Sprint2* SQL File 6*

SCHEMAS

Filter objects

sakila transactions

Tables company transaction Views Stored Procedures Functions world

Object Info Session Schema: transactions

```
1
2 # - Llistat dels països que estan fent compres.
3 • SELECT distinct country
4 FROM company
5 RIGHT JOIN transaction
6     ON company.id = transaction.company_id
7
8 ORDER BY country ASC;
```

Result Grid Filter Rows: Search Export:

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

Result 1

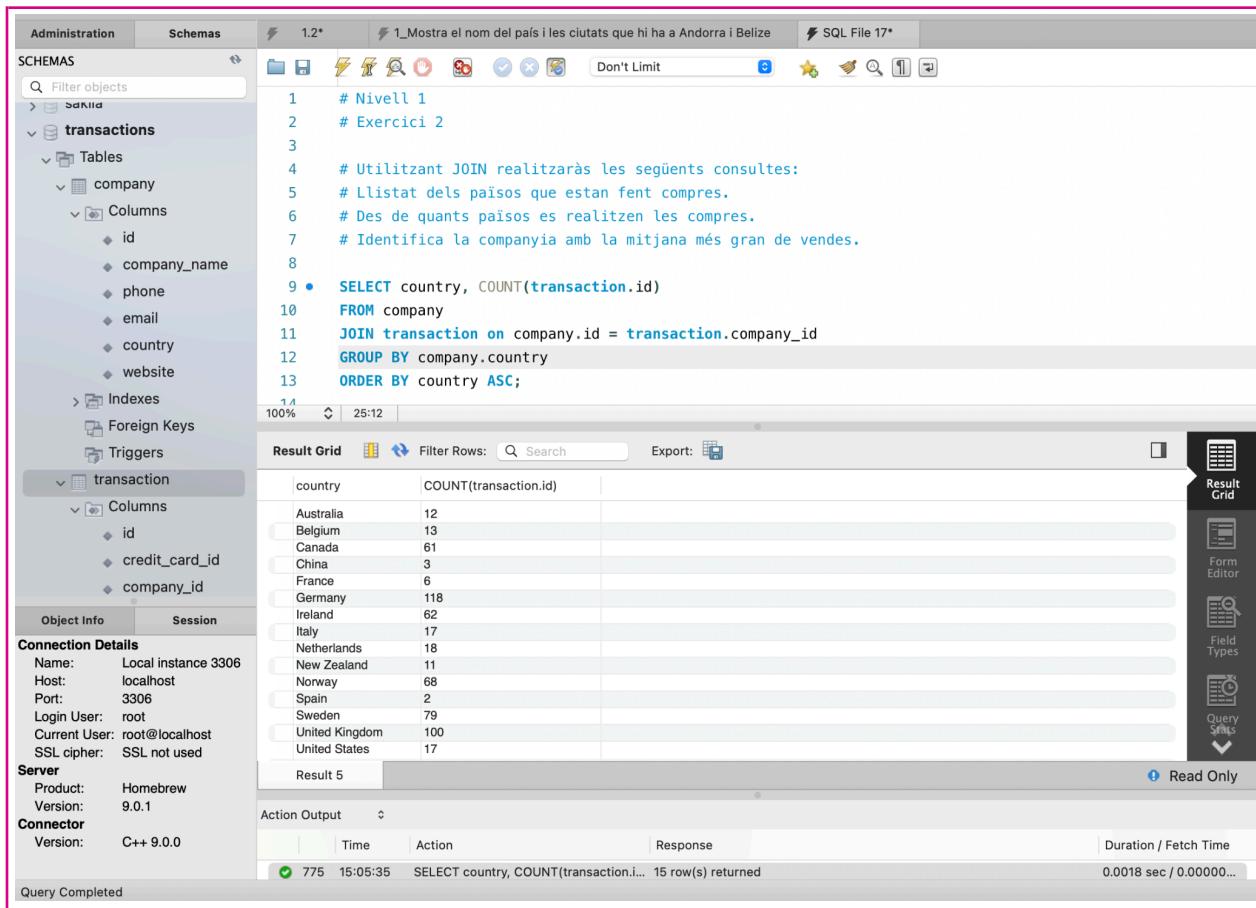
Action Output Time Action Response Duration / Fetch Time

38 11:01:27 SELECT distinct country FROM company RIGHT JOIN transaction ON company.id = transaction.company_id... 15 row(s) returned 0.0016 sec / 0.00001...

Query Completed

Result Grid Form Editor Field Types Query Stats

Com que ens han sortit la mateixa llista de 15 països, he decidit comprovar que tots tenen transaccions amb un GROUP BY.



The screenshot shows the MySQL Workbench interface. On the left, the 'Schemas' tree view is open, showing the 'transactions' schema with its tables ('company' and 'transaction') and columns. The 'transaction' table is currently selected. On the right, the main area displays a SQL query and its results.

```
1 # Nivell 1
2 # Exercici 2
3
4 # Utilitzant JOIN realitzaràs les següents consultes:
5 # Llistat dels països que estan fent compres.
6 # Des de quants països es realitzen les compres.
7 # Identifica la companyia amb la mitjana més gran de vendes.
8
9 • SELECT country, COUNT(transaction.id)
10   FROM company
11   JOIN transaction ON company.id = transaction.company_id
12   GROUP BY company.country
13   ORDER BY country ASC;
```

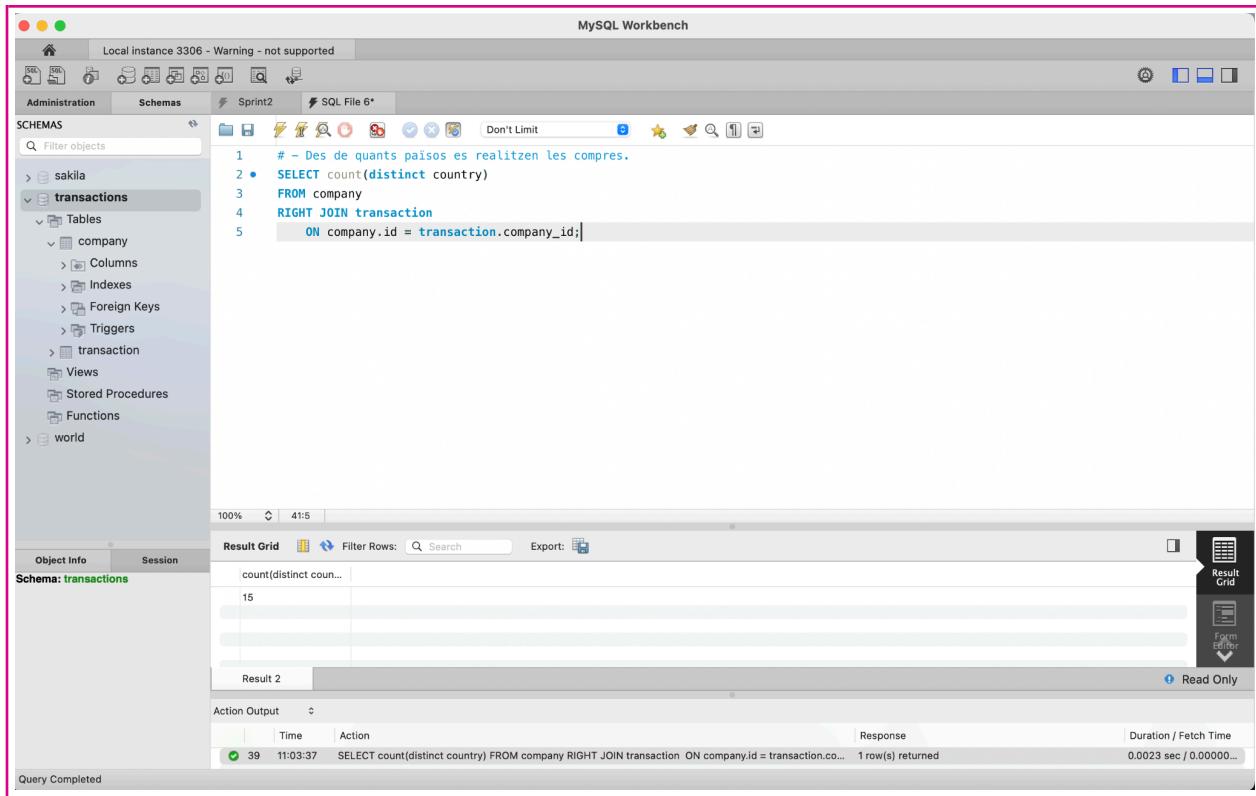
The results grid shows the following data:

country	COUNT(transaction.id)
Australia	12
Belgium	13
Canada	61
China	3
France	6
Germany	118
Ireland	62
Italy	17
Netherlands	18
New Zealand	11
Norway	68
Spain	2
Sweden	79
United Kingdom	100
United States	17

Below the results, the 'Action Output' section shows the query executed: 'SELECT country, COUNT(transaction.id) ...'. The status bar at the bottom indicates '775 15:05:35' and '0.0018 sec / 0.00000...'. The right sidebar contains icons for Result Grid, Form Editor, Field Types, and Query Profiler.

- Des de quants països es realitzen les compres.

Utilitzem un count sobre el codi anterior per al número de països



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'schemas' tree, with 'transactions' selected. The main pane contains a SQL editor with the following code:

```

1 # - Des de quants països es realitzen les compres.
2 • SELECT count(distinct country)
3   FROM company
4     RIGHT JOIN transaction
5       ON company.id = transaction.company_id;

```

The results pane shows a single row of data from the 'Result Grid':

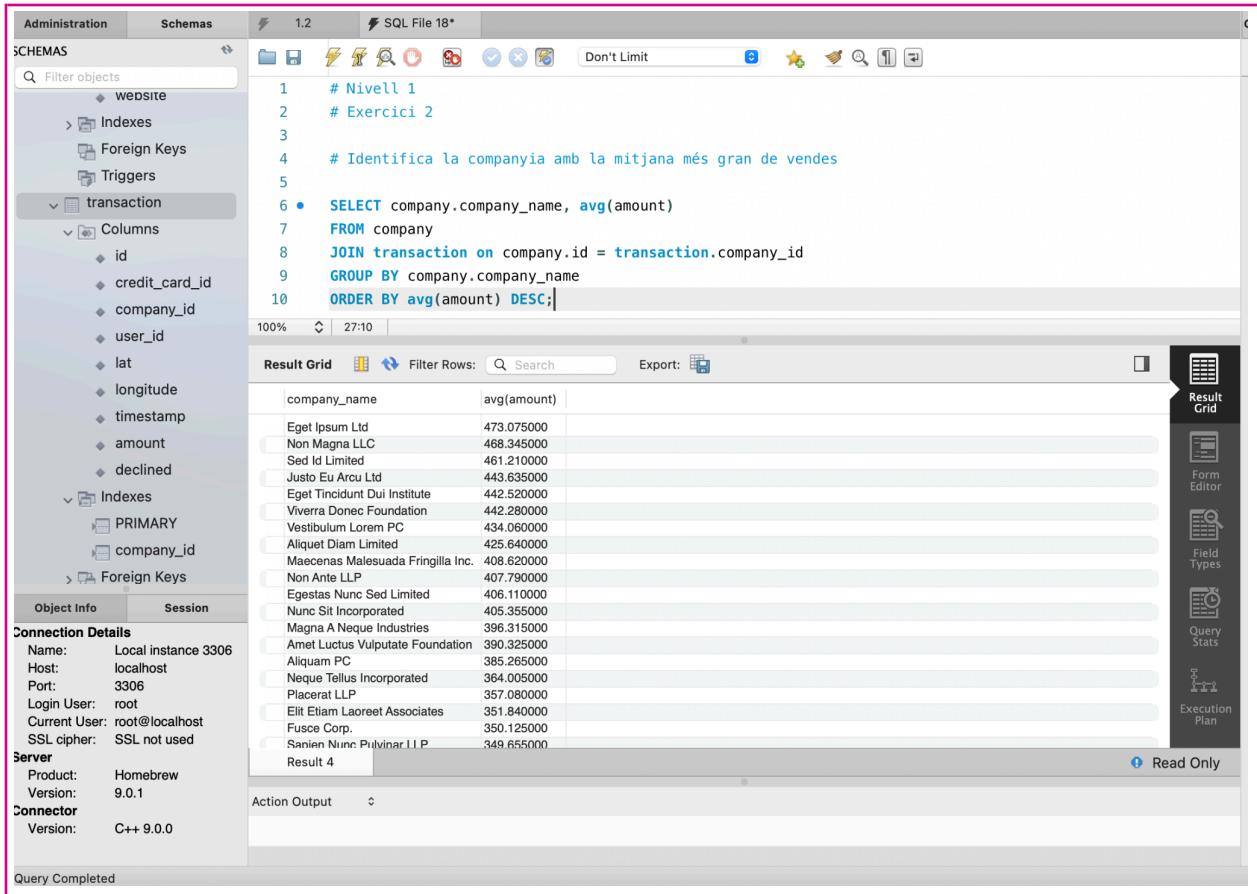
count(distinct coun...)
15

Below the results, the 'Action Output' pane shows the query details:

Action	Time	Response	Duration / Fetch Time
39	11:03:37	SELECT count(distinct country) FROM company RIGHT JOIN transaction ON company.id = transaction.co...	1 row(s) returned 0.0023 sec / 0.00000...

- Identifica la companyia amb la mitjana més gran de vendes

Entenc que el que volen dir és la mitjana més gran per transacció. Així doncs li demanem el nom d'empresa i l'average per transacció. L'ordenem de major a menor per a comprovar visualment quin és el resultat major per a quan ho filtrem.



The screenshot shows the MySQL Workbench interface with a query editor and a results grid. The query is:

```

1 # Nivell 1
2 # Exercici 2
3
4 # Identifica la companyia amb la mitjana més gran de vendes
5
6 • SELECT company.company_name, avg(amount)
  FROM company
  JOIN transaction ON company.id = transaction.company_id
  GROUP BY company.company_name
  ORDER BY avg(amount) DESC;

```

The results grid displays the following data:

company_name	avg(amount)
Eget Ipsum Ltd	473.075000
Non Magna LLC	468.345000
Sed Id Limited	461.210000
Justo Eu Arcu Ltd	443.635000
Eget Tincidunt Duis Institute	442.520000
Viverra Donec Foundation	442.280000
Vestibulum Lorem PC	434.060000
Aliquet Diam Limited	425.640000
Maecenas Malesuada Fringilla Inc.	408.620000
Non Ante LLP	407.790000
Egestas Nunc Sed Limited	406.110000
Nunc Sit Incorporated	405.355000
Magna A Neque Industries	396.315000
Amet Luctus Vulputate Foundation	390.325000
Aliquam PC	385.265000
Neque Tellus Incorporated	364.005000
Placerat LLP	357.080000
Elit Etiam Laoreet Associates	351.840000
Fusco Corp.	350.125000
Sanien Nunc Pulvinar I I P	349.655000

Below the results grid, there is a message: "Result 4" and a "Read Only" status indicator.

No he aconseguit que em funcioni el MAX sense subqueries així que li he posat un limit 1

The screenshot shows the MySQL Workbench interface. The left sidebar displays the database schema with the 'transaction' table selected. The main area contains a SQL query and its results.

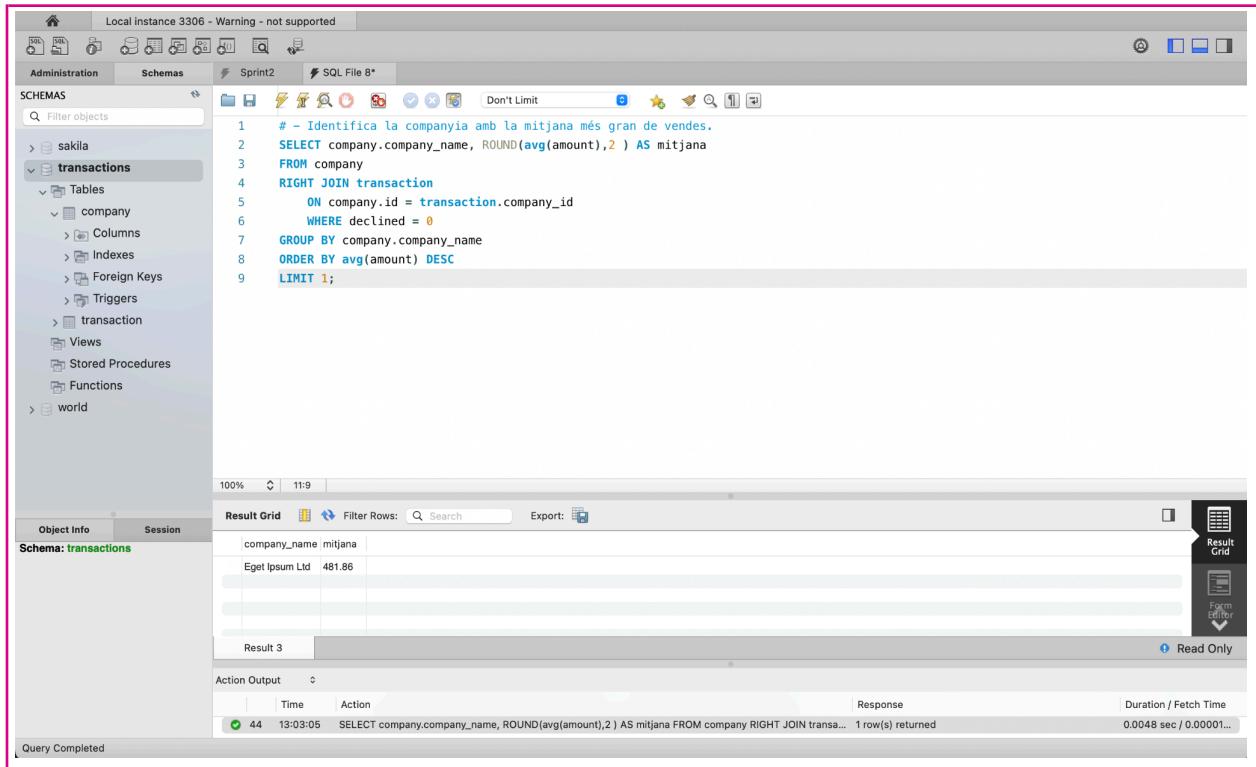
```
1 # Nivell 1
2 # Exercici 2
3
4 # Identifica la companyia amb la mitjana més gran de vendes
5
6 • SELECT company.company_name, avg(amount)
7   FROM company
8   JOIN transaction ON company.id = transaction.company_id
9   GROUP BY company.company_name
10  ORDER BY avg(amount) DESC
11  LIMIT 1;
```

The results grid shows one row:

company_name	avg(amount)
Eget Ipsum Ltd	473.075000

Below the results, the status bar indicates: Action Output, Time 793, Response 15:28:54, S 1 row(s) returned.

En han aclarit que a les vendes no s'han d'incloure les transaccions declinades, així que modifiquem el codi. El que farem és posar una condició al join per a que només tingui en compte les transaccions no declinades. Així, quan es calculi la mitjana, no les tindrà en compte



The screenshot shows the MySQL Workbench interface. The left sidebar displays the schema tree under 'SCHEMAS'. The 'transactions' schema is selected, showing its tables ('company', 'transaction'), columns, indexes, foreign keys, triggers, and views. The main area contains a SQL editor with the following query:

```
# - Identifica la companyia amb la mitjana més gran de vendes.
SELECT company.company_name, ROUND(avg(amount),2 ) AS mitjana
FROM company
RIGHT JOIN transaction
ON company.id = transaction.company_id
WHERE declined = 0
GROUP BY company.company_name
ORDER BY avg(amount) DESC
LIMIT 1;
```

Below the SQL editor is a results grid titled 'Result Grid' showing one row of data:

company_name	mitjana
Eget Ipsum Ltd	481.86

The status bar at the bottom indicates 'Query Completed'.

- Exercici 3: subconsultes

Utilitzant només subconsultes (sense utilitzar JOIN):

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

Primer fem una consulta d'empreses amb el filtre d'Alemanya

The screenshot shows the MySQL Workbench interface with a query editor and a results grid. The query is:

```
1 • SELECT *
2   FROM company
3  WHERE country = 'Germany';
```

The results grid displays the following data:

ID	Company Name	Phone	Email	Country	Website
b-2222	Ac Fermentum Incorporated	06 85 56 52 33	donec.porttitor.tellus@yahoo.net	Germany	https://instagram.com/site
b-2234	Convallis In Incorporated	06 66 57 29 50	mauris.ut@sol.co.uk	Germany	https://cnn.com/user/110
b-2302	Nunc Interdum Incorporated	05 18 15 48 13	nisi@outlook.com	Germany	https://wikipedia.org/en-us
b-2306	Augue Foundation	06 88 43 15 63	mauris@yahoo.com	Germany	https://baidu.com/sub/cars
b-2358	Ac Industries	09 34 65 40 60	ipsum@yahoo.com	Germany	https://bbc.co.uk/group/9
b-2550	Auctor Mauris Corp.	05 62 87 14 41	egestet.netus@protonmail.ca	Germany	https://walmart.com/sub
b-2566	Aliquam PC	01 45 73 52 16	sclerisque.mollis@cloud.org	Germany	https://yahoo.com/en-ca
b-2614	Rutrum Non Inc.	02 66 31 61 09	neque@protonmail.net	Germany	https://netflix.com/site
*	NULL	NULL	NULL	NULL	NULL

The output pane shows the query was executed successfully in 0.016 sec / 0.000 sec.

Però sense el join, amb el nom no podem fer res. En canvi si treiem els id d'empresa de les empreses en alemanya, aquest ens serveix en l'altra taula.

The screenshot shows the MySQL Workbench interface with the following details:

- File Bar:** File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Navigator:** Schemas (sakila, sys, transactions), Tables (company), Columns (id, company_name, phone, email, country, website), Indexes, Foreign Keys, Triggers, transaction, Views, Stored Procedures, Functions, world.
- SQL Editor:** SQL File 3* (1.2.sql, 1.3*)

```
1
2 •   SELECT id
3     FROM company
4    WHERE country = 'Germany';
5
```
- Result Grid:** A grid showing results for the query. The columns are labeled 'id'. The data includes:

id
b-2222
b-2234
b-2302
b-2306
b-2358
b-2550
b-2566
b-2614
bnull
- Output Window:** company 2 x
Action Output:

#	Time	Action	Message	Duration / Fetch
1	15:12:27	SELECT company_name FROM company WHERE country = 'Germany';	8 row(s) returned	0.000 sec / 0.000 sec
2	15:13:42	SELECT id FROM company WHERE country = 'Germany' LIMIT 0, 1...	8 row(s) returned	0.000 sec / 0.000 sec

Ara utilitzarem aquesta llista com a filtre de l'altra taula
Primer provem amb un dels resultats

The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the database schema with the **transactions** schema expanded, revealing tables like **company** and **transaction**, and their columns.
- SQL Editor:** Displays the SQL query:

```
1 • Select *
2   FROM transaction
3   WHERE company_id in ('b-2222');
4
5
6
7   #   SELECT id
8   #   FROM company
9   #   WHERE country ='Germany';
10
```
- Result Grid:** Shows the results of the query, which return two rows of data:| id | credit_card_id | company_id | user_id | lat | longitude | timestamp | amount | declined |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10881D1D-5B23-A76C-55EF-C568E49A05DD | CcU-2938 | b-2222 | 275 | 83.7839 | -178.86 | 2021-07-07 17:43:16 | 293.57 | 0 |
| EA2C3281-C9C1-A387-4HF8-729FB4B51C76 | CcU-2938 | b-2222 | 275 | 20.004 | -116.84 | 2021-05-09 10:25:08 | 119.36 | 1 |
- Output:** Shows the execution log for the transaction:| # | Time | Action | Message | Duration / Fetch |
| --- | --- | --- | --- | --- |
| 5 | 15:20:33 | Select * FROM transaction WHERE company_id = b-2222' LIMIT ... | 2 row(s) returned | 0.000 sec / 0.000 sec |
| 6 | 15:20:50 | Select * FROM transaction WHERE company_id in (b-2222) LIMI... | 2 row(s) returned | 0.000 sec / 0.000 sec |

I ara afegim tota la subquery

The screenshot shows the MySQL Workbench interface with a query editor and results grid.

Query Editor:

```
1 • Select *
  FROM transaction
 WHERE company_id in (
  SELECT id
  FROM company
  WHERE country = 'Germany');
```

Result Grid:

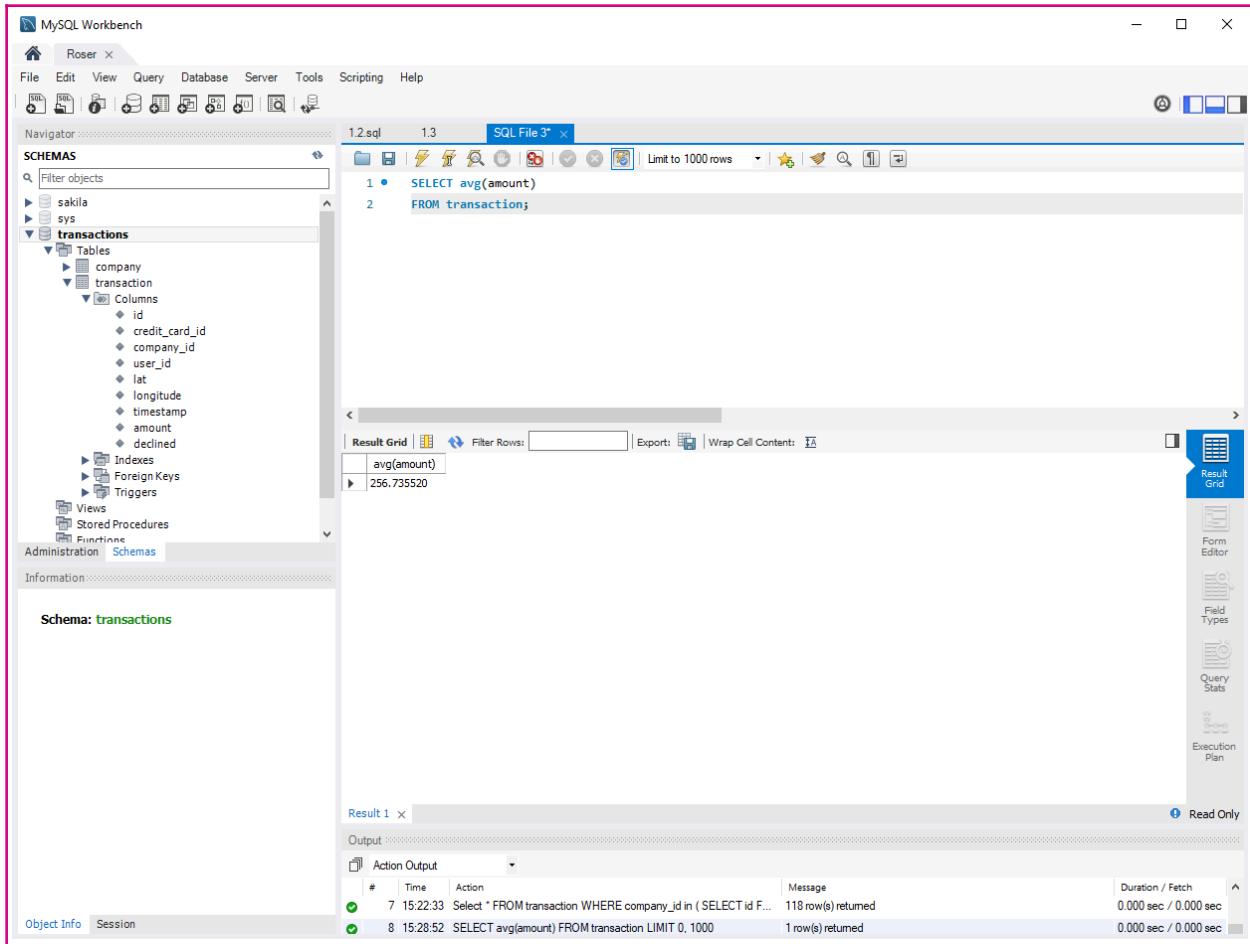
id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
10881D1D-5B23-A76C-55EF-C568E49A05DD	CdU-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
EA2C3281-C9C1-A387-44F8-729F84B51C76	CdU-2938	b-2222	275	20.0004	-116.84	2021-05-09 10:25:08	119.36	1
0DD2E608-5C9E-D1B3-4999-B99F83AD735A	CdU-2959	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
AB069F53-965E-A2A8-CE06-CAB84FD92501	CdU-2959	b-2234	275	1.64819	-158.007	2021-04-15 13:37:18	60.99	0
0466A42E-7CF-8D24-FD01-C0B689713128	CdU-4219	b-2302	170	-43.9695	-117.525	2021-07-26 07:29:18	49.53	0
0A476ED9-0C13-1962-F87B-03563924B539	CdU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
12DC333-E19F-D629-DCD8-9C54CF1EB89A	CdU-4366	b-2302	221	29.6372	-166.173	2021-06-09 06:04:14	172.01	0
1352678A-2E7D-957C-C42C-6450A283ED54	CdU-4520	b-2302	210	20.6724	14.9732	2021-12-29 20:38:23	17.97	0
14CAE5B5-8F81-3E4A-4C85-0EA4167534F4	CdU-4849	b-2302	189	-53.6202	93.0533	2021-12-31 00:29:42	388.04	0
158A3ACB-541C-DBCC-65BD-6373CC678F1C	CdU-4849	b-2302	183	42.5424	-170.347	2022-03-08 05:02:19	240.29	0
162C7E78-2B6B-7971-A1E4-D212-E732451	CdU-4527	b-2302	210	-69.1381	58.0017	2021-04-11 05:59:18	231.26	0
1717FD68-ADAD-7082-A748-9112BE892CC	CdU-4219	b-2302	172	69.4892	-138.411	2021-12-29 16:18:54	249.91	0
1753A288-9FC1-52E6-5C39-A1FF9780D3A	CdU-4345	b-2302	222	57.9422	-114.729	2021-08-17 05:32:08	497.84	0
186F53DE-0E27-B1FE-682F-15B61C877726	CdU-4310	b-2302	225	-72.7448	36.6211	2021-12-20 13:13:45	238.16	0
18C4E2D0-1E4C-F35E-2198-C660e081DC25	CdU-4849	b-2302	177	68.0133	91.4839	2021-09-24 18:55:25	237.04	0
18CCBA7C-ABC1-813D-FAF3-4B8B97429368	CdU-4219	b-2302	173	51.3881	-156.371	2021-06-21 03:21:34	58.16	0
19E1EC3E-2119-1EFD-8AAE-5930D4A4E63F	CdU-4219	b-2302	154	-56.0839	116.987	2021-07-06 21:40:15	29.63	0
1B117D49-938C-8A6C-E94B-30C3293AA239	CdU-4219	b-2302	163	-75.099	109.034	2021-05-09 23:56:04	371.35	0
1B521826-5860-5A86-5364-6EB6A5CC21B7	CdU-4226	b-2302	231	-53.4613	49.1484	2021-08-14 02:39:50	476.33	0

Output:

#	Time	Action	Message	Duration / Fetch
6	15:20:50	Select * FROM transaction WHERE company_id in (b-2222) LIMIT 1000	2 row(s) returned	0.000 sec / 0.000 sec
7	15:22:33	Select * FROM transaction WHERE company_id in (SELECT id F...	118 row(s) returned	0.000 sec / 0.000 sec

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

Comencem calculant la mitjana de totes les transaccions



The screenshot shows the MySQL Workbench interface. In the top-left corner, the title bar says "MySQL Workbench". The main window has a "File" menu with options like "Edit", "View", "Query", "Database", "Server", "Tools", "Scripting", and "Help". Below the menu is a toolbar with various icons. On the left, the "Navigator" pane shows the database schema. It lists "SCHEMAS" with "sakila", "sys", and "transactions" selected. Under "transactions", it shows "Tables" with "company" and "transaction" selected. Under "transaction", it shows "Columns" with "id", "credit_card_id", "company_id", "user_id", "lat", "longitude", "timestamp", "amount", and "declined". There are also sections for "Indexes", "Foreign Keys", and "Triggers". To the right of the Navigator is the "SQL Editor" pane, which contains a query: "SELECT avg(amount) FROM transaction;". Below the SQL editor is the "Result Grid" pane, which displays the result of the query: "avg(amount)" with a value of "256.735520". The bottom right of the interface has several tabs: "Result Grid" (which is selected), "Form Editor", "Field Types", "Query Stats", and "Execution Plan". At the bottom, there is a "Result 1" pane showing the execution log with two entries:

#	Time	Action	Message	Duration / Fetch
7	15:22:33	Select * FROM transaction WHERE company_id in (SELECT id F...	118 row(s) returned	0.000 sec / 0.000 sec
8	15:28:52	SELECT avg(amount) FROM transaction LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Ara busquem totes les transaccions per sobre d'aquest amount

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the 'File', 'Edit', 'View', 'Query', 'Database', 'Server', 'Tools', 'Scripting', and 'Help' menus are visible. The 'Navigator' pane on the left lists 'SCHEMAS' (sakila, sys, transactions), 'Tables' (company, transaction), and various database objects like 'Columns', 'Indexes', 'Foreign Keys', 'Triggers', 'Views', 'Stored Procedures', and 'Functions'. The 'Administration' tab is selected. The 'Schemas' tab is also present. The 'Information' pane below the Navigator is currently empty.

In the center, the 'SQL File 3*' tab contains the following SQL code:

```
1 • SELECT *
2   FROM transaction
3   WHERE amount > (
4     SELECT avg(amount)
5       FROM transaction);
```

The 'Result Grid' pane below displays the results of the query. The columns are: id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, and declined. The data shows numerous rows of transaction details, with the 'amount' column ranging from approximately 400 to 1000.

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
02C6201E-D90A-1859-B4EE-88D2986D3802	CcU-2938	b-2362	92	81.9185	-12.5276	2021-08-28 23:42:24	466.92	0
0668296C-CD89-A883-768C-2E4C44F8C8AE	CcU-3743	b-2618	265	-34.3593	-100.556	2022-01-26 02:07:14	394.18	0
06CD90A5-9842-D684-0DD0-A5E394EBAA99	CcU-2959	b-2346	92	33.7381	158.298	2021-10-26 23:00:01	279.93	0
07A46D48-31A3-7E87-65B9-0DA902AD109F	CcU-3225	b-2386	272	38.8342	92.1905	2021-06-28 21:11:42	340.87	1
09DE92CE-6F27-2B87-1385-9389B2388E2	CcU-3071	b-2298	275	71.1706	10.5757	2021-05-11 20:40:06	303.05	1
0A476ED9-0C13-1962-F876-D35639246532	CcU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
0BE88087-9D66-1707-CE4B-9DCE7E1914B5	CcU-3141	b-2338	272	23.3264	-13.6037	2022-03-04 14:54:35	288.81	1
0CE957A6-CCAA-2B7A-6839-8A40B324853	CcU-3435	b-2506	269	-69.3537	-10.26	2022-02-02 07:29:36	428.69	1
1017AA59-3D5F-7A4C-1992-D151ABD1FA0A	CcU-3701	b-2618	267	4.27645	-101.554	2021-11-01 01:02:11	447.11	0
1026DA24-8929-31F1-8250-D7BA805C13D2	CcU-2959	b-2346	92	32.0646	-140.147	2021-12-07 09:30:38	465.31	0
10881D1D-SB23-A76C-53EF-C568E9A05D0	CcU-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
133882CC-DE62-8604-2D11-3DC5496E0A5F	CcU-3407	b-2490	271	62.3246	101.017	2021-04-02 05:17:46	348.88	1
147983D2-B7BA-C7BB-4CE3-8D7C2DE85A8B	CcU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0
14CAE5B5-8FB1-3E4A-4C85-0EA4167534F4	CcU-4849	b-2302	189	-53.6202	93.0533	2021-12-31 00:29:42	388.04	0
151763AB-8844-A7C9-6691-692C2700DC2C	CcU-3505	b-2546	267	-70.0484	-44.5028	2021-03-23 01:58:34	259.51	1
152598C2-029D-D684-4B66-91EDF393EBFF	CcU-2994	b-2326	126	-67.0189	-141.672	2021-07-05 03:10:00	395.43	0
156F3F80-7E7D-65CF-727D-6AE03CEB7520	CcU-2959	b-2346	92	-59.9778	172.731	2021-04-29 07:06:10	404.16	0
15CC4862-D13E-ED4B-941C-486484AF0FDAD	CcU-3239	b-2394	272	-14.0843	7.79937	2021-04-22 13:56:42	447.11	0
1670E938-B1C2-428D-FA3D-96A45CD41B22	CcU-3883	b-2494	255	67.3865	-63.1993	2021-03-29 11:04:24	414.36	0

The 'Output' pane at the bottom shows two log entries:

#	Time	Action	Message	Duration / Fetch
17	15:34:31	SELECT * FROM transaction WHERE amount > 100 LIMIT 0, 1000	479 row(s) returned	0.000 sec / 0.000 sec
18	15:35:20	SELECT * FROM transaction WHERE amount > (SELECT avg(am...)	297 row(s) returned	0.000 sec / 0.000 sec

Ara li demanarem que només ens doni els id d'empresa d'aquestes transaccions i demanarem que ens tregui els duplicats

The screenshot shows the MySQL Workbench interface. In the top-left pane, the Navigator displays the database schema, specifically the 'transaction' table under the 'company' schema. The 'Columns' section shows fields like id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, and declined. The 'Result Grid' pane shows the output of a query that selects distinct company_ids from the transaction table where the amount is greater than the average amount. The results are listed as follows:

company_id
b-2362
b-2618
b-2346
b-2386
b-2388
b-2302
b-2338
b-2506
b-2222
b-2490
b-2326
b-2546
b-2394
b-2494
b-2278
b-2474
b-2570
b-2366
b-2446

The bottom pane shows the 'Output' window with two log entries:

#	Time	Action	Message	Duration / Fetch
19	15:36:34	SELECT company_id FROM transaction WHERE amount > (SELECT avg(amount) FROM transaction);	297 row(s) returned	0.000 sec / 0.000 sec
20	15:36:43	SELECT distinct company_id FROM transaction WHERE amount >... 70 row(s) returned		0.000 sec / 0.000 sec

Ara ja tenim una llista de ids d'empresa, només ens calen els noms, que demanarem a l'altre taula

The screenshot shows the MySQL Workbench interface with a query editor window titled '1.2.sql'. The code in the editor is:

```
1 • Select company_name
2   FROM company
3   WHERE id in (
4     SELECT distinct company_id
5       FROM transaction
6      WHERE amount > (
7        SELECT avg(amount)
8          FROM transaction
9      )
10    ORDER by company_name;
```

The results grid displays a list of company names:

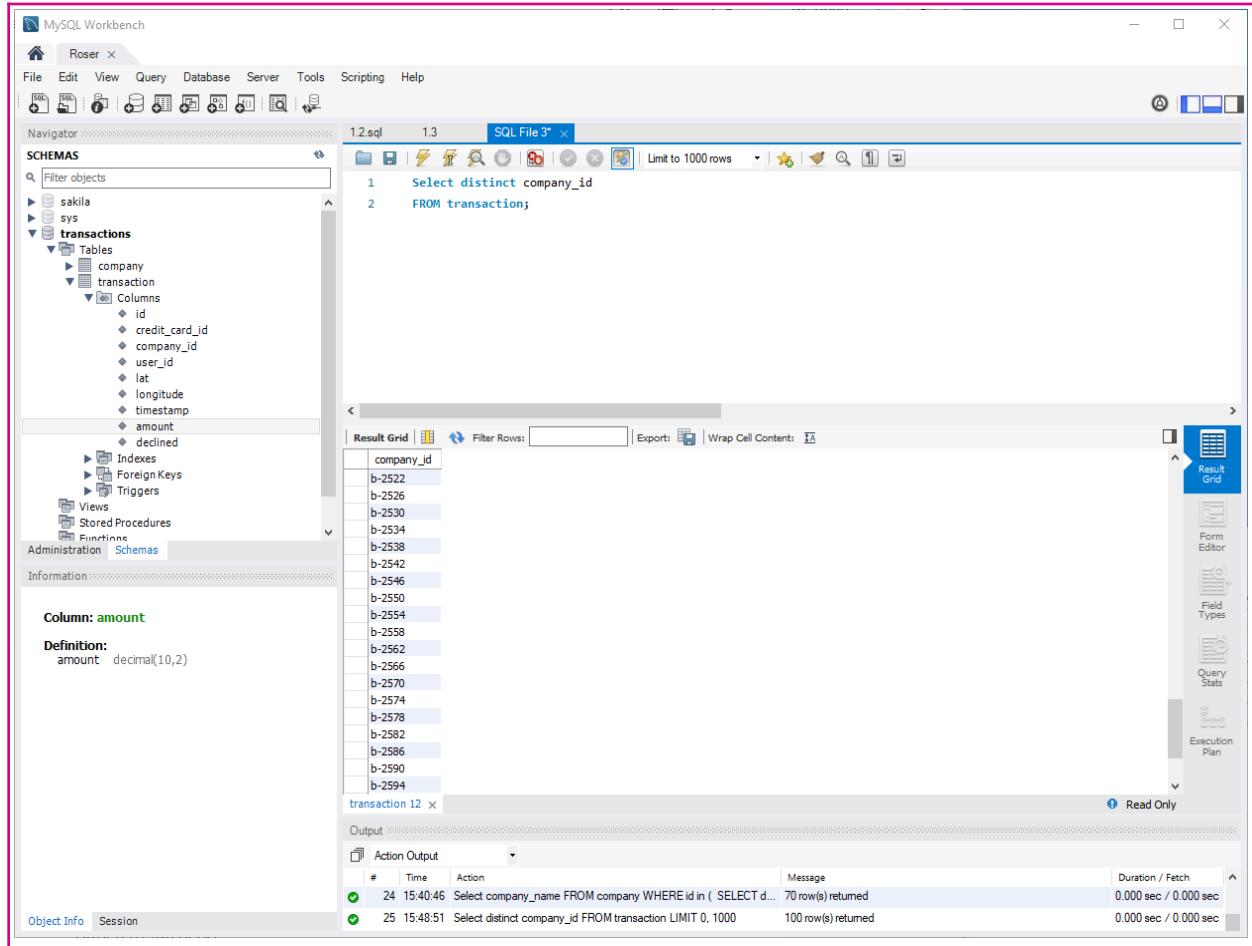
company_name
A Institute
Ac Fermentum Incorporated
Ac Industries
Aliquam PC
Aliquet Diam Limited
Aliquet Sem Limited
Amet Institute
Amet Luctus Vulpitate Foundation
Ante Iaculis Nec Foundation
Arcu LLP
At Pede Corp.
Auctor Mauris Corp.
Augue Foundation
Dictum Eu Corp.
Dis Parturient Institute
Donec Fringilla PC
Donec Ltd
Egestas Nunc Sed Limited
Eget Ipsum Ltd

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
23	15:39:57	Select company_name as "Empreses amb transaccions per sobre l..."	70 row(s) returned	0.000 sec / 0.000 sec
24	15:40:46	Select company_name FROM company WHERE id in (SELECT d...	70 row(s) returned	0.000 sec / 0.000 sec

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

Ens demanen un llistat de les empreses que no tenen transaccions
 Començarem amb la llista d'empreses que tenen transaccions



The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane displays the database schema, specifically the 'transactions' schema which contains the 'transaction' table. The 'Columns' section of the transaction table is expanded, showing fields like id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, and declined. Below this, the 'Result Grid' pane shows a list of company_ids from the transaction table, ranging from b-2522 to b-2594. The bottom pane, 'Output', shows the execution log with two entries: a SELECT query for company_name and another for distinct company_ids from the transaction table, both completed in 0.000 sec / 0.000 sec.

company_id
b-2522
b-2526
b-2530
b-2534
b-2538
b-2542
b-2546
b-2550
b-2554
b-2558
b-2562
b-2566
b-2570
b-2574
b-2578
b-2582
b-2586
b-2590
b-2594

Output:

#	Time	Action	Message	Duration / Fetch
24	15:40:46	Select company_name FROM company WHERE id in (SELECT d...	70 row(s) returned	0.000 sec / 0.000 sec
25	15:48:51	Select distinct company_id FROM transaction LIMIT 0, 1000	100 row(s) returned	0.000 sec / 0.000 sec

Després ens dóna error perquè no es pot posar distinct en una sbquery, no té sentit

The screenshot shows the MySQL Workbench interface. In the top-left corner, the title bar says "MySQL Workbench". Below it is a menu bar with File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The main area has a "Navigator" pane on the left containing a tree view of schemas (sakila, sys, transactions) and their tables (company, transaction). A "SQL File 3*" tab is open in the center, displaying the following SQL code:

```
1. Select company_name
  FROM company
  WHERE id NOT in (
    Select distinct company_id
      FROM transaction
  )
  ORDER by company_name;
```

Below the code, the "Information" pane shows details for the "amount" column of the "transaction" table:

Column: amount
Definition: amount decimal(10,2)

At the bottom, the "Output" pane shows the results of the query execution:

#	Time	Action	Message	Duration / Fetch
25	15:48:51	Select distinct company_id FROM transaction LIMIT 0, 1000	100 row(s) returned	0.000 sec / 0.000 sec
26	15:50:48	distinct	Error Code: 1064. You have an error in your SQL syntax; check the... 0.000 sec	

Treiem el distinct i no surt cap empresa. No hi ha cap empresa que no tingui transaccions.

The screenshot shows the MySQL Workbench interface. In the top-left corner, the title bar says "MySQL Workbench". The menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The "Navigator" pane on the left lists "Schemas" (sakila, sys, transactions), "Tables" (company, transaction), and "Columns" (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, declined). The "Administration" tab is selected. In the center, a query editor window titled "1.2.sql" contains the following SQL code:

```
1 • Select company_name
2   FROM company
3   WHERE id NOT in (
4     Select company_id
5       FROM transaction
6   )
7   ORDER by company_name;
```

The "Result Grid" pane below the query editor shows a single row with the value "company_name". In the bottom-right corner, there is a vertical toolbar with icons for Result Grid, Form Editor, Field Types, Query Stats, and Execution Plan. The "Output" pane at the bottom displays the following log entries:

#	Time	Action	Message	Duration / Fetch
26	15:50:48	distinct	Error Code: 1064. You have an error in your SQL syntax; check the... 0.000 sec	
27	15:51:44	Select company_name FROM company WHERE id NOT in (Sele...	0 row(s) returned 0.000 sec / 0.000 sec	

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.

Comencem calculant el total de vendes

The screenshot shows the MySQL Workbench interface. In the top-left pane, the Navigator displays the schema 'transactions' with its tables ('company', 'transaction') and columns ('id', 'credit_card_id', 'company_id', 'user_id', 'lat', 'longitude', 'timestamp', 'amount', 'declined'). A query editor window contains the following SQL code:

```
1 •   SELECT SUM(amount)
2   FROM transaction
3  WHERE declined = 0;
```

The results grid shows a single row with the value 129505.59. The output pane at the bottom shows the following log entries:

#	Time	Action	Message	Duration / Fetch
25	15:48:51	Select distinct company_id FROM transaction LIMIT 0, 1000	100 row(s) returned	0.000 sec / 0.000 sec
26	15:50:48	distinct	Error Code: 1064. You have an error in your SQL syntax; check the... 0 row(s) returned	0.000 sec
27	15:51:44	Select company_name FROM company WHERE id NOT in (Sele...	0 row(s) returned	0.000 sec / 0.000 sec
28	15:56:42	SELECT SUM(amount) FROM transactions WHERE declined = 0 L...	Error Code: 1146. Table 'transactions.transactions' doesn't exist	0.000 sec
29	15:56:59	SELECT SUM(amount) FROM transaction WHERE declined = 0 L...	1 row(s) returned	0.000 sec / 0.000 sec

Hem d'agrupar per dia, però cada timestamp és diferent perquè inclou la hora. Convertirem a només dia amb DATE, i agruparem per data.

The screenshot shows the MySQL Workbench interface with the following details:

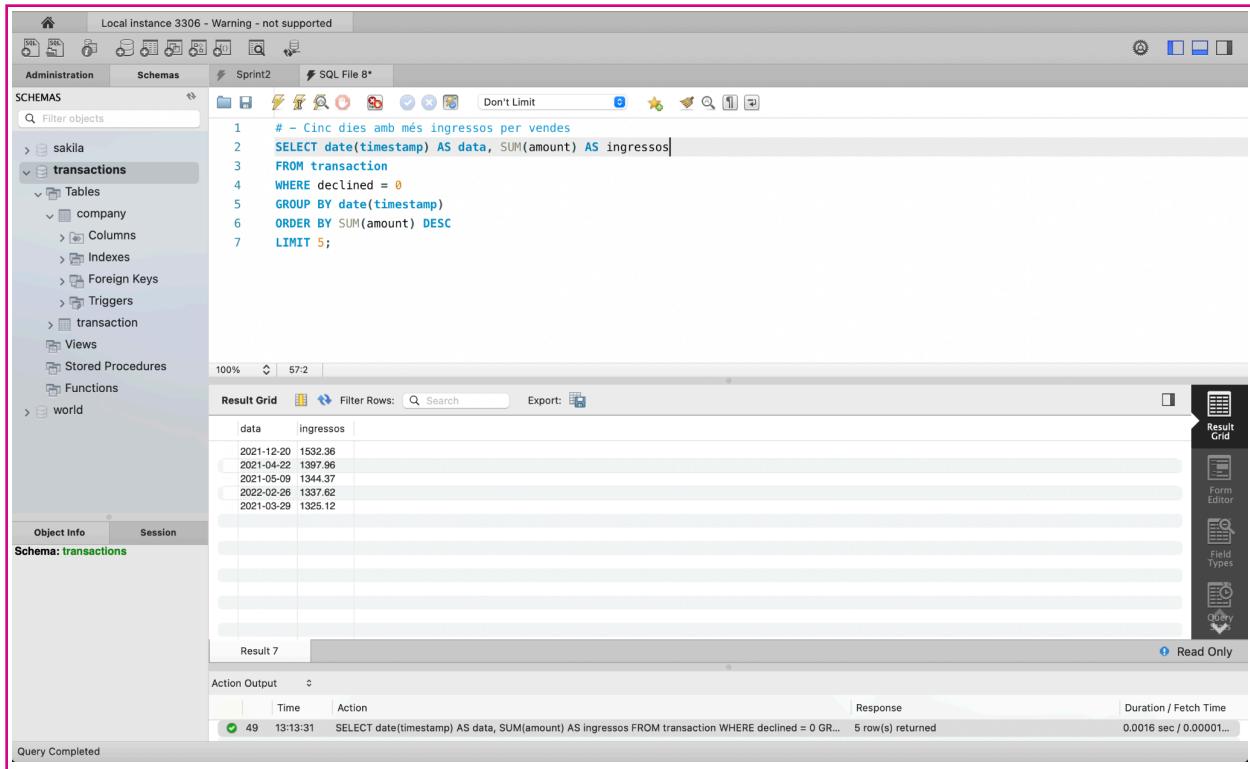
- File Menu:** File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Navigator:** Schemas (sakila, sys, transactions), Tables (company, transaction), Columns (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, declined), Indexes, Foreign Keys, Triggers, Views, Stored Procedures, Functions.
- Current Schema:** transactions
- Current Table:** transaction
- Current Column:** timestamp
- Current Definition:** timestamp timestamp
- Query Editor:** Contains the following SQL code:

```
1 •   SELECT date(timestamp), SUM(amount)
2   FROM transaction
3   WHERE declined = 0
4   GROUP BY date(timestamp);
```
- Result Grid:** Displays the results of the query, showing the date and the sum of amounts for each day.

date(timestamp)	SUM(amount)
2021-08-28	1319.61
2021-07-26	979.43
2022-01-06	943.15
2022-01-26	748.46
2021-10-26	1051.92
2022-02-26	137.62
2021-11-01	621.66
2021-12-07	465.31
2021-07-07	689.72
2021-07-14	157.20
2021-06-01	194.20
2021-12-29	1149.88
2021-08-09	839.86
...	...
- Output:** Shows the action history and message log.

#	Time	Action	Message	Duration / Fetch
29	15:56:59	SELECT SUM(amount) FROM transaction WHERE declined = 0	1 row(s) returned	0.000 sec / 0.000 sec
30	16:01:55	SELECT SUM(amount) FROM transaction WHERE declined = 0	280 row(s) returned	0.016 sec / 0.000 sec
31	16:02:03	SELECT date, SUM(amount) FROM transaction WHERE declined = 0	Error Code: 1054. Unknown column 'date' in field list'	0.000 sec
32	16:02:09	SELECT SUM(amount) FROM transaction WHERE declined = 0	280 row(s) returned	0.000 sec / 0.000 sec
33	16:02:31	SELECT date(timestamp), SUM(amount) FROM transaction WHERE declined = 0	280 row(s) returned	0.000 sec / 0.000 sec

Ara ens toca ordrenar de major a menor i demanar que ens doni els ingressos més grans.



The screenshot shows the MySQL Workbench interface. On the left, the 'Schemas' tree view is open, showing the 'transactions' schema selected. In the center, a SQL editor window displays the following query:

```
# - Cinc dies amb més ingressos per vendes
SELECT date(timestamp) AS data, SUM(amount) AS ingressos
FROM transaction
WHERE declined = 0
GROUP BY date(timestamp)
ORDER BY SUM(amount) DESC
LIMIT 5;
```

The result grid below the query shows five rows of data:

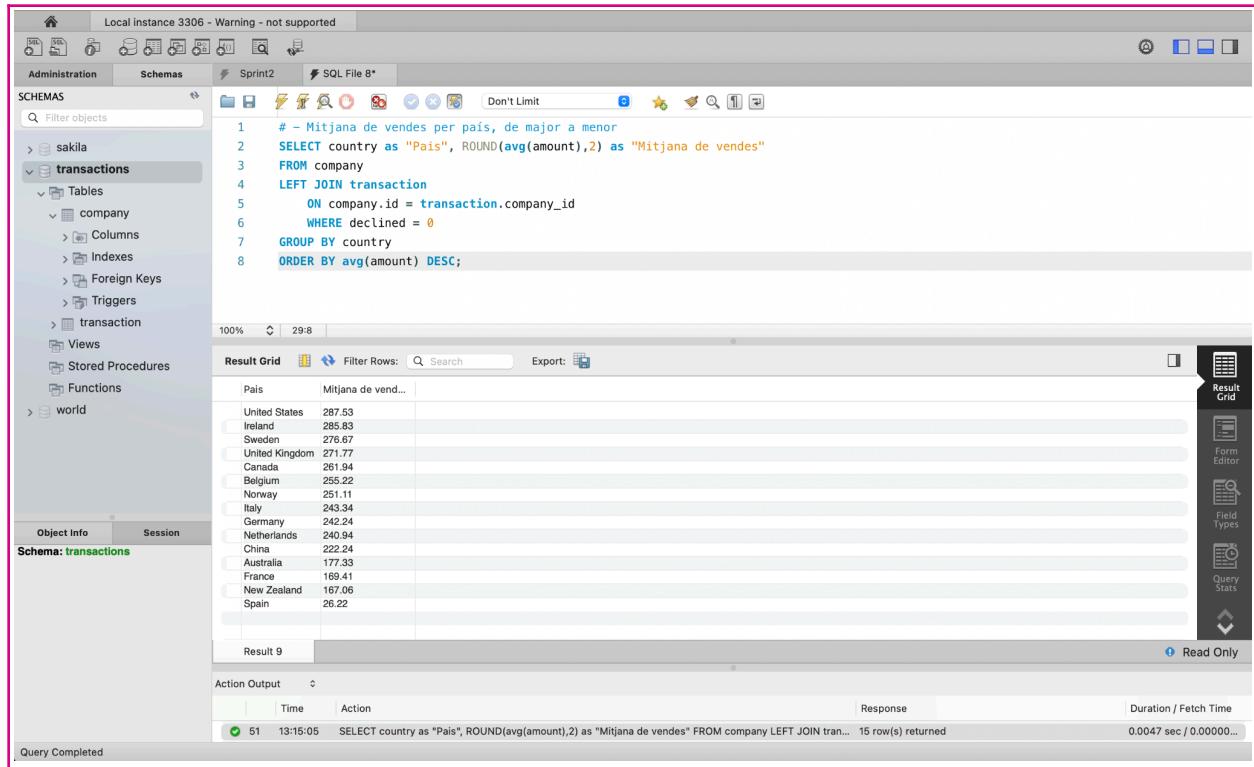
data	ingressos
2021-12-20	1532.36
2021-04-22	1397.96
2021-05-09	1344.37
2022-02-28	1337.62
2021-03-29	1325.12

At the bottom of the interface, the status bar indicates "Query Completed".

Exercici 2

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

Agafem el mateix codi que tenim amb l'exercici 2 del nivell 1 i en compte de preguntar-li per les empreses, li preguntem per país. Agruparem per país també.



The screenshot shows the MySQL Workbench interface with the following details:

- Toolbar:** Standard MySQL Workbench tools like Home, File, Edit, Tools, etc.
- Schemas:** Shows the schema tree with **sakila** and **transactions** databases selected.
- Query Editor:** A SQL editor window titled "Sprint2" containing the following query:

```
1 # - Mitjana de vendes per pais, de major a menor
2 SELECT country as "Pais", ROUND(avg(amount),2) as "Mitjana de vendes"
3 FROM company
4 LEFT JOIN transaction
5     ON company.id = transaction.company_id
6 WHERE declined = 0
7 GROUP BY country
8 ORDER BY avg(amount) DESC;
```
- Result Grid:** A table showing the results of the query. The columns are "Pais" and "Mitjana de vend...". The data is as follows:

Pais	Mitjana de vend...
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

- Object Info:** Shows the schema is **transactions**.
- Action Output:** Shows the query was executed successfully with 15 rows returned in 0.0047 sec / 0.000000...
- Status Bar:** Shows "Query Completed".

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.

Primer fer una consulta per a veure que l'empresa estigui a la llista i de quin país és

The screenshot shows the MySQL Workbench interface with a query editor and a results grid. The query is:

```
SELECT * FROM company;
```

The results grid displays a list of companies with their details:

ID	Company Name	Phone	Email	Country	Website
b-2266	Mus Aenean Eget Foundation	06 25 15 52 43	mi.duis@hotmail.net	Sweden	https://instagram.com/group/9
b-2254	Nascetur Ridiculus Mus Inc.	06 26 87 61 84	suspendisse.du@icloud.net	United States	https://ebay.com/sub
b-2470	Nec Luctus LLC	02 14 71 75 73	consectetur.cursus@protonmail...	Norway	https://instagram.com/user/110
b-2393	Neque Tellus Imperdiet Corp.	09 15 42 22 11	vestibulum.anus.ipsum@aol.edu	Ireland	https://whatsapp.com/sub/cars
b-2382	Neque Tellus Incorporated	04 43 18 34 19	ultrices.lacus.odo@aol.ca	Ireland	https://google.com/site
b-2414	Nibh Phasellus Corporation	02 55 43 68 46	et.ipsum.cursus@aol.edu	Netherlands	https://baidu.com/sub/cars
b-2582	Nibh Phasellus Corporation	08 48 67 57 48	nisi@google.edu	China	https://netflix.com/sub/cars
b-2406	Non Ante LLP	08 89 47 65 08	at.augue.id@aol.net	Sweden	https://nytimes.com/group/9
b-2618	Non Institute	06 77 15 31 14	neat.morbi@protonmail.co.uk	United Kingdom	https://guardian.co.uk/settings
b-2370	Non Justo	Open Value In Editor	idunt@yahoo.edu	Sweden	https://baidu.com/en-us
b-2310	Non Magis	Set Field to NULL	a.fringilla@hotmail.ca	United Kingdom	https://whatsapp.com/site
b-2558	Nulla Inte	Mark Field Value as a Function/Literal	protonmail.org	Sweden	https://yahoo.com/one
b-2438	Nunc Ac F	Delete Row(s)	google.com	Sweden	https://nytimes.com/fr
b-2542	Nunc In F	Load Value From File...	um@protonmail.com	Italy	https://netflix.com/sub
b-2302	Nunc Inte	Save Value To File...	ok.com	Germany	https://wikipedia.org/en-us
b-2490	Nunc Sit I	Copy Row	es@cloud.net	Norway	https://haver.com/en-ca
b-2574	Orci Adipi	Copy Row (with names)	@protonmail.ca	United Kingdom	https://reddit.com/user/110
b-2426	Pede Cum	Copy Row (with names)	n.sodales@yahoo.ca	Norway	https://crn.com/one
b-2462	Pede Ultr	Copy Row (with names)	@yahoo.com	Belgium	https://instagram.com/group/9
b-2602	Placerat L	Copy Row (unquoted)	endisse@hotmail.org	Netherlands	https://netflix.us/sub
b-2282	Pretium N	Copy Row (names, unquoted)	j.malesuada@proton...	Australia	https://ebay.com/sub
b-2318	Quam A F	Copy Row (names, unquoted)	gildoud.edu	Italy	https://ebay.com/settings
b-2290	Quisque L	Copy Row (names, tab separated)	este.orci@hotmail.co.uk	China	https://baidu.com/group/9
b-2446	Risus Ass	Copy Row (tab separated)	ula.nullan@google.edu	Australia	https://whatsapp.com/group/9
b-2614	Rutrum N	Copy Field	stormail.net	Germany	https://netflix.com/site
b-2506	Sapien Nt	Copy Field (unquoted)	ahoo.net	New Zealand	https://netflix.com/settings

Seleccionem la entrada de Non Institute

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the title is "Roser x". The menu includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main area has tabs labeled 1.2, 1.3, and 2, with "SQL File 11" active. The SQL editor contains the following query:

```
1  SELECT *
2  FROM company
3  WHERE company_name = 'Non Institute';
```

The results are displayed in a "Result Grid" table:

	id	company_name	phone	email	country	website
▶	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/settings
*	NULL	NULL	NULL	NULL	NULL	NULL

On the left, the Navigator pane shows the schema structure under "schemas". The "transactions" schema is expanded, showing tables like "company" and "transaction", and other objects like Views, Stored Procedures, Functions, and world. On the right, there are several tabs: Result Grid, Form Editor, Field Types, Query Stats, and Execution Plan. At the bottom, the "Object Info" tab is selected, showing the output of the previous query:

#	Time	Action	Message	Duration / Fetch
✖	711 11:53:25	SELECT * FROM company WHERE company_name is 'Non Institute'	Error Code: 1064. You have an error in your SQL syntax; check the ...	0.000 sec
✔	712 11:54:55	SELECT * FROM company WHERE company_name = 'Non Institut...' 1 row(s) returned		0.000 sec / 0.000 sec

The status bar at the bottom indicates "Query Completed".

Reduim a que ens doni només el país

The screenshot shows the MySQL Workbench interface. In the top-left corner, the title bar says "MySQL Workbench" and "Roser". The menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The "Query" tab is selected.

The Navigator pane on the left shows the schema structure. Under the "schemas" section, there are "sakila", "sys", and "transactions". The "transactions" schema is expanded, showing "Tables" (with "company" and "transaction"), "Views", "Stored Procedures", "Functions", and "world".

The main query editor window contains the following SQL code:

```
1 SELECT country
2 FROM company
3 WHERE company_name = 'Non Institute';
```

The results pane below the query editor shows the output of the query:

country
United Kingdom

The bottom pane, titled "Output", displays the execution log:

Action Output
Time Action Message Duration / Fetch
712 11:54:55 SELECT * FROM company WHERE company_name = 'Non Institut...' 1 row(s) returned 0.000 sec / 0.000 sec
713 11:56:20 SELECT country FROM company WHERE company_name = 'Non I... 1 row(s) returned 0.000 sec / 0.000 sec

The status bar at the bottom indicates "Query Completed".

Ara li demanarem una llista d'empreses d'aquest mateix país amb una subquery i comprovem que també són de Regne Unit

The screenshot shows the MySQL Workbench interface with a query editor and results grid.

SQL Editor:

```
## EXERCICI 3
# - Transaccions en el mateix país que "Non Institute"
# - Amb JOIN i subconsultes

Select *
FROM company
WHERE country = (
    SELECT country
    FROM company
    WHERE company_name = 'Non Institute');
```

Result Grid:

id	company_name	phone	email	country	website
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnr.com/one
b-2310	Non Magna LLC	06 71 73 13 17	nisi quisque.fringilla@hotmail.ca	United Kingdom	https://whatsapp.com/site
b-2326	Enim Condimentum Ltd	09 55 51 66 25	imperdiet.non.vestibulum@yahoo.net	United Kingdom	https://cnr.com/group/9
b-2354	Ac Libero Inc.	04 36 20 64 29	mollis.lectus@protonmail.ca	United Kingdom	https://reddit.com/one
b-2374	Amet Faucibus Ut Foundation	03 21 62 47 12	malesuada@cloud.net	United Kingdom	https://zoom.us/fr
b-2430	Interdum Feugiat Sed Associates	04 88 40 32 52	consectetur.mauris@yahoo.co.uk	United Kingdom	https://nytimes.com/sub
b-2522	Viverra Donec Foundation	03 33 12 32 73	dictum.eu@outlook.net	United Kingdom	https://nytimes.com/site
b-2574	Orci Adipiscing Limited	03 18 00 77 81	dolor.fusce@protonmail.ca	United Kingdom	https://reddit.com/user/110
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/settings
*	NULL	NULL	NULL	NULL	NULL

Action Output:

#	Time	Action	Message	Duration / Fetch
713	11:56:20	SELECT country FROM company WHERE company_name = 'Non I...	1 row(s) returned	0.000 sec / 0.000 sec
714	11:57:56	Select * FROM company WHERE country = (SELECT country FRO...	9 row(s) returned	0.000 sec / 0.000 sec

Ara farem un JOIN i li posarem aquesta condició. Li demanarem que ens doni tota la informació de les transaccions, inclosa la d'empresa i veiem que són d'aquest país

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the database is set to 'Roser'. The main area displays a SQL query in the 'SQL File 11*' tab:

```
## EXERCICI 3
# - Transaccions en el mateix país que "Non Institute"
# - Amb JOIN i subconsultes
Select *
FROM transaction
RIGHT JOIN company
ON company.id = transaction.company_id
WHERE country = (
    SELECT country
    FROM company
    WHERE company_name = 'Non Institute');
```

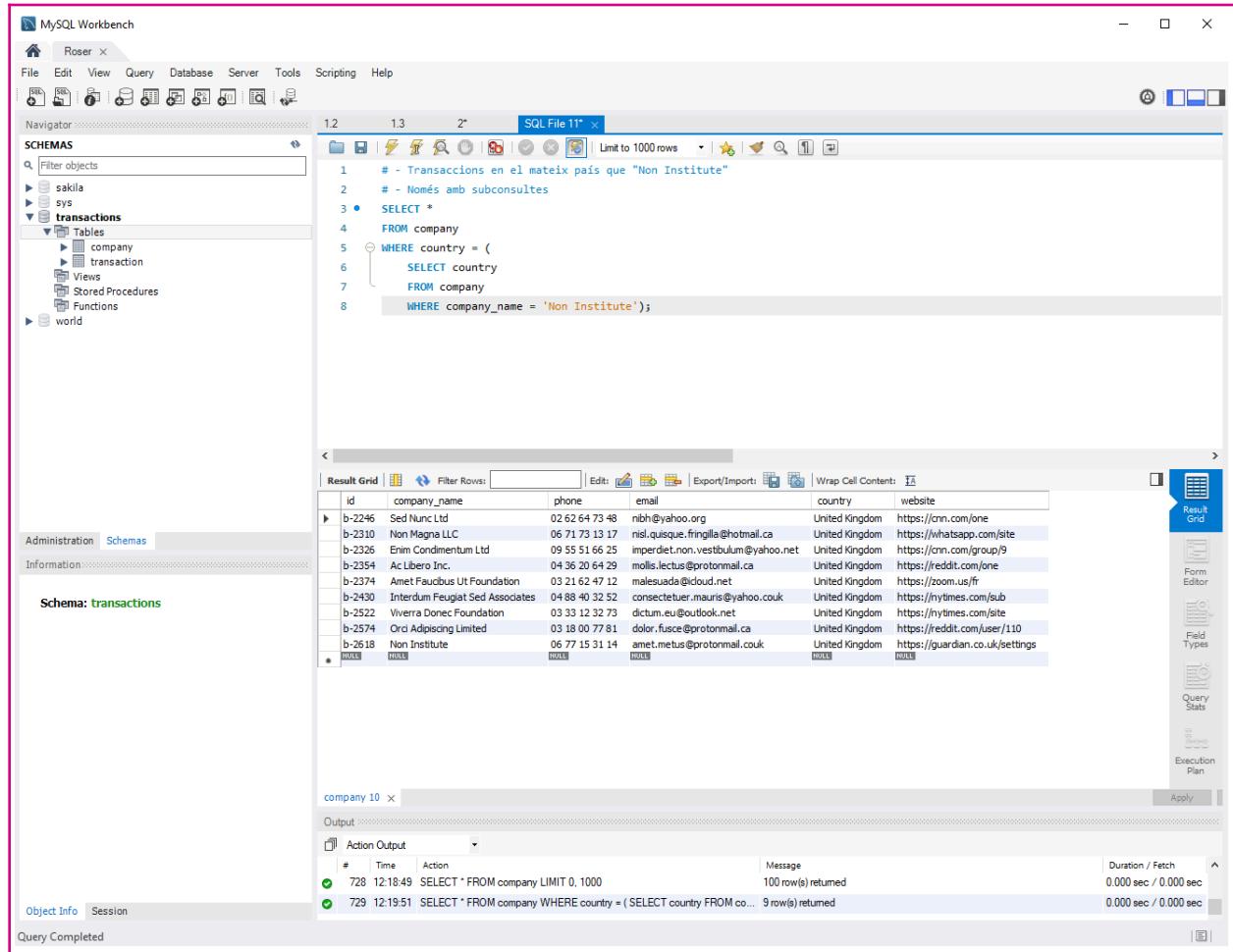
The results are displayed in the 'Result Grid' tab, showing a list of transactions with their corresponding company details:

amount	declined	id	company_name	phone	email	country	website
492.42	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
295.35	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
411.70	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
337.22	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
20.93	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
175.13	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
223.57	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
171.43	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
325.08	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
286.85	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
309.22	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
101.32	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
113.49	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
38.03	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...
385.28	0	b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/se...

In the bottom status bar, it says 'Query Completed'.

- Mostra el llistat aplicant solament subconsultes.

Tornem al punt on tenim una subconsulta que ens donava les empreses del mateix país.



The screenshot shows the MySQL Workbench interface with a query editor and results grid.

Query Editor:

```

MySQL Workbench - Roser x
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
  Filter objects
  sakila
  sys
  transactions
    Tables
      company
      transaction
    Views
    Stored Procedures
    Functions
  world

1  # - Transaccions en el mateix país que "Non Institute"
2  # - Només amb subconsultes
3  ● SELECT *
4  FROM company
5  WHERE country = (
6    SELECT country
7    FROM company
8    WHERE company_name = 'Non Institute');
  
```

Result Grid:

ID	Company Name	Phone	Email	Country	Website
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one
b-2310	Non Magna LLC	06 71 73 13 17	nisl quisque.fringilla@hotmail.ca	United Kingdom	https://whatsapp.com/site
b-2326	Enim Condimentum Ltd	09 55 51 66 25	imperdiet.non.vestibulum@yahoo.net	United Kingdom	https://cnn.com/group/9
b-2354	Ac Libero Inc.	04 36 20 64 29	mollis.lectus@protonmail.ca	United Kingdom	https://reddit.com/one
b-2374	Amet Faucibus Ut Foundation	03 21 62 47 12	malesuada@cloud.net	United Kingdom	https://zoom.us/fr
b-2430	Interdum Feugiat Sed Associates	04 88 40 32 52	consectetur.mauris@yahoo.co.uk	United Kingdom	https://nytimes.com/sub
b-2522	Viverra Donec Foundation	03 33 12 32 73	dictum.eu@outlook.net	United Kingdom	https://nytimes.com/site
b-2574	Orci Adipiscing Limited	03 18 00 77 81	dolor.fusce@protonmail.ca	United Kingdom	https://reddit.com/user/110
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/settings
*	HULL	HULL	HULL	HULL	HULL

Action Output:

#	Time	Action	Message	Duration / Fetch
728	12:18:49	SELECT * FROM company LIMIT 0, 1000	100 row(s) returned	0.000 sec / 0.000 sec
729	12:19:51	SELECT * FROM company WHERE country = (SELECT country FROM co... 9 row(s) returned		0.000 sec / 0.000 sec

Li diem que només ens doni el resultat de id's d'empresa

The screenshot shows the MySQL Workbench interface with the following details:

- File Menu:** File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Navigator:** Shows the database schema with the "transactions" schema selected, containing Tables, Views, Stored Procedures, and Functions.
- SQL Editor:** Displays the following SQL code:

```
1  # - Transaccions en el mateix país que "Non Institute"
2  # - Només amb subconsultes
3  ● SELECT id
4    FROM company
5  ⚡ WHERE country = (
6    SELECT country
7      FROM company
8      WHERE company_name = 'Non Institute');
```
- Result Grid:** Shows the results of the query, listing various IDs (e.g., b-2246, b-2310, b-2328, b-2354, b-2374, b-2430, b-2522, b-2574, b-2618) under the "id" column.
- Output Panel:** Displays the execution log:

#	Time	Action	Message	Duration / Fetch
729	12:19:51	SELECT * FROM company WHERE country = (SELECT country FROM co...	9 row(s) returned	0.000 sec / 0.000 sec
730	12:30:56	SELECT id FROM company WHERE country = (SELECT country FROM c...	9 row(s) returned	0.000 sec / 0.000 sec
- Status Bar:** Shows "Query Completed".

Ara li direm que ens doni les transaccions només amb aquests id d'empresa
Comencem provant amb un dels ids

The screenshot shows the MySQL Workbench interface with a query editor and results grid.

Query Editor:

```
1 # - Transaccions en el mateix país que "Non Institute"
2 # - Només amb subconsultes
3 • SELECT *
4 FROM transaction
5 WHERE company_id in ('b-2310');
```

Result Grid:

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CcU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0
BC2B9A38-77B4-28CD-1FE8-14DED863E773	CcU-3092	b-2310	275	-78.0295	18.5295	2021-10-18 07:27:35	477.95	1
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Output:

#	Time	Action	Message	Duration / Fetch
741	12:37:00	SELECT * FROM transaction WHERE company_id = b-2310 LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec
742	12:37:11	SELECT * FROM transaction WHERE company_id in (b-2310) LIMIT 0, 10...	2 row(s) returned	0.000 sec / 0.000 sec

I ara ho juntem tot

Screenshot of MySQL Workbench showing a query execution window.

Query Editor:

```

1 •  SELECT *
2   FROM transaction
3   WHERE company_id IN (
4     SELECT id
5       FROM company
6      WHERE country = (
7        SELECT country
8          FROM company
9         WHERE company_name = 'Non Institute'
10      )
11  ;
12

```

Result Grid:

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
28928E1C-E014-A760-0A75-87147764...	CcU-2980	b-2246	275	-41.0496	161.685	2021-08-10 06:14:49	283.73	0
ACD2011A-A2B1-C965-41E1-2AB00C6...	CcU-2980	b-2246	275	-54.4792	-82.7974	2022-03-05 20:41:20	60.07	1
433A349E-CEB0-3D68-A4D4-FE7718...	CcU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0
BC289A3B-77B4-28CD-1FE9-14DED8...	CcU-3092	b-2310	275	-78.0299	18.5295	2021-10-18 07:27:35	477.95	1
147963D2-B7BA-C7BB-4CE3-8D7C2D...	CcU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0
152598C2-02D0-D684-4B64-51EDF39...	CcU-2994	b-2326	126	-67.0189	-141.872	2021-07-05 03:10:00	395.43	0
18636B58-A2E8-7C69-D9C9-C5435D...	CcU-2994	b-2326	131	70.2543	-13.1336	2021-07-06 08:48:46	195.06	0
20418DE5-BB04-BEBB-BD7A-A96C1B...	CcU-2994	b-2326	126	-79.1148	1,51481	2022-01-03 15:59:29	479.52	0
239857E-6C0E-137A-C2F6-3180A188...	CcU-2994	b-2326	126	23.6174	137.222	2021-08-26 06:04:05	43.90	0
267CA4A86-7B47-1C5E-0718-2824983...	CcU-2994	b-2326	126	-17.5259	104.915	2021-10-01 21:08:53	122.63	0
3142C93E-B3B7-49E4-EE2D-29CA834...	CcU-2994	b-2326	126	-67.8476	-119.978	2021-04-06 17:24:44	91.59	0
357968BE-7B1D-B887-3BC7-20B8673...	CcU-2994	b-2326	126	87.0665	-22.7339	2021-07-26 22:59:24	303.60	0
360C7814-F7AF-B43A-0946-A38D26...	CcU-2994	b-2326	116	-7.93005	-79.0733	2021-08-21 10:19:58	494.82	0
391E1CFD-D653-E45B-A729-F2EB932...	CcU-2994	b-2326	118	60.5512	103.904	2021-10-09 00:50:38	271.27	0
3C4D7C2A-A402-B941-625A-D64CA53...	CcU-2994	b-2326	117	23.1627	-10.381	2021-04-25 19:11:52	441.27	0
3C4D7C2A-A402-B941-625A-D64CA53...	CcU-2994	b-2326	127	60.0540	06.5033	2021-02-29 11:28:28	478.54	0

Action Output:

Action	Time	Response	Duration / Fetch Time
59 13:20:40	SELECT * FROM transaction WHERE company_id IN (SELECT id FROM company WHERE country = (SELECT country FROM company WHERE company_name = 'Non Institute'))	100 row(s) returned	0.0017 sec / 0.00008...

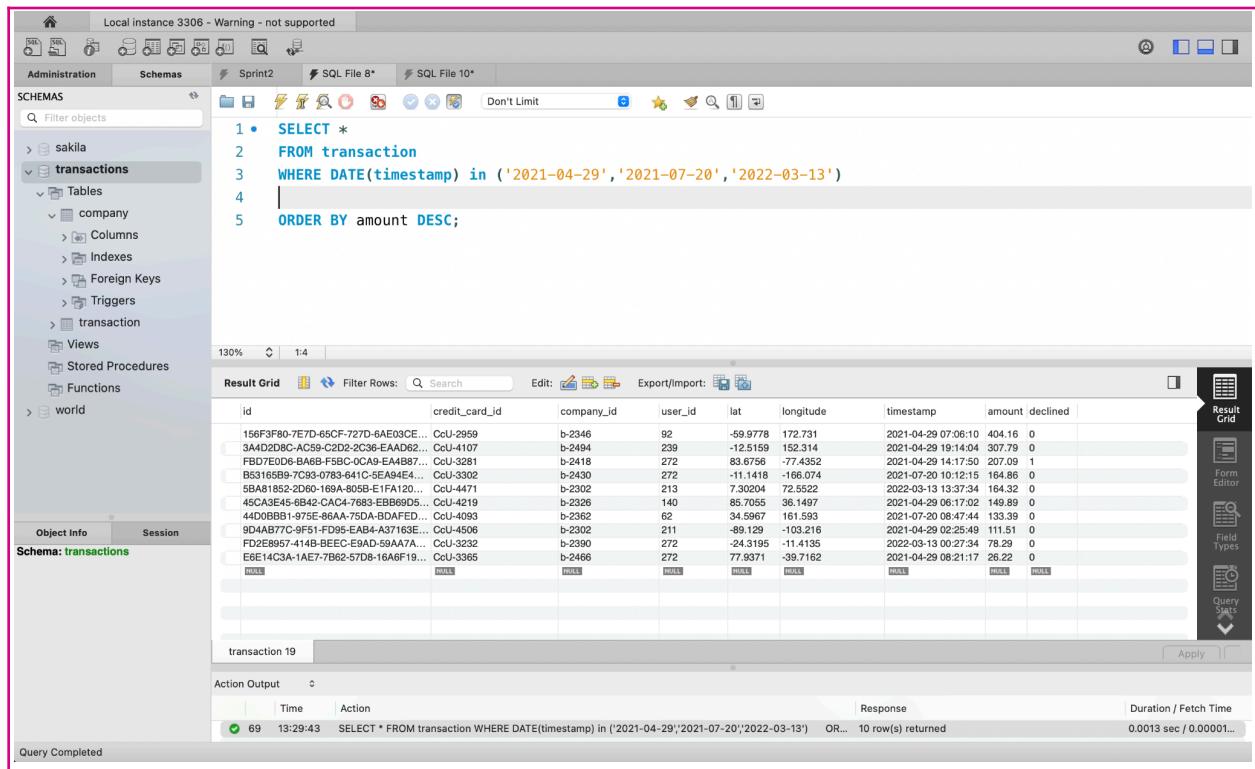
Query Completed

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.

Començarem per les transaccions que s'han fet aquests tres dies



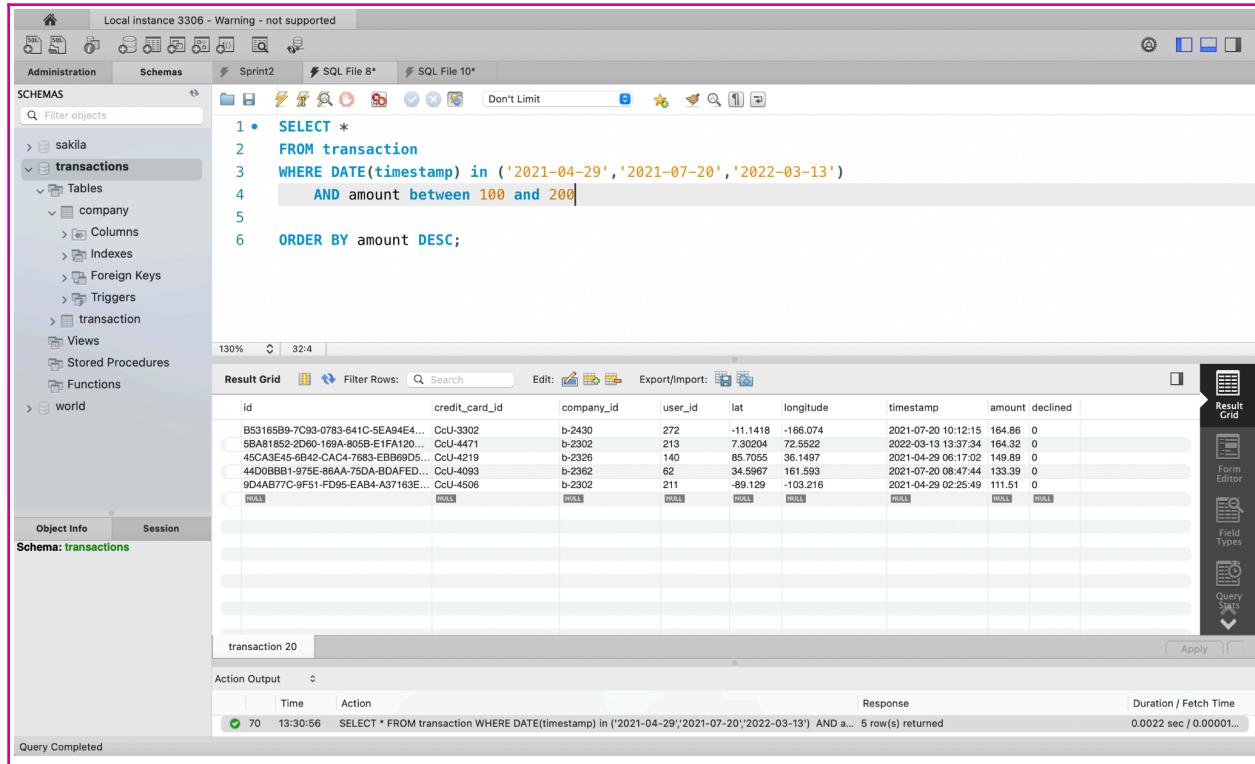
The screenshot shows the MySQL Workbench interface. The left sidebar displays the schema browser for the 'transactions' database, showing tables like 'company', 'transaction', and 'credit_card'. The main area contains a SQL editor window with the following query:

```
1 •  SELECT *
2   FROM transaction
3  WHERE DATE(timestamp) IN ('2021-04-29', '2021-07-20', '2022-03-13')
4
5  ORDER BY amount DESC;
```

The results grid below the query shows 10 rows of transaction data, ordered by amount in descending order. The columns include id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, and declined. The timestamp column shows dates from April 29, 2021, to March 13, 2022. The amount column ranges from 100 to 200 euros. The declined column shows values 0 and 1.

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
156F3F80-7E7D-65CF-727D-6AE03CE...	CcU-2959	b-2346	92	-59.9778	172.731	2021-04-29 07:06:10	404.16	0
3A4D2D8C-AC59-C2D2-2C36-EAD62...	CcU-4107	b-2494	239	-12.5159	152.314	2021-04-29 19:14:04	307.79	0
FBD7E0D6-B46B-F5BC-0CA9-EA4B87...	CcU-3281	b-2418	272	83.6758	-77.4352	2021-04-29 14:17:50	207.09	1
B53165B9-7C93-1783-641C-5EA94E4...	CcU-3302	b-2430	272	-11.1418	-166.074	2021-07-20 10:12:15	164.86	0
5BA81852-2D60-169A-805B-E1FA120...	CcU-4471	b-2302	213	7.30208	72.5522	2022-03-13 13:37:34	164.32	0
45CA3E45-6B42-CAC4-7683-EBB6905...	CcU-4219	b-2326	140	85.7055	36.1497	2021-04-29 06:17:02	149.88	0
44D0BBB1-975E-66AA-75DA-BDAFED...	CcU-4093	b-2362	62	34.5967	161.593	2021-07-20 08:47:44	133.39	0
9D4AB77C-9F51-FD95-EAB4-A37163E...	CcU-4506	b-2302	211	-89.129	-103.216	2021-04-29 02:25:49	111.51	0
FD2E8957-414B-BECC-E9AD-59A7A...	CcU-3232	b-2390	272	-24.3195	-11.4135	2022-03-13 00:27:34	78.29	0
E6E14C3A-1AE7-7B82-57D8-16A6F19...	CcU-3365	b-2466	272	77.9371	-39.7162	2021-04-29 06:21:17	26.22	0

Limitem als valors entre 100 i 200



The screenshot shows the MySQL Workbench interface with a query editor and a results grid.

Query Editor:

```
1 • SELECT *
2   FROM transaction
3  WHERE DATE(timestamp) IN ('2021-04-29', '2021-07-20', '2022-03-13')
4    AND amount BETWEEN 100 AND 200
5
6  ORDER BY amount DESC;
```

Result Grid:

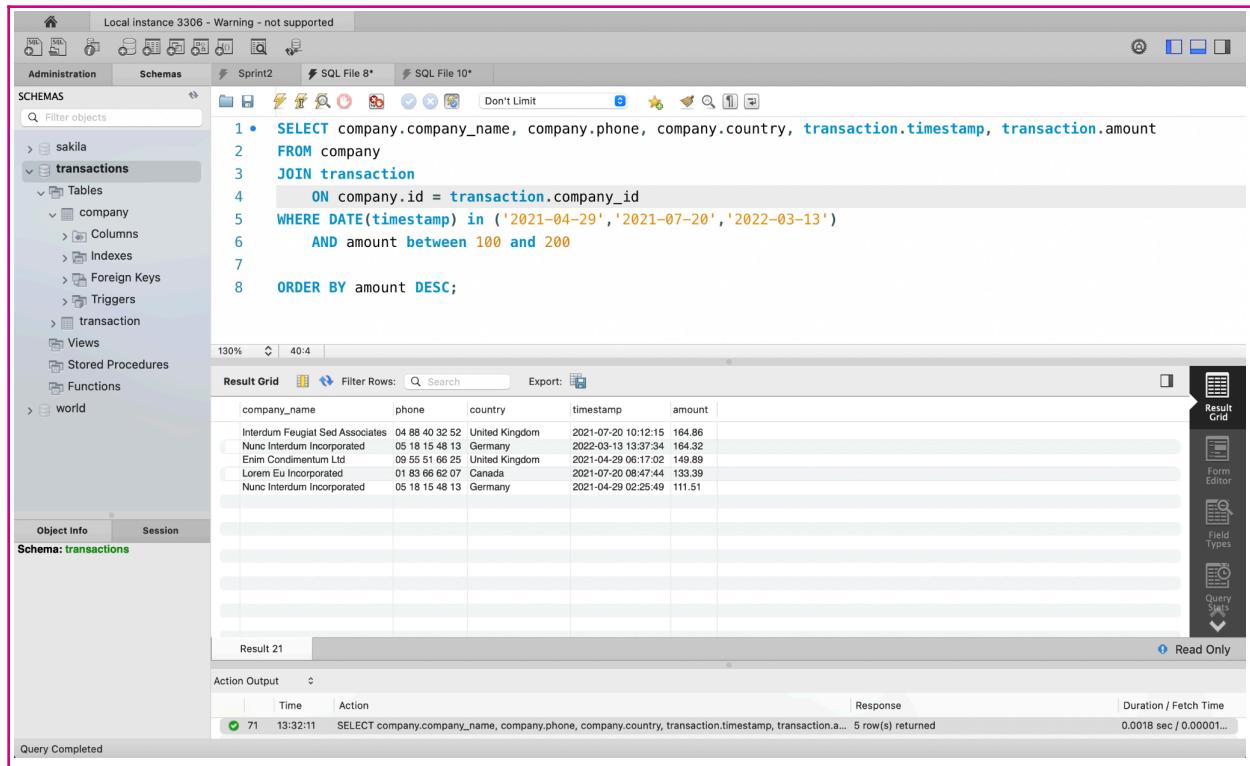
id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
B53165B9-7C93-0783-641C-5EA94E4...	CcU-3302	b-2430	272	-11.1418	-166.074	2021-07-20 10:12:15	164.86	0
5BA81852-2D60-169A-805B-E1FA120...	CcU-4471	b-2302	213	7.30204	72.5522	2022-03-13 13:37:34	164.32	0
45CA3E45-6842-CAC4-7683-EBB69D5...	CcU-4219	b-2326	140	85.7055	36.1497	2021-04-29 06:17:02	149.89	0
44D0DBB1-975E-86AA-75DA-BDAFED...	CcU-4093	b-2362	62	34.5967	161.593	2021-07-20 08:47:44	133.39	0
9D4AB77C-9F51-FD95-EABA-A37163E...	CcU-4506	b-2302	211	-89.129	-103.216	2021-04-29 02:25:49	111.51	0
HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

Action Output:

Action	Time	Response	Duration / Fetch Time
70	13:30:56	SELECT * FROM transaction WHERE DATE(timestamp) IN ('2021-04-29','2021-07-20','2022-03-13') AND a... 5 row(s) returned	0.0022 sec / 0.0000...

Message Bar: Query Completed

I ajuntem aquestes transaccions amb les empreses i seleccionem les dades que ens demanen



The screenshot shows the MySQL Workbench interface with a query editor and results grid.

Query Editor:

```
1 •  SELECT company.company_name, company.phone, company.country, transaction.timestamp, transaction.amount
2   FROM company
3   JOIN transaction
4     ON company.id = transaction.company_id
5   WHERE DATE(timestamp) IN ('2021-04-29', '2021-07-20', '2022-03-13')
6     AND amount between 100 and 200
7
8   ORDER BY amount DESC;
```

Results Grid:

company_name	phone	country	timestamp	amount
Interdum Feugiat Sed Associates	04 88 40 32 52	United Kingdom	2021-07-20 10:12:15	164.86
Nunc Interdum Incorporated	05 18 15 48 13	Germany	2022-03-13 13:37:34	164.32
Enim Condimentum Ltd	09 55 51 66 25	United Kingdom	2021-04-29 06:17:02	149.89
Lorem Eu Incorporated	01 83 66 62 07	Canada	2021-07-20 08:47:44	133.39
Nunc Interdum Incorporated	05 18 15 48 13	Germany	2021-04-29 02:25:49	111.51

Action Output:

Action	Time	Response	Duration / Fetch Time
71	13:32:11	SELECT company.company_name, company.phone, company.country, transaction.timestamp, transaction.a... 5 row(s) returned	0.0018 sec / 0.00001...

Status: Query Completed

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 especificquis si tenen més de 4 transaccions o menys.

Comencem demanant el número de transaccions per empresa

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the 'File', 'Edit', 'View', 'Query', 'Database', 'Server', 'Tools', and 'Help' menus are visible. The 'Navigator' pane on the left displays the database schema, specifically the 'transactions' schema which contains tables like 'company' and 'transaction'. The main area shows a SQL editor with the following query:

```
1 ## EXERCICI 2
2
3 • SELECT company_id, COUNT(transaction.id)
4 FROM transaction
5 GROUP BY company_id;
```

The 'Result Grid' pane below the SQL editor displays the results of the query:

company_id	COUNT(transaction.id)
b-2222	2
b-2226	2
b-2230	2
b-2234	2
b-2238	2
b-2242	2
b-2246	2
b-2250	2
b-2254	2
b-2258	2
b-2262	2
b-2266	2
b-2270	2
b-2274	2
b-2278	56
b-2282	2
b-2286	2

The 'Output' pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
767	13:28:47	SELECT company.company_name, company.phone, company.country, tra...	4 row(s) returned	0.000 sec / 0.000 sec
768	13:44:38	SELECT COUNT(transaction.id) FROM transaction GROUP BY company._...	100 row(s) returned	0.000 sec / 0.000 sec
769	13:44:49	SELECT company_id, COUNT(transaction.id) FROM transaction GROUP B...	100 row(s) returned	0.000 sec / 0.000 sec

Després li afegim el nom d'empresa amb un join

The screenshot shows the MySQL Workbench interface with a query editor and results pane.

Query Editor:

```
## EXERCICI 2
SELECT company.company_name, COUNT(transaction.id)
FROM transaction
JOIN company
ON company.id = transaction.company_id
GROUP BY company.company_name;
```

Results Grid:

company_name	COUNT(transaction.id)
Ac Fermentum Incorporated	2
Magna A Neque Industries	2
Fusce Corp.	2
Convallis In Incorporated	2
Ante Iaculis Nec Foundation	2
Donec Ltd	2
Sed Nunc Ltd	2
Amet Nulla Donec Corporation	2
Nascetur Ridiculus Mus Inc.	2
Vestibulum Lorem PC	2
Gravida Sagittis LLP	2
Mus Aenean Eget Foundation	2
Dis Parturient Institute	2
Sed LLC	2
Arcu LLP	56
Pretium Neque Corp.	2
Fringilla LLC	2

Action Output:

#	Time	Action	Message	Duration / Fetch
768	13:44:38	SELECT COUNT(transaction.id) FROM transaction GROUP BY company_id...	100 row(s) returned	0.000 sec / 0.000 sec
769	13:44:49	SELECT company_id, COUNT(transaction.id) FROM transaction GROUP BY...	100 row(s) returned	0.000 sec / 0.000 sec
770	13:46:30	SELECT company.company_name, COUNT(transaction.id) FROM transaction...	100 row(s) returned	0.000 sec / 0.000 sec

I ordenem de més a menys transaccions

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the database 'Roser' is selected. The left sidebar displays the schema structure under the 'sakila' database, specifically the 'transactions' table which contains columns for company_id, id, credit_card_id, user_id, lat, and lonlatitude. A query window titled 'SQL File 17*' contains the following SQL code:

```
## EXERCICI 2
SELECT company.company_name, COUNT(transaction.id)
FROM transaction
JOIN company
ON company.id = transaction.company_id
GROUP BY company.company_name
ORDER BY COUNT(transaction.id) DESC;
```

The results grid shows the output of the query, listing companies and their transaction counts:

company_name	COUNT(transaction.id)
Nunc Interdum Incorporated	105
Ut Semper Foundation	59
Emin Condimentum Ltd	57
Arcu LLP	56
Lorem Eu Incorporated	54
Malesuada PC	52
Non Institute	30
Fusce Corp.	2
Convallis In Incorporated	2
Ante Iaculis Nec Foundation	2
Donec Ltd	2
Sed Nunc Ltd	2
Amet Nulla Donec Corporation	2
Nascetur Ridiculus Mus Inc.	2
Vestibulum Lorem PC	2
Gravida Sagittis LLP	2
Mus Aenean Eget Foundation	2

The bottom section shows the 'Output' tab with the following log entries:

#	Time	Action	Message	Duration / Fetch
770	13:46:30	SELECT company.company_name, COUNT(transaction.id) FROM transaction	100 row(s) returned	0.000 sec / 0.000 sec
771	13:48:01	SELECT company.company_name, COUNT(transaction.id) FROM transaction	100 row(s) returned	0.000 sec / 0.000 sec
772	13:48:06	SELECT company.company_name, COUNT(transaction.id) FROM transaction	100 row(s) returned	0.000 sec / 0.000 sec

Ara li afegim el que vol el departament de Recursos Humans. Entenem que són menys de 4 transaccions versus 4 o més transaccions. Utilitzarem un case.

The screenshot shows the MySQL Workbench interface with a SQL editor window containing the following code:

```
## EXERCICI 2
SELECT company.company_name, COUNT(transaction.id),
CASE
    WHEN COUNT(transaction.id) < 4 THEN "Menys de 4"
    ELSE "Més de 4"
END
FROM transaction
JOIN company
ON company.id = transaction.company_id
GROUP BY company.company_name
ORDER BY COUNT(transaction.id) DESC;
```

The results grid displays the company names and their transaction counts, categorized by the CASE statement. The output pane shows the execution log with three entries:

#	Time	Action	Message	Duration / Fetch
779	13:54:01	SELECT company.company_name, COUNT(transaction.id) CASE WHEN ...	Error Code: 1064. You have an error in your SQL syntax; check the manual ...	0.000 sec
780	13:54:14	SELECT company.company_name, COUNT(transaction.id), CASE WHEN ...	100 row(s) returned	0.016 sec / 0.000 sec
781	13:54:40	SELECT company.company_name, COUNT(transaction.id), CASE WHEN ...	100 row(s) returned	0.000 sec / 0.000 sec

Li afegim les de menys i posem un nom més curt a la columna

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the 'File' menu is open. Below the menu, the 'Navigator' pane displays the database schema for the 'sakila' database, specifically the 'transactions' table. The 'Tables' section under 'transactions' shows the 'company' table with columns: id, company_name, phone, email, country, website. The 'Columns' section shows additional columns: credit_card_id, company_id, user_id, lat, and longitude. The 'SQL File 17' tab contains the following SQL code:

```
## EXERCICI 2
SELECT company.company_name, COUNT(transaction.id),
CASE
    WHEN COUNT(transaction.id) < 4 THEN "Menys de 4"
    ELSE "4 o més"
END AS transaccions
FROM transaction
JOIN company
ON company.id = transaction.company_id
GROUP BY company.company_name
ORDER BY COUNT(transaction.id) DESC;
```

The 'Result Grid' pane displays the results of the query. The columns are: company_name, COUNT(transaction.id), and transaccions. The data shows various company names and their counts, with the 'transaccions' column indicating if the count is less than 4 or 4 or more. The results are as follows:

company_name	COUNT(transaction.id)	transaccions
Nunc Interdum Incorporated	105	4 o més
Ut Semper Foundation	59	4 o més
Emin Condimentum Ltd	57	4 o més
Arca LLP	56	4 o més
Loem Eu Incorporated	54	4 o més
Malesuada PC	52	4 o més
Non Institute	30	4 o més
Fusce Corp.	2	Menys de 4
Convallis In Incorporated	2	Menys de 4
Ante Iaculis Nec Foundation	2	Menys de 4
Donec Ltd	2	Menys de 4
Sed Nunc Ltd	2	Menys de 4
Amet Nulla Donec Corporation	2	Menys de 4
Nascetur Ridiculus Mus Inc.	2	Menys de 4
Vestibulum Lorem PC	2	Menys de 4
Gravida Sagittis LLP	2	Menys de 4
Mus Aenean Eget Foundation	2	Menys de 4

The 'Output' pane at the bottom shows the execution log with three entries:

#	Time	Action	Message	Duration / Fetch
784	13:56:04	SELECT company.company_name, COUNT(transaction.id), CASE WHEN ...	Error Code: 1064. You have an error in your SQL syntax; check the manual ...	0.00 sec
785	13:56:08	SELECT company.company_name, COUNT(transaction.id), CASE WHEN ...	100 row(s) returned	0.016 sec / 0.000 sec
786	13:56:13	SELECT company.company_name, COUNT(transaction.id), CASE WHEN ...	100 row(s) returned	0.000 sec / 0.000 sec

I treiem el número de transaccions, que no ens les demanen

The screenshot shows the MySQL Workbench interface with a query editor and results grid.

Query Editor:

```
## EXERCICI 2
SELECT company.company_name,
CASE
    WHEN COUNT(transaction.id) < 4 THEN "Menys de 4"
    ELSE "4 o més"
END AS transaccions
FROM transaction
JOIN company
ON company.id = transaction.company_id
GROUP BY company.company_name
ORDER BY COUNT(transaction.id) DESC;
```

Result Grid:

company_name	transaccions
Nunc Interdum Incorporated	4 o més
Ut Semper Foundation	4 o més
Emin Condimentum Ltd	4 o més
Arcu LLP	4 o més
Lorem Eu Incorporated	4 o més
Malesuada PC	4 o més
Non Institute	4 o més
Fusce Corp.	Menys de 4
Convallis In Incorporated	Menys de 4
Ante Iaculis Nec Foundation	Menys de 4
Donec Ltd	Menys de 4
Sed Nunc Ltd	Menys de 4
Amet Nulla Donec Corporation	Menys de 4
Nascetur Ridiculus Mus Inc.	Menys de 4
Vestibulum Lorem PC	Menys de 4
Gravida Sagittis LLP	Menys de 4
Mus Aenean Eget Foundation	Menys de 4

Action Output:

#	Time	Action	Message	Duration / Fetch
785	13:56:08	SELECT company.company_name, COUNT(transaction.id), CASE WHEN ...	100 row(s) returned	0.016 sec / 0.000 sec
786	13:56:13	SELECT company.company_name, COUNT(transaction.id), CASE WHEN ...	100 row(s) returned	0.000 sec / 0.000 sec
787	13:56:53	SELECT company.company_name, CASE WHEN COUNT(transaction.id) ...	100 row(s) returned	0.000 sec / 0.000 sec