

Roser Blasco
Sprint 2

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 Lista 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

- FET 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. Assegura't d'incloure un diagrama que il·lustri la relació entre les diferents taules i variables.

Em donava error al importar l'estructura de les dades, deia que no trobava les referències. Per recomanació de companyes, he comentat les referències.

```

1 -- Creamos la base de datos
2 • CREATE DATABASE IF NOT EXISTS transactions;
3 • USE transactions;
4
5 -- Creamos la tabla company
6 • CREATE TABLE IF NOT EXISTS company (
7     id VARCHAR(15) PRIMARY KEY,
8     company_name VARCHAR(255),
9     phone VARCHAR(15),
10    email VARCHAR(100),
11    country VARCHAR(100),
12    website VARCHAR(255)
13 );
14
15
16 -- Creamos la tabla transaction
17 • CREATE TABLE IF NOT EXISTS transaction (
18     id VARCHAR(255) PRIMARY KEY,
19     credit_card_id VARCHAR(15), # REFERENCES credit_card(id),
20     company_id VARCHAR(20),
21     user_id INT, # REFERENCES user(id),
22     lat FLOAT,
23     longitude FLOAT,
24     timestamp TIMESTAMP,
25     amount DECIMAL(10, 2),
26     declined BOOLEAN,
27     FOREIGN KEY (company_id) REFERENCES company(id)
28 );
29

```

Action Output 0

	Time	Action	Response	Duration / Fetch Time
710	11:32:31	INSERT INTO transaction (id, credit_card_id, compa...)	1 row(s) affected	0.00017 sec

Característiques principals de l'esquema creat:

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

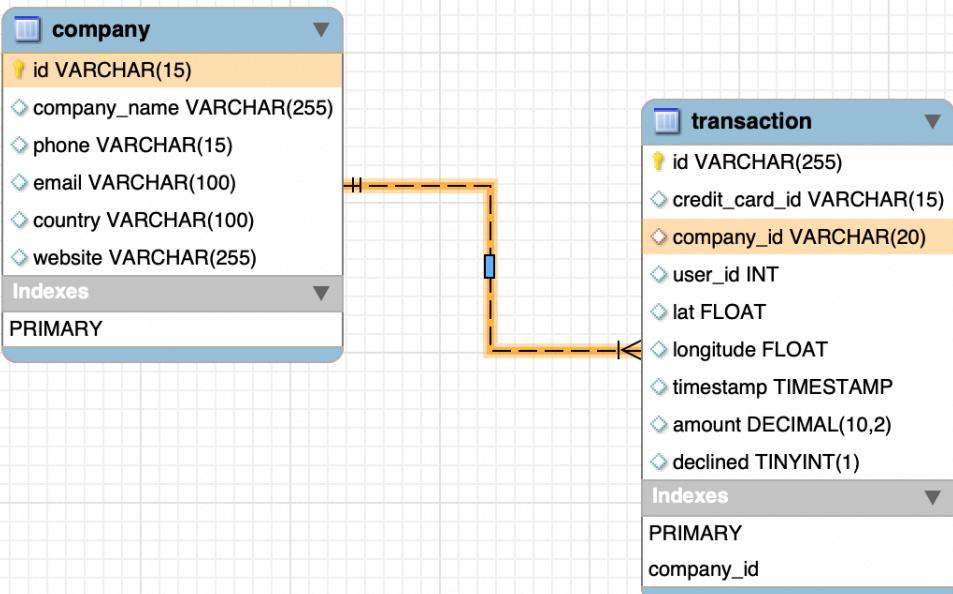
Explicació de les diferents taules i variables:

- 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.

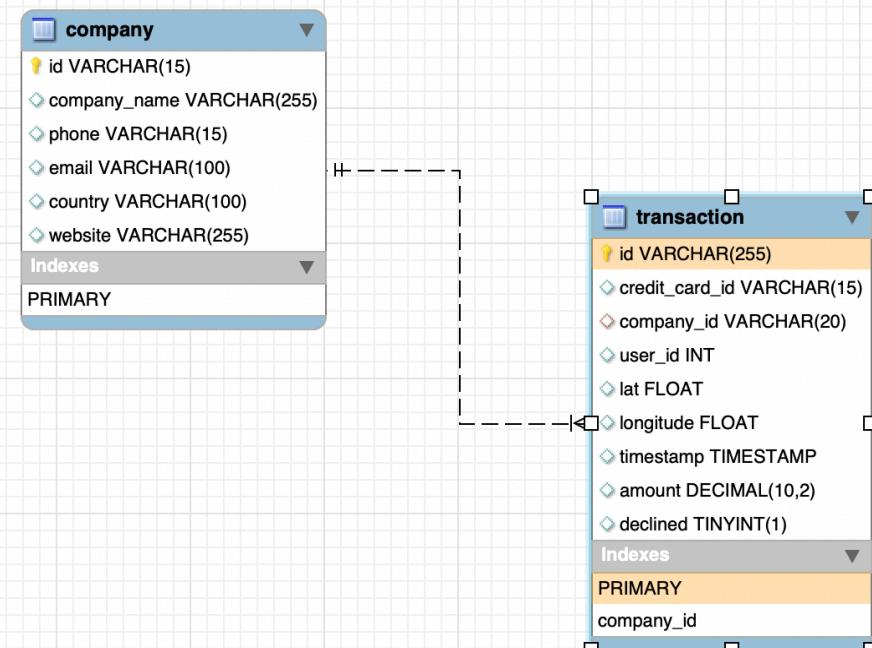
- En canvi, per a l'id d'usuari, de la persona que fa el pagament, s'ha elegit una variable INT, que és un número enter.
- La variable “declined” és del tipus BOOLEAN, és a dir, només pot ser 0 o 1. Si és 0, es considera que el pagament ha segut correcte, i si és 1 que el pagament ha segut rebutjat pel 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.

Després de consultar amb la tutora, 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. The left sidebar displays the schema browser for the 'sakila' database, specifically focusing on the 'transactions' schema which contains the 'company' table. The main area shows a query editor with the following SQL code:

```
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;
```

The results grid on the right shows the following data:

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

Below the results grid, the status bar indicates 'company 23' and 'Read Only'. The bottom of the interface shows the action output and duration information.

Li li he demanat que ens els conti:

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 'Query Editor' tab is active, displaying a query:

```

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
10 • SELECT COUNT(distinct country)
11   FROM company;

```

The results grid shows a single row with the value '15'. Below the results, the 'Action Output' table provides details about the query execution:

Action	Time	Action	Response	Duration / Fetch Time
723	14:21:28	SELECT COUNT(distinct coun...	1 row(s) returned	0.0052 sec / 0.00000...

Ara mirarem de fer un join a través de l'id d'empresa.

Primer li he afegit el id d'empresa de la mateixa taula

Administration Schemas Query 5 1.2* Filter objects

```

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, id
10 FROM company;
11
12 • SELECT COUNT(distinct country)
13 FROM company;

```

Result Grid Filter Rows: Search Edit: Export/Import:

country	id
United States	b-2230
Germany	b-2234
New Zealand	b-2238
Norway	b-2242
United Kingdom	b-2246
Italy	b-2250
United States	b-2254
Belgium	b-2258
Sweden	b-2262
Sweden	b-2266
Ireland	b-2270
Belgium	b-2274
Norway	b-2278
Australia	b-2282

Object Info Session

Connection Details

- Name: Local instance 3306
- Host: localhost
- Port: 3306
- Login User: root
- Current User: root@localhost
- SSL cipher: SSL not used

Server

- Product: Homebrew
- Version: 9.0.1

Connector

- Version: C++ 9.0.0

Action Output Duration / Fetch Time
727 14:26:02 SELECT COUNT(distinct...) 1 row(s) returned 0.00059 sec / 0.000...

Pensant-ho millor, potser decideixo començar al contrari, des dels id d'empresa de les transaccions i mapejant-les amb els països. D'aquí treiem que hi ha 100 empreses que han tingut transaccions.

The screenshot shows the MySQL Workbench interface. In the top-left pane, the 'schemas' tree is expanded to show the 'transactions' schema, which contains tables like 'company', 'Columns', and 'transaction'. The 'transaction' table is selected. In the top-right pane, a query editor window titled '1.2*' displays the following SQL code:

```

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 transaction.company_id, company.country
10 FROM transaction
11 JOIN company on company.id = transaction.company_id;
12

```

The results of this query are shown in the 'Result Grid' below, listing various countries and their corresponding company IDs:

company_id	country
b-2222	Germany
b-2226	Australia
b-2230	United States
b-2234	Germany
b-2238	New Zealand
b-2242	Norway
b-2246	United Kingdom
b-2250	Italy
b-2254	United States
b-2258	Belgium
b-2262	Sweden
b-2266	Sweden
b-2270	Ireland
b-2274	Belgium
b-2278	Norway
b-2282	Australia
b-2286	New Zealand

Below the result grid, the status bar shows 'Result 16' and a 'Read Only' icon. The bottom pane shows the 'Action Output' log with one entry:

Action	Time	Response	Duration / Fetch Time
SELECT distinct transacti...	752 14:40:28	100 row(s) returned	0.0024 sec / 0.00000...

El tema és que ara tenim països duplicats i hem de treure aquests duplicats.

Finalment, he decidit utilitzar un GROUP BY, així comprovo que tots els països de la meva llista tenen transaccions.

Administration Schemas 1.2* 1_Mostra el nom del país i les ciutats que hi ha a Andorra i Belize SQL File 17*

SCHEMAS

Filter objects

> Sakila

transactions

Tables

company

Columns

- ◆ id
- ◆ company_name
- ◆ phone
- ◆ email
- ◆ country
- ◆ website

Indexes

Foreign Keys

Triggers

transaction

Columns

- ◆ id
- ◆ credit_card_id
- ◆ company_id

Object Info Session

Connection Details

- Name: Local instance 3306
- Host: localhost
- Port: 3306
- Login User: root
- Current User: root@localhost
- SSL cipher: SSL not used

Server

- Product: Homebrew
- Version: 9.0.1

Connector

- Version: C++ 9.0.0

100% 25:12

Result Grid Filter Rows: Search Export:

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

Result 5 Read Only

Action Output Duration / Fetch Time

Action	Time	Response	Duration / Fetch Time
775 15:05:35	SELECT country, COUNT(transaction.i... 15 row(s) returned		0.0018 sec / 0.00000...

Query Completed

—

Provem una última cosa, amb leftjoin

```

1 • SELECT distinct country
2   FROM company
3   LEFT JOIN transaction
4     ON company.id = transaction.company_id
5
6   ORDER BY country ASC
7

```

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

Output:

#	Time	Action	Message	Duration / Fetch
1	9 13:18:49	SELECT distinct country FROM company LEFT JOIN transaction ON co...	15 row(s) returned	0.000 sec / 0.000 sec

- Des de quants països es realitzen les compres.

Amb la mateixa consulta tinc el número de països a través del número de files del resultat.

Administration Schemas 1.2* 1_Mostra el nom del país i les ciutats que hi ha a Andorra i Belize SQL File 17*

SCHEMAS

Filter objects

> Sakila

transactions

Tables

company

Columns

- ◆ id
- ◆ company_name
- ◆ phone
- ◆ email
- ◆ country
- ◆ website

Indexes

Foreign Keys

Triggers

transaction

Columns

- ◆ id
- ◆ credit_card_id
- ◆ company_id

Object Info Session

Connection Details

- Name: Local instance 3306
- Host: localhost
- Port: 3306
- Login User: root
- Current User: root@localhost
- SSL cipher: SSL not used

Server

- Product: Homebrew
- Version: 9.0.1

Connector

- Version: C++ 9.0.0

100% 25:12

Result Grid Filter Rows: Search Export:

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

Result 5 Read Only

Action Output Duration / Fetch Time

Action	Time	Response	Duration / Fetch Time
775 15:05:35 SELECT country, COUNT(transaction.i... 15 row(s) returned			0.0018 sec / 0.00000...

Query Completed

The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane displays the schema structure, including the 'transactions' schema which contains 'company' and 'transaction' tables. The top-right shows the Query Editor with the following SQL code:

```

1 • SELECT count(distinct country)
2   FROM company
3   LEFT JOIN transaction
4     ON company.id = transaction.company_id;
5

```

The Result Grid pane below the editor shows the output of the query:

count(distinct country)
15

The Output pane at the bottom right provides details about the execution:

Action	Time	Action	Message	Duration / Fetch
SELECT distinct country FROM company LEFT JOIN transaction ON co...	10 13:20:20		15 row(s) returned	0.000 sec / 0.000 sec

- Identifica la companyia amb la mitjana més gran de vendes. **-refer declined**

Ara ens pregunten 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 filtre.

Administration Schemas 1.2 SQL File 18*

SCHEMAS

Filter objects

- website
- Indexes
- Foreign Keys
- Triggers
- transaction**
- Columns
- id**
- credit_card_id**
- company_id**
- user_id**
- lat**
- longitude**
- timestamp**
- amount**
- declined**
- Indexes
- PRIMARY
- company_id
- Foreign Keys

Object Info Session

Connection Details

Name:	Local instance 3306
Host:	localhost
Port:	3306
Login User:	root
Current User:	root@localhost
SSL cipher:	SSL not used

Server

Product:	Homebrew
Version:	9.0.1

Connector

Version:	C++ 9.0.0
----------	-----------

Query Completed

```

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;

```

100% 27:10

Result Grid Filter Rows: Search Export:

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 Vulpitate Foundation	390.325000
Aliquam PC	385.265000
Neque Tellus Incorporated	364.005000
Placerat LLP	357.080000
Elit Etiam Laoreet Associates	351.840000
Fusce Corp.	350.125000
Sanien Nunc Pulvinar I I P	349.655000

Result 4 Read Only

Action Output

Result Grid Form Editor Field Types Query Stats Execution Plan

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. On the left, the 'Schemas' tree view is open, showing the 'transaction' schema with its columns (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, declined) and indexes (PRIMARY, company_id). The 'Object Info' tab is selected. In the center, the SQL editor contains the following code:

```

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 'Result Grid' pane shows the output of the query:

company_name	avg(amount)
Eget Ipsum Ltd	473.075000

At the bottom, the status bar indicates 'Action Output' and '793 15:28:54 S 1 row(s) returned'. The 'Query Completed' message is also visible.

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

```

1  # - Identifica la companyia amb la mitjana més gran de vendes.
2 • SELECT company.company_name, avg(amount)
3   FROM company
4   LEFT JOIN transaction
5     ON company.id = transaction.company_id
6     WHERE declined = 0
7   GROUP BY company.company_name
8   ORDER BY avg(amount) DESC;

```

company_name	avg(amount)
Eget Ipsum Ltd	481.860000
Sed Id Limited	477.510000
Neque Tellus Incorporated	477.100000
Nunc Sit Incorporated	461.830000
Non Magna LLC	458.740000
Maecenas Malesuada Fringilla Inc.	451.290000
Erat LLP	448.440000
Tortor Nunc Commodo Company	447.110000
Justo Eu Arcu Ltd	444.160000
Pede Cum Ltd	442.320000
Vestibulum Lorem PC	428.400000
Mauris Institut	427.710000
Aliquet Diam Limited	425.640000
Mus Aenean Eget Foundation	419.970000
Sed LLC	416.660000
Viverra Donec Foundation	414.530000
Eget Tincidunt Dul Institut	413.500000
Amet Institute	412.480000
Egestas Nunc Sed Limited	406.110000
Elt Etiam Laoreet Associates	400.630000
Ac Industries	396.150000
Netus Et Malesuada Ltd	389.620000
Sed Nunc Ltd	383.730000

Result 1 | Read Only

Action Output

#	Time	Action	Message	Duration / Fetch
703	11:19:52	SELECT country as "País", avg(amount) as "Mitjana de vendes" FR...	15 row(s) returned	0.000 sec / 0.000 sec
704	11:23:57	SELECT company.company_name, avg(amount) FROM company L...	100 row(s) returned	0.000 sec / 0.000 sec

Object Info | Session

Query Completed

- Exercici 3: subconsultes

Utilitzant només subconsultes (sense utilitzar JOIN):

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

Primer fem una consulta amb el filtre d'alemanya

MySQL Workbench

```

1 •  SELECT *
2   FROM company
3   WHERE country = 'Germany';
4

```

	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@aol.co.uk	Germany	https://cnr.com/user/110
▶	b-2302	Nunc Interdum Incorporated	05 18 15 48 13	non@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	eget.metus@protonmail.ca	Germany	https://walmart.com/sub
▶	b-2566	Aliquam PC	01 45 73 52 16	scelerisque.mollis@icloud.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	NULL

company 3 x

Output

Action Output

Time Action Message Duration / Fetch

23 13:32:45 SELECT company.company_name, avg(amount) FROM compan... 1 row(s) returned 0.016 sec / 0.000 sec

Object Info Session

Query Completed

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. In the top navigation bar, the database 'Roser' is selected. The left sidebar displays the 'Navigator' with the 'SCHEMAS' section expanded, showing 'sakila', 'sys', and 'transactions'. Under 'transactions', the 'Tables' section is expanded, showing 'company' with columns 'id', 'company_name', 'phone', 'email', 'country', and 'website'. Below 'company' are 'Indexes', 'Foreign Keys', and 'Triggers'. The 'transaction' table is also listed. Other sections like 'Views', 'Stored Procedures', and 'Functions' are shown. The bottom-left pane shows the 'Information' section with the 'Schema: transactions' tab selected.

In the main workspace, there are three tabs: 'SQL File 3*' (containing a query), '1.2.sql' (selected), and '1.3*' (containing a query). The '1.2.sql' tab contains the following SQL code:

```
1
2 •  SELECT id
3   FROM company
4  WHERE country = 'Germany';
5
```

The results of the query are displayed in the 'Result Grid' pane, showing a list of company IDs:

id
b-2222
b-2234
b-2302
b-2306
b-2358
b-2550
b-2566
b-2614
*

The bottom right pane shows the 'Execution Plan' for the query. The output pane at the bottom right shows the following log entries:

#	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

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- sakila
- sys
- transactions**
 - Tables
 - company
 - transaction
 - Columns
 - Indexes
 - Foreign Keys
 - Views
 - Stored Procedures
 - Triggers

Administration Schemas

Information

Schema: transactions

Object Info Session

SQL File 3* 1.2.sql 1.3*

```

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 | Filter Rows: | Edits: | Export/Import: | Wrap Cell Content: |

	id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
▶	108B1D1D-5823-A76C-55EF-C568E49A05DD	Ccu-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
	EA2C3281-C9C1-A387-4FB-729FB4B51C76	Ccu-2938	b-2222	275	20.2004	-116.84	2021-05-09 10:25:08	119.36	1
*	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

Result Grid | Form Editor | Field Types | Query Stats | Execution Plan | Apply

transaction 5 x

Output:

Action Output

#	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') LI... M...	2 row(s) returned	0.000 sec / 0.000 sec

I ara afegim tota la subquery

```

1 • Select *
2   FROM transaction
3   WHERE company_id in (
4     SELECT id
5       FROM company
6      WHERE country = 'Germany')
7
8
9

```

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-A387-44F8-729FB4B51C76	CcU-2938	b-2222	275	20.2004	-116.84	2021-05-09 10:25:08	119.36	1
0DD2E608-5C9E-D1B3-4999-B99F43AD735A	CcU-2959	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
A8069F53-965E-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-DCD9-9C54CF1EBB9A	CcU-4366	b-2302	221	29.6372	-166.173	2021-06-09 06:04:14	172.01	0
13526784-2E7D-957C-C42C-6450A2B2ED54	CcU-4520	b-2302	210	20.6724	14.9732	2021-12-29 20:38:23	17.97	0
14CAE5B5-8F81-3E4A-4C35-0EA4167534F4	CcU-4849	b-2302	189	-53.6202	93.0533	2021-12-31 00:29:42	388.04	0
158A3ACB-541C-DBCC-65B0-6373CC67BF1C	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-A74B-9112BE892CCC	CcU-4219	b-2302	172	69.4892	-138.411	2021-12-29 16:18:54	249.91	0
1753A288-9FC1-52E6-5C39-A1FFB97B0D3A	CcU-4345	b-2302	222	57.9422	-114.729	2021-08-17 05:32:08	497.84	0
186F530E-0E27-61FE-682F-1B561CEB7726	CcU-4310	b-2302	225	-72.7448	36.6211	2021-12-20 13:13:45	238.16	0
18C4E2D0-1E4C-F35E-219B-C660BD81DC25	CcU-4849	b-2302	177	68.0133	91.4839	2021-09-24 18:55:25	237.04	0
18CCBA7C-ABC1-813D-FAF3-4B4B97429368	CcU-4219	b-2302	173	51.3881	-156.371	2021-06-21 03:21:34	58.16	0
19E1EC3E-2119-1EFD-8AAE-5930D44E63F	CcU-4219	b-2302	154	-56.0839	116.987	2021-07-06 21:40:15	29.63	0
1B11D749-936C-8A6C-E94B-30C3293AA239	CcU-4219	b-2302	163	-75.099	109.034	2021-05-09 23:56:04	371.35	0
1B521826-5860-5A86-5364-6EB6A15CC21B7	CcU-4226	b-2302	231	-53.4613	49.1484	2021-08-14 02:39:50	476.33	0

transaction 6

Action Output

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

MySQL Workbench

Roser < File Edit View Query Database Server Tools Scripting Help

Navigator :> Filter objects

SCHEMAS :> Filter objects

Schemas :> transactions

Tables :> company

transaction

Columns

- > id
- > credit_card_id
- > company_id
- > user_id
- > lat
- > longitude
- > timestamp
- > amount
- > declined

Indexes

Foreign Keys

Views

Stored Procedures

Functions

Administration Schemas

Information

Schema: transactions

SQL File 3* :> 1.2.sql 1.3

```
1 • SELECT avg(amount)
2 FROM transaction;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Result 1 x

avg(amount)
256.735520

Result 1 x

Action Output

#	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

Object Info Session

Result Grid Form Editor Field Types Query Stats Execution Plan

Read Only

Ara busquem totes les transaccions per sobre d'aquest amount

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator: 1.2.sql 1.3 SQL File 3*

Limit to 1000 rows

SCHEMAS: Filter objects: 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 Administration Schemas Information

Column: amount

Definition: amount decimal(10,2)

```

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

```

Result Grid: Filter Rows: Edit Export/Import: Wrap Cell Content: Result Grid Form Editor Field Types Query Stats Execution Plan

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
02C6201E-D90A-1859-8B4E-88D2986D3B02	CdU-2938	b-2362	92	81.9185	-12.5276	2021-08-28 23:42:24	466.92	0
0668296-CD89-A883-76BC-2E4C4F8C8AE	CdU-3743	b-2618	265	-34.3593	-100.556	2022-01-26 02:07:14	394.18	0
06CD9A5-9842-D684-0DD0-A5E394FEBAA9	CdU-2959	b-2346	92	33.7381	158.299	2021-10-26 23:00:01	279.33	0
07A46D4B-31A3-7E87-6589-0DA902AD109F	CdU-3225	b-2386	272	38.8342	92.1905	2021-06-28 21:11:42	340.87	1
09DE92CE-6F27-2B87-1385-9385B2B388E2	CdU-3071	b-2298	275	71.1706	10.5757	2021-05-11 20:40:06	303.05	1
0A476ED9-0C13-1962-F87B-D3563924B539	CdU-4359	b-2302	221	-56.4991	114.801	2022-02-26 20:33:54	430.49	0
0BEB8087-9D66-1707-CF4B-9DCE7E71914B5	CdU-3141	b-2338	272	23.3264	-13.6037	2022-03-04 14:54:35	288.81	1
0CE957A6-CCAA-2B7A-6389-8A4B1B324B53	CdU-3435	b-2506	269	-69.3537	-10.26	2022-02-02 07:29:33	428.69	1
1017AA59-3D5F-7A4C-1992-D151A8D1FA0A	CdU-3701	b-2618	267	4.27645	-101.554	2021-11-01 01:02:11	447.11	0
10260A24-8929-31F1-8250-D7BA05C13D2	CdU-2959	b-2346	92	52.0646	-140.147	2021-12-07 09:30:38	465.31	0
108E1D1D-5B23-A79C-53EF-C568E49A05D0	CdU-2938	b-2222	275	83.7339	-178.86	2021-07-07 17:43:16	293.57	0
133B82CC-DE62-8604-2D11-3DC5449E0A5F	CdU-3407	b-2490	271	62.3246	101.017	2021-04-02 05:17:46	348.88	1
14798302-B7BA-C7B8-4CE3-8D7C2DE85A8B	CdU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0
14CAE5B5-8FB1-3E4A-4C85-0EA4167534F	CdU-4849	b-2302	189	-53.6202	93.0533	2021-12-31 00:29:42	388.04	0
1517E6A8-8844-A7C9-6691-692C2700DC2C	CdU-3505	b-2546	267	-70.0484	-44.5029	2021-03-23 01:58:34	259.51	1
152598C2-029D-D684-4B66-91EDF393EBFF	CdU-2994	b-2326	126	-67.0189	-141.672	2021-07-05 03:10:00	395.43	0
156F3F80-7E7D-65CF-727D-6AE03CEB7520	CdU-2959	b-2346	92	-59.9778	172.731	2021-04-29 07:06:10	404.16	0
15CC4B62-D13E-ED4B-941C-4B6484A0DFAD	CdU-3239	b-2394	272	-14.0843	7.79937	2021-04-22 13:56:42	447.11	0
1670E938-B1C2-42B0-FA3D-96A45CD4B2	CdU-3883	b-2494	255	67.3865	-63.1993	2021-03-29 11:04:24	414.36	0

transaction 5 x

Output: Action Output

#	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

Object Info Session

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

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator ::::: Filter objects

SCHEMAS ::::: Filter objects

- 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

Administration Schemas

Information

Column: amount

Definition: amount decimal(10,2)

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

company_id
b-2362
b-2618
b-2346
b-2386
b-2298
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-2356
b-2246

transaction 7 x Read Only

Action Output

#	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

Object Info Session

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

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 'transactions' database, including tables like 'company' and 'transaction' with their respective columns. The main area contains two tabs: '1.2.sql' and '1.3'. The '1.3' tab contains the following SQL code:

```

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 below the code shows a list of company names. The output pane at the bottom shows the execution log with two entries:

#	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 navigation bar, the database is set to 'Roser'. The main window displays a SQL editor with the following query:

```
1 Select distinct company_id
2 FROM transaction;
```

The results grid shows the following data:

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

The output pane shows two log entries:

#	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 subquery, no té sentit

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator Schemas

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

Administration Schemas

Information

Column: amount

Definition: amount decimal(10,2)

SQL File 3* 1.3

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

Output

Action Output

#	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	

Object Info Session

Treiem el distinct i no surt cap empresa

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the user is connected to 'Roser'. The main area contains three tabs: '1.2.sql', '1.3', and 'SQL File 3*'. The '1.3' tab is active and displays 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;
8
9
10
11

```

The 'Result Grid' pane below the code shows a single column named 'company_name' with one row containing the value 'company_name'. To the right of the result grid, there is a vertical toolbar with several icons: 'Result Grid' (selected), 'Form Editor', 'Field Types', 'Query Stats', and 'Execution Plan'.

In the bottom right corner of the result grid, there is an 'Output' tab labeled 'company 13 x' with the status 'Read Only'. This tab 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	0.000 sec / 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

Fem un join per a comprovar que està bé?

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

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator :> Filter objects

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

Administration Schemas

Information

Column: timestamp

Definition: timestamp timestamp

Result Grid | Filter Rows: SUM(amount) Export: Wrap Cell Content: □

Result 14 x

Action Output

#	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	0.000 sec
29	15:56:59	SELECT SUM(amount) FROM transaction WHERE declined = 0 LI...	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

1.2.sql 1.3 2.1*

Limit to 1000 rows

```

1 • SELECT date(timestamp), SUM(amount)
2   FROM transaction
3   WHERE declined = 0
4   GROUP BY date(timestamp);

```

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

	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	1337.62
	2021-11-01	621.66
	2021-12-07	465.31
	2021-07-07	669.72
	2021-07-14	157.20
	2021-06-09	194.20
	2021-12-29	1149.88
	2021-08-09	839.86

Result 17 x		

Output

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

Object Info Session

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

The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane displays the database schema with the 'transactions' table selected. The central area contains a query editor window titled '12.sql' with the following SQL code:

```

1 •  SELECT date(timestamp), SUM(amount)
2   FROM transaction
3   WHERE declined = 0
4   GROUP BY date(timestamp)
5   ORDER BY SUM(amount) DESC
6   LIMIT 5;

```

The results grid below the query editor shows the following data:

	date(timestamp)	SUM(amount)
▶	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

The bottom section shows the 'Result 19' output panel with a table titled 'Action Output' containing the following log entries:

#	Time	Action	Message	Duration / Fetch
31	16:02:03	SELECT date, SUM(amount) FROM transaction WHERE declined ...	Error Code: 1054. Unknown column 'date' in field list'	0.000 sec
32	16:02:09	SELECT SUM(amount) FROM transaction WHERE declined = 0 G...	280 row(s) returned	0.000 sec / 0.000 sec
33	16:02:31	SELECT date(timestamp), SUM(amount) FROM transaction WHERE...	280 row(s) returned	0.000 sec / 0.000 sec
34	16:06:17	SELECT date(timestamp), SUM(amount) FROM transaction WHERE...	5 row(s) returned	0.000 sec / 0.000 sec
35	16:06:29	SELECT date(timestamp), SUM(amount) FROM transaction WHERE...	5 row(s) returned	0.000 sec / 0.000 sec

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. In the top navigation bar, the database 'Roser' is selected. The main area displays a SQL query in the 'SQL File 5*' tab:

```

1  # - Mitjana de vendes per país, de major a menor
2  SELECT country as "Pais", avg(amount) 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;
9
10

```

The results are shown in the 'Result Grid' tab, with the following data:

Pais	Mitjana de vendes
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

In the bottom right corner of the results grid, there is a 'Result Grid' button. The 'Output' tab shows the execution plan:

Action	Time	Action	Message	Duration / Fetch
699	11:13:27	SELECT country, avg(amount) FROM company LEFT JOIN transa...	15 row(s) returned	0.000 sec / 0.000 sec
700	11:13:46	SELECT country, avg(amount) as "Mitjana de vendes" FROM com...	15 row(s) returned	0.000 sec / 0.000 sec
701	11:13:53	SELECT country as "Pais", avg(amount) as "Mitjana de vendes" F...	15 row(s) returned	0.000 sec / 0.000 sec

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 p'er a veure que l'empresa estigui a la llista i de quin país és

MySQL Workbench

Roser unconnected

File Edit View Query Database Server Tools Scripting Help

Navigator: 1.2 1.3 2 SQL File 11*

SCHEMAS: sakila sys transactions

Tables: Views Stored Procedures Functions world

Result Grid: Filter Rows: Edit: Export/Import: Wrap Cell Content: Result Grid Form Editor Field Types Query Stats Execution Plan

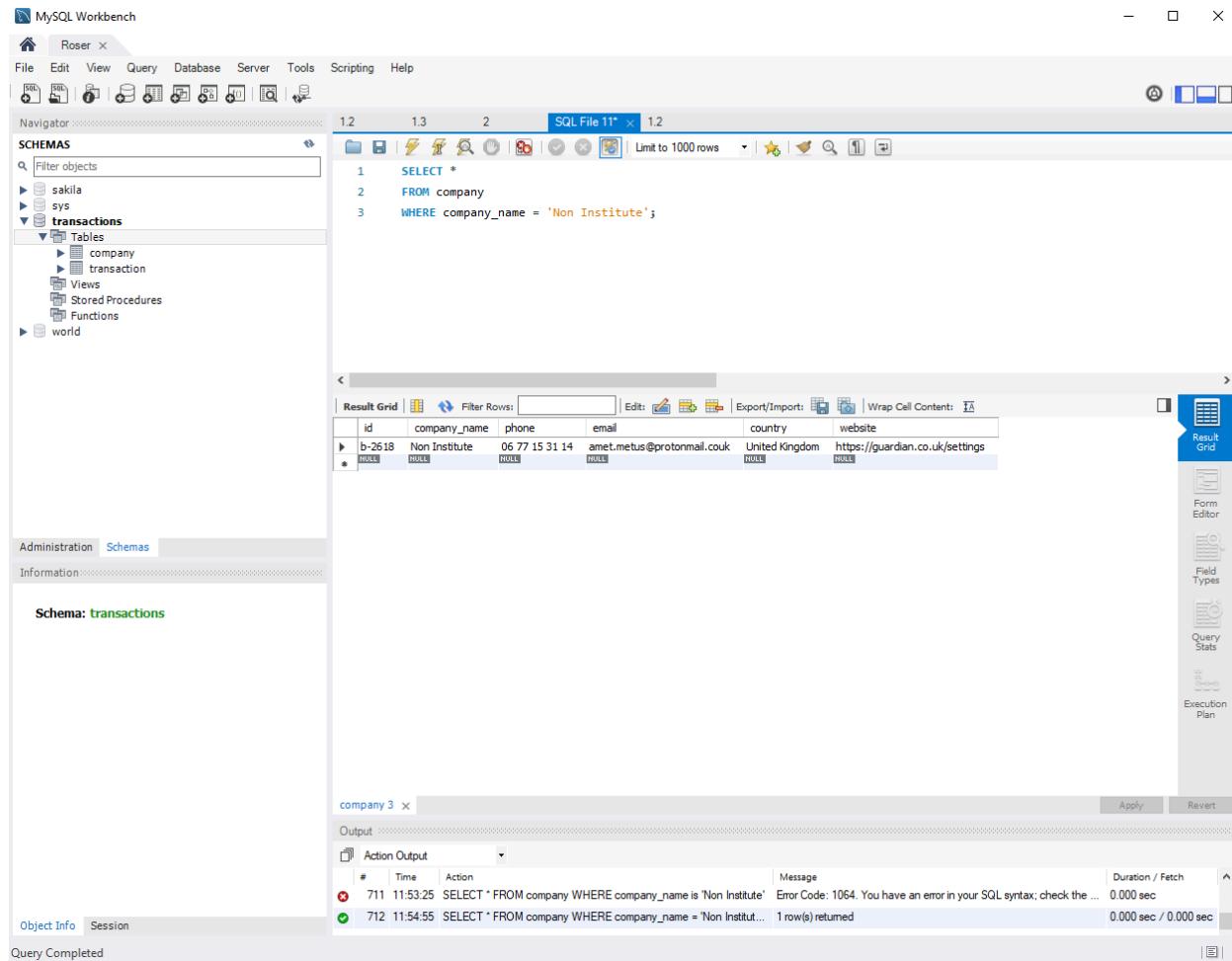
SELECT * FROM company;

	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		Nascentur Ridiculus Mus Inc.	06 26 87 61 84	suspendisse.du@icloud.net	United States	https://ebay.com/sub
b-2470		Nec Luctu LLC	02 14 71 75 73	consectetur.cursus@protonmail...	Norway	https://instagram.com/user/110
b-2390		Neque Tellus Imperdiet Corp.	09 15 42 22 11	vestibulum.ante.ipsum@aol.edu	Ireland	https://whatsapp.com/sub/cars
b-2382		Neque Tellus Incorporated	04 43 18 34 19	ultrices.iaculis.odio@aol.ca	Ireland	https://google.com/site
b-2414		Netus Et Malesuada Ltd	02 55 43 68 46	et.ipsum.cursus@aol.edu	Netherlands	https://baidu.com/sub/cars
b-2592		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	0c 77 15 31 11	enmet.motus@protonmail.co.uk	United Kingdom	https://guardian.co.uk/settings
b-2370		Non Justic	Open Value in Editor	elidunt@yahoo.edu	Sweden	https://baidu.com/en-us
b-2310		Non Magr	Set Field to NULL	z.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@icloud.net	Norway	https://naver.com/en-ca
b-2574		Ordi Adipi	Copy Row (with names)	@protonmail.ca	United Kingdom	https://reddit.com/user/110
b-2426		Pede Cum	Copy Row (with unquoted)	n.sodales@yahoo.ca	Norway	https://cnn.com/one
b-2462		Pede Ultra	Copy Row (with names, unquoted)	@yahoo.com	Belgium	https://instagram.com/group/9
b-2602		Placerat L	Copy Row (tab separated)	endisse@hotmail.org	Netherlands	https://zoom.us/sub
b-2282		Pretium N	Copy Field	c.malesuada@proton...	Australia	https://netflix.com/sub
b-2318		Quam A F	Copy Field (unquoted)	@icloud.edu	Italy	https://ebay.com/settings
b-2290		Quisque L	Paste Row	estie.ordi@hotmail.co.uk	China	https://baidu.com/group/9
b-2446		Risus Ass	Action Output	ula nullam@google.edu	Australia	https://whatsapp.com/group/9
b-2614		Rutrum N	# Time Ac	tonnmail.net	Germany	https://netflix.com/site
b-2506		Sapiens Nu	Message	@yahoo.net	New Zealand	https://netflix.com/settings
		company 1	704 11:23:57 SE	100 row(s) returned		0.000 sec / 0.000 sec
			705 11:49:39 SELECT * FROM company LIMIT 0, 1000	100 row(s) returned		0.000 sec / 0.000 sec

Object Info Session

Query Completed

Seleccionem la entrada de Non Institute



Reduim a que ens doni només el país

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the database 'Roser' is selected. The left sidebar displays the 'SCHEMAS' tree, which includes 'sakila', 'sys', and 'transactions'. Under 'transactions', there are 'Tables' (including 'company' and 'transaction'), 'Views', 'Stored Procedures', and 'Functions'. The main area shows a query editor with the following SQL code:

```

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

```

The results of the query are displayed in a 'Result Grid' table:

	country
▶	United Kingdom

On the right side, there is a vertical toolbar with icons for 'Result Grid', 'Form Editor', 'Field Types', 'Query Stats', and 'Execution Plan'. Below the toolbar, the 'Object Info' tab is selected. The 'Output' pane at the bottom shows the following log entries:

#	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

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

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator Schemas

SCHEMAS

Filter objects

- sakila
- sys
- transactions**
- Tables
- company
- transaction
- Views
- Stored Procedures
- Functions
- world

SQL File 11* x 1.2

```

1 ## EXERCICI 3
2 # - Transaccions en el mateix país que "Non Institute"
3 # - Amb JOIN i subconsultes
4
5 • Select *
6   FROM company
7 WHERE country = (
8     SELECT country
9       FROM company
10      WHERE company_name = 'Non Institute');

```

Result Grid | Filter Rows: Edit: Export/Import: Wrap Cell Content: Result Grid Form Editor Field Types Query Stats

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/
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	Orn 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

Output

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

Object Info Session

Query Completed

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.

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

SQL File 11* x 1.2 1.3 2 1.2

```

1 ## EXERCICI 3
2 # - Transaccions en el mateix país que "Non Institute"
3 # - Amb JOIN i subconsultes
4
5 • Select *
6   FROM transaction
7     RIGHT JOIN company
8       ON company.id = transaction.company_id
9 WHERE country = (
10   SELECT country
11     FROM company
12   WHERE company_name = 'Non Institute');
13

```

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

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...

Result 8 x Read Only

Output

#	Time	Action	Message	Duration / Fetch
719	12:04:53	Select * FROM transaction WHERE country = (SELECT country FR...	Error Code: 1054. Unknown column 'country' in 'where clause'	0.000 sec
720	12:05:00	Select * FROM transaction RIGHT JOIN company ON company.id =...	100 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Query Completed

- Mostra el llistat aplicant solament subconsultes.

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

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

SQL File 11* | Limit to 1000 rows

```

1  # - Transaccions en el mateix pais 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 | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

id	company_name	phone	email	country	website
b-2246	Sed Nunc Ltd	02 62 64 73 48	nib@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	Ehim 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	consectetuer.mauris@yahoo.co.uk	United Kingdom	https://nytimes.com/sub
b-2522	Viverra Donec Foundation	03 33 12 32 73	dicitur.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	NULL

Form Editor

Field Types

Query Stats

Execution Plan

company 10 x

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

Object Info Session

Query Completed

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

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" with "transactions" selected, showing "Tables", "Views", "Stored Procedures", and "Functions". The main area contains a SQL Editor with the following query:

```

1  # - Transaccions en el mateix pais 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');

```

Below the SQL Editor is a "Result Grid" showing a list of transaction IDs (id) from the company table:

id
b-2246
b-2310
b-2326
b-2354
b-2374
b-2430
b-2522
b-2574
b-2618
*
ROLL

On the right side, there is a vertical toolbar with icons for Result Grid, Form Editor, Field Types, Query Stats, and Execution Plan. At the bottom, the "Output" window displays the execution log:

Action Output	#	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 co...	9 row(s) returned	0.000 sec / 0.000 sec

Ara li direm que ens doni les transaccions només amb aquests id d'empresa

Comencem provant amb un dels ids

MySQL Workbench

Roser x

File Edit View Query Database Server Tools Scripting Help

Navigator 1.2 1.3 2* SQL File 11* SQL File 13*

SCHEMAS Filter objects

- sakila
- sys
- transactions**

Tables

- company
- Columns
- Indexes
- PRIMARY
- Foreign Keys
- Triggers
- transaction**
- Columns

id credit_card_id company_id user_id lat longitude timestamp amount declined

4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CCL-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0
BC2B9A38-7784-28CD-1FE8-14DED863E773	CCL-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

Administration Schemas

Information Schema: transactions

Result Grid Form Editor Field Types Query Stats Execution Plan

transaction 3 x

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

Object Info Session

Query Completed

I ara ho juntem tot

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. Below the menu is the 'Navigator' pane, which displays the database schema. It shows the 'schemas' section with 'sakila', 'sys', and 'transactions'. Under the 'transactions' schema, there are 'Tables' like 'company', 'transaction', and 'Columns' for each. The 'transaction' table has columns: id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, and declined. The 'Indexes' and 'Triggers' sections are also present. The main workspace contains two tabs: 'SQL File 11*' and 'SQL File 13*'. The 'SQL File 11*' tab contains a complex multi-select query:

```

1  # - Transaccions en el mateix país que "Non Institute"
2  # - Només amb subconsultes
3  • SELECT *
4    FROM transaction
5    WHERE company_id in (
6      SELECT id
7        FROM company
8        WHERE id in (
9          SELECT id
10         FROM company
11        WHERE country = (
12          SELECT country
13            FROM company
14            WHERE company_name = 'Non Institute'
15        )
16      )
17    );
18  ;
19  ;

```

The 'Result Grid' tab shows the results of the query, displaying 100 rows of transaction data. The 'Output' tab at the bottom shows the execution log with three entries:

- 745 12:40:51 SELECT * FROM transaction WHERE company_id in (SELECT `id` FROM company WHERE country = 'Non Institute') Error Code: 1241. Operand should contain 1 column(s) Duration / Fetch: 0.000 sec / 0.000 sec
- 746 12:41:46 SELECT * FROM transaction WHERE company_id in (SELECT `id` FROM company WHERE country = 'Non Institute') 100 row(s) returned Duration / Fetch: 0.000 sec / 0.000 sec
- 747 12:42:07 SELECT * FROM transaction WHERE company_id in (SELECT `id` FROM company WHERE country = 'Non Institute') 100 row(s) returned Duration / Fetch: 0.000 sec / 0.000 sec

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. Ordena els resultats de major a menor quantitat.

Select nom, telèfon, país, data i amount

From company

Join

On blah

WHERE amount between xxx and xxx

Dates is X and X and X - convertir a UMC

ORDER BY valor DES

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 especifiquis si tenen més de 4 transaccions o menys.

Select empresa, numero de transaccions o nova variable?

Group by? més /menys transaccions?

Nova variable boleana més o menys transaccions? Afegir una columna ooleana?