

Roser Blasco  
Sprint 3  
Data  
Corregit per XXX

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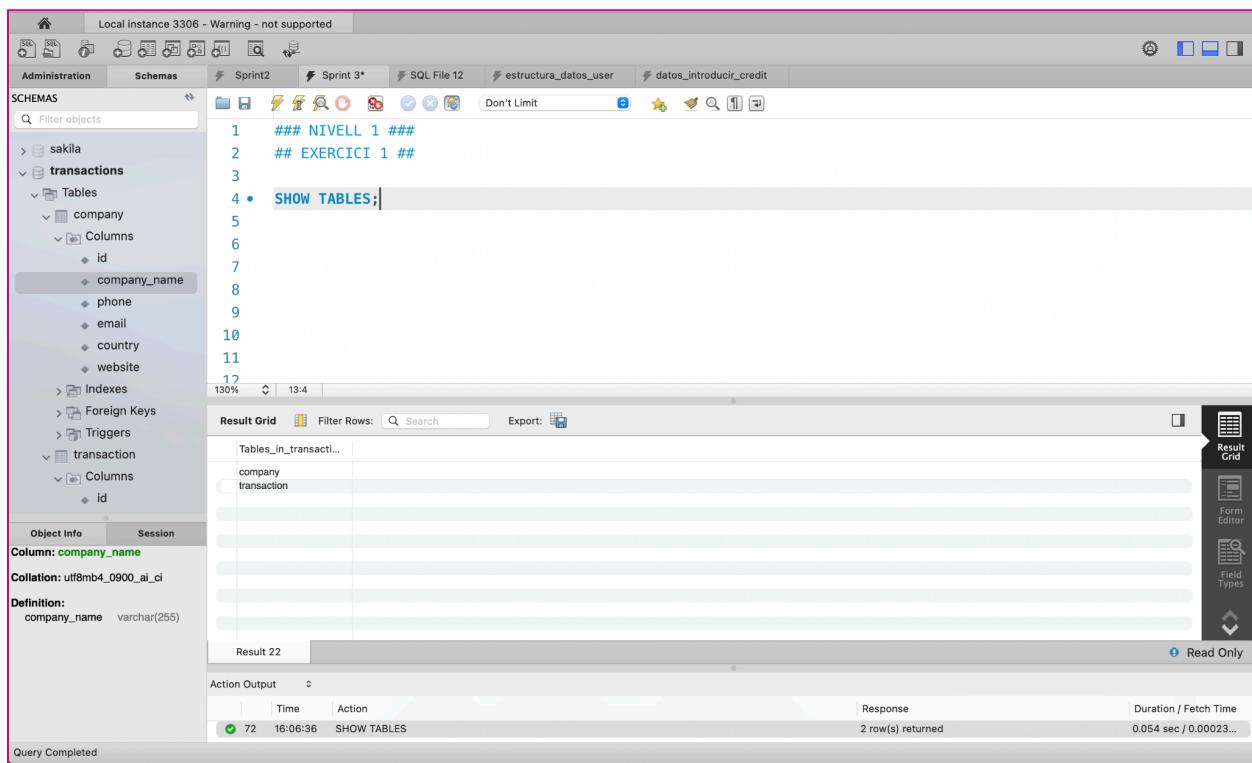
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# Nivell 1

## - Exercici 1: taula credit\_card

La teva tasca és dissenyar i crear una taula anomenada "credit\_card" que emmagatzemi detalls crucials sobre les targetes de crèdit. La nova taula ha de ser capaç d'identificar de manera única cada targeta i establir una relació adequada amb les altres dues taules ("transaction" i "company"). Després de crear la taula serà necessari que ingressis la informació del document denominat "dades\_introduir\_credit". Recorda mostrar el diagrama i realitzar una breu descripció d'aquest.

Comencem verificant que només tenim dues taules



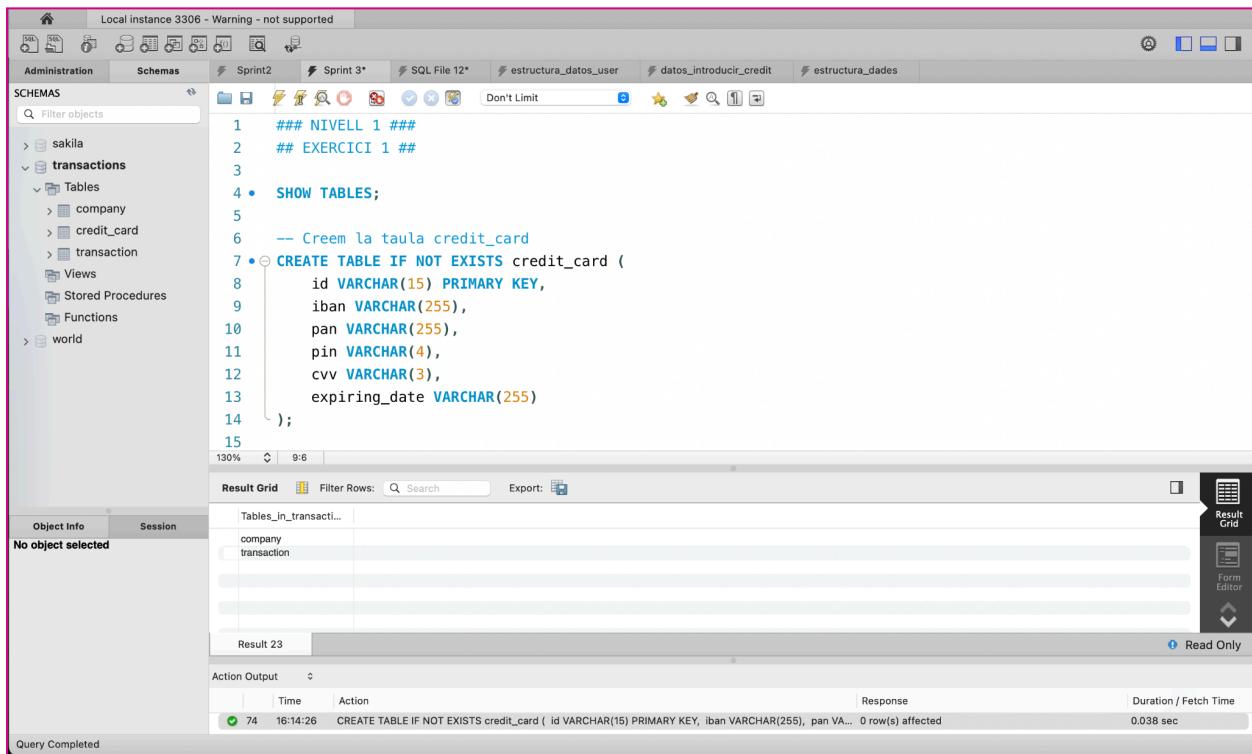
The screenshot shows the MySQL Workbench interface with the following details:

- Left Panel (Object Navigator):** Shows the database schema. Under the 'transactions' schema, there are two tables: 'company' and 'transaction'. The 'company' table has columns: id, company\_name, phone, email, country, and website. The 'transaction' table has column: id.
- Center Panel (Query Editor):** A SQL editor window with the following content:

```
1  ### NIVELL 1 ###
2  ## EXERCICI 1 ##
3
4 • SHOW TABLES;
```
- Result Grid:** A table titled 'Tables\_in\_transacti...' showing the results of the SHOW TABLES query:

| Tables_in_transacti... |
|------------------------|
| company                |
| transaction            |
- Bottom Status Bar:** Shows the following information:
  - Action Output: 72 16:06:36 SHOW TABLES
  - Response: 2 row(s) returned
  - Duration / Fetch Time: 0.054 sec / 0.00023...

Afegim la taula, refresquem es schemas i els veiem a l'esquerra.  
He elegit VARCHAR per a totes les variables



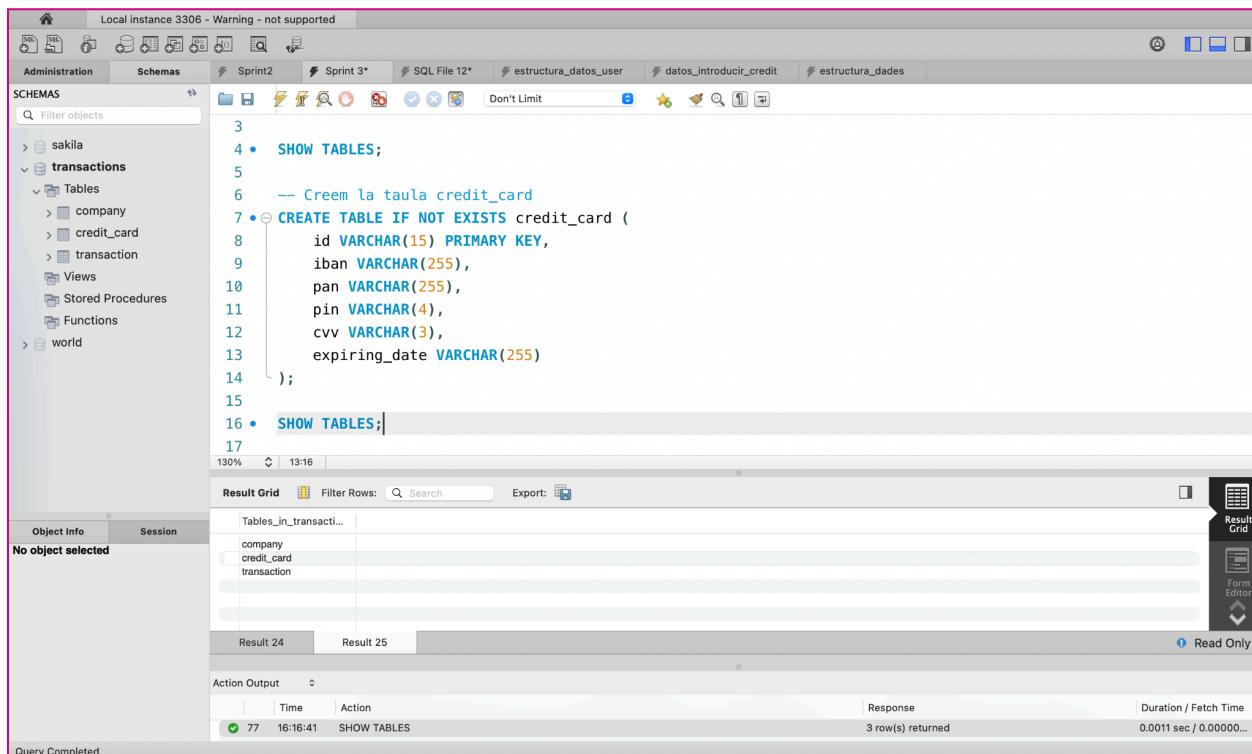
```

1  ### NIVELL 1 ###
2  ## EXERCICI 1 ##
3
4 • SHOW TABLES;
5
6  -- Creem la taula credit_card
7 • CREATE TABLE IF NOT EXISTS credit_card (
8      id VARCHAR(15) PRIMARY KEY,
9      iban VARCHAR(255),
10     pan VARCHAR(255),
11     pin VARCHAR(4),
12     cvv VARCHAR(3),
13     expiring_date VARCHAR(255)
14 );
15

```

The screenshot shows the MySQL Workbench interface. In the top navigation bar, there are tabs for Administration, Schemas, and several open queries. The Schemas tab is selected, showing the 'transactions' schema which contains tables like 'company', 'credit\_card', and 'transaction'. Below the schema tree, a code editor window displays the SQL script for creating the 'credit\_card' table. The 'Result Grid' pane shows the output of the 'SHOW TABLES' command, listing 'company' and 'transaction'. The 'Action Output' pane shows the log entry for the 'CREATE TABLE' command.

També li tornem a preguntar per les taules que hi ha ara



```

3
4 • SHOW TABLES;
5
6  -- Creem la taula credit_card
7 • CREATE TABLE IF NOT EXISTS credit_card (
8      id VARCHAR(15) PRIMARY KEY,
9      iban VARCHAR(255),
10     pan VARCHAR(255),
11     pin VARCHAR(4),
12     cvv VARCHAR(3),
13     expiring_date VARCHAR(255)
14 );
15
16 • SHOW TABLES;|
17

```

The screenshot shows the MySQL Workbench interface again. The 'transactions' schema is selected in the Schemas tree. The code editor now contains the 'SHOW TABLES' command. The 'Result Grid' pane shows the output of this command, listing 'company', 'credit\_card', and 'transaction'. The 'Action Output' pane shows the log entry for the 'SHOW TABLES' command.

Ara carregarem les dades de "dades\_introduir\_credit"

Que té unes 275 files

Li donem un ull a la taula, que tingui aquest número d'entrades i si

Local Instance 3306 - Warning - not supported MySQL Model\* EER Diagram

Administration Schemas Sprint2 Sprint 3\* datos\_introducir\_credit estructura\_dades SQL File 16\*

SCHEMAS  
Filter objects sakila transactions

Tables company credit\_card transaction Views Stored Procedures Functions world

Result Grid Form Editor Field Types Query Stats Execution Plan

Object Info Session

Schema: transactions

credit\_card 1

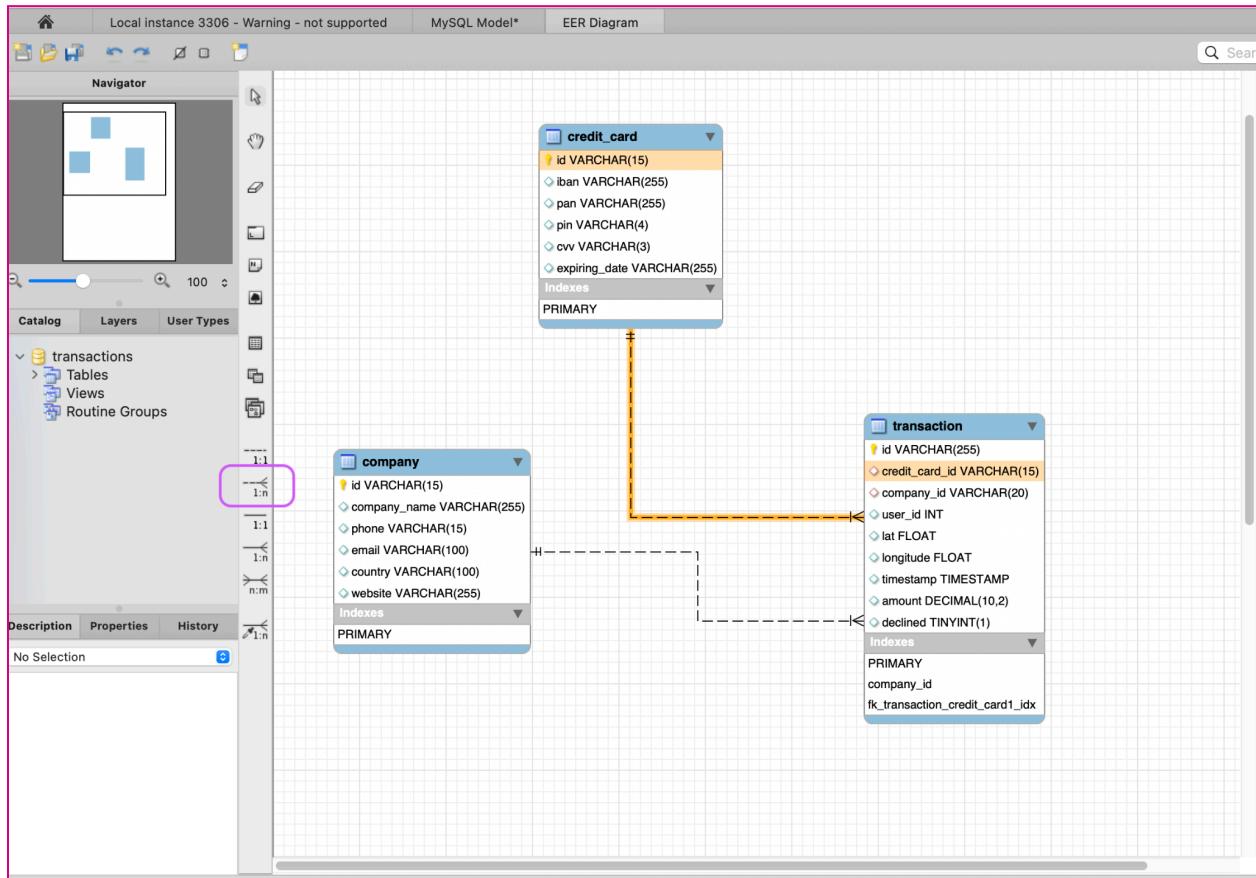
Action Output Time Action Response Duration / Fetch Time

353 16:28:20 SELECT \* FROM credit\_card 275 row(s) returned 0.0014 sec / 0.0009...

Query Completed

| id       | iban                          | pan                  | pin  | cvc | expiring_date |
|----------|-------------------------------|----------------------|------|-----|---------------|
| Ccu-2945 | DO26854763748537475216568680  | 5142423821948828     | 9080 | 887 | 08/24/23      |
| Ccu-2952 | BG45/VQ52710525608255         | 4556 453 55 5287     | 4598 | 438 | 06/29/21      |
| Ccu-2959 | CR724247724435841535          | 37461377349375       | 3583 | 667 | 02/24/23      |
| Ccu-2966 | BG72LKTQ15627628377363        | 448568867477265      | 4900 | 130 | 10/29/24      |
| Ccu-2973 | PT8780622813509249456346      | 544 58654 54343 384  | 8760 | 887 | 01/30/25      |
| Ccu-2980 | CC932418818306277136          | 40240 715845969      | 5075 | 596 | 07/24/22      |
| Ccu-2987 | GE99691434837748791813        | 3763 747687 76666    | 2298 | 797 | 10/31/23      |
| Ccu-2994 | BH627144283606765294          | 344283273252593      | 7545 | 595 | 02/28/22      |
| Ccu-3001 | CY49078265654774581266832110  | 511722 924833 2244   | 9562 | 867 | 09/16/22      |
| Ccu-3008 | LU50721693616119230           | 448574446433884      | 1856 | 740 | 04/05/25      |
| Ccu-3015 | PS119398216295715988342456821 | 3784 662233 17389    | 3246 | 820 | 01/31/22      |
| Ccu-3022 | G791695162850556977423121857  | 5164 1379 4842 3951  | 5610 | 342 | 04/25/25      |
| Ccu-3029 | AZ6231174382441418123739746   | 3429 279566 77631    | 9708 | 505 | 09/02/23      |
| Ccu-3036 | AZ39336002025842865843941994  | 3768 451556 48766    | 2232 | 565 | 10/27/25      |
| Ccu-3043 | TN6488143310514852179535      | 455676 6437463635    | 5969 | 196 | 06/07/25      |
| Ccu-3050 | FR5167743469175836831854477   | 4024007123722        | 4834 | 126 | 10/09/23      |
| Ccu-3057 | LU91822574697545215           | 3484 621767 21237    | 6805 | 846 | 09/14/25      |
| Ccu-3064 | PS1469655454925337762727313   | 3467 732741 26810    | 3865 | 496 | 06/03/25      |
| Ccu-3071 | OD992381476313                | 3464 789562 23535    | 6625 | 661 | 12/20/23      |
| Ccu-3078 | IS025127145884623279548733    | 4530 322 74 2377     | 9405 | 720 | 03/08/23      |
| Ccu-3085 | BE63114723972437              | 5268 3346 1135 1687  | 7241 | 413 | 05/10/23      |
| Ccu-3092 | RO65LSD0116612125447487       | 3488 754223 46253    | 9417 | 594 | 12/19/22      |
| Ccu-3099 | PT2610527556823705537218      | 448 5518 988637 5612 | 5612 | 564 | 01/22/23      |
| Ccu-3106 | AT64825163751168592           | 3495741635983        | 9733 | 209 | 01/27/24      |
| Ccu-3113 | IE26LCGTG7732173572752        | 341834822877471      | 9011 | 287 | 06/12/21      |
| Ccu-3120 | BS725575686616827144          | E97816_E93375_E877   | 7658 | 265 | 01/16/21      |

Ara faltarà la relació, la posarem a mà en el diagrama clicant 1:n, per a que la primary key de credit\_card puga relacionar-se amb moltes credit\_card\_id de transaction, ja que una targeta es pot fer servir en varies transaccions.



La relació amb company és indirecta a través de la taula transaction

## - Exercici 2: canvi registre

El departament de Recursos Humans ha identificat un error en el número de compte de l'usuari amb ID CcU-2938. La informació que ha de mostrar-se per a aquest registre és: R323456312213576817699999. Recorda mostrar que el canvi es va realitzar.

Busquem aquesta entrada en la taula 'credit\_card'

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

```
1 •  SELECT *
2   from credit_card
3  WHERE id = 'CcU-2938';
```

The results grid displays one row of data:

| id       | iban                       | pan              | pin  | cvv | expiring_date |
|----------|----------------------------|------------------|------|-----|---------------|
| CcU-2938 | TR301960312213576817638661 | 5424465566813633 | 3257 | 984 | 10/30/22      |

Below the grid, the status bar shows "Query Completed".

Fem el canvi de registre i comprovem que el canvi s'ha realitzat

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

- Left Panel (Schemas):** Shows the database structure. Under the 'transactions' schema, there is a 'credit\_card' table which contains columns: id, iban, pan, pin, cvv, and expiring\_date.
- SQL Editor:** Displays the following SQL code:

```
1 UPDATE credit_card SET iban = 'R323456312213576817699999' WHERE id = 'CcU-2938';
2
3
4 • SELECT *
5   from credit_card
6 WHERE id = 'CcU-2938';
```
- Result Grid:** Shows the result of the SELECT query. The table has columns: id, iban, pan, pin, cvv, and expiring\_date. One row is displayed:

| id       | iban                      | pan              | pin  | cvv | expiring_date |
|----------|---------------------------|------------------|------|-----|---------------|
| CcU-2938 | R323456312213576817699999 | 5424465566813633 | 3257 | 984 | 10/30/22      |
- Action Output:** Shows the history of actions taken. The last action was a SELECT query: "SELECT \* from credit\_card WHERE id = 'CcU-2938'" executed at 17:04:37 by user 372. It returned 1 row(s) in 0.00043 sec / 0.000... seconds.

## - Exercici 3: nou usuari

En la taula "transaction" ingressa un nou usuari amb la següent informació:

|                |                                      |
|----------------|--------------------------------------|
| Id             | 108B1D1D-5B23-A76C-55EF-C568E49A99DD |
| credit_card_id | CcU-9999                             |
| company_id     | b-9999                               |
| user_id        | 9999                                 |
| lat            | 829.999                              |
| longitude      | -117.999                             |
| amount         | 111.11                               |
| declined       | 0                                    |

Usem el codi per a afegir nova entrada

The screenshot shows the MySQL Workbench interface with the 'transactions' schema selected. In the SQL tab, the following code was run:

```
1  ## NIVELL 1 ##
2  ## EXERCICI 3 ##
3
4
5  # - Nou usuari a "transaction" amb les dades que ens han donat
6 •  INSERT into transaction (id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) VALUES ('108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999', 'b-9999', '9999', 829.999, -117.999, 111.11, 0)
```

The execution of the query resulted in an error message in the 'Action Output' pane:

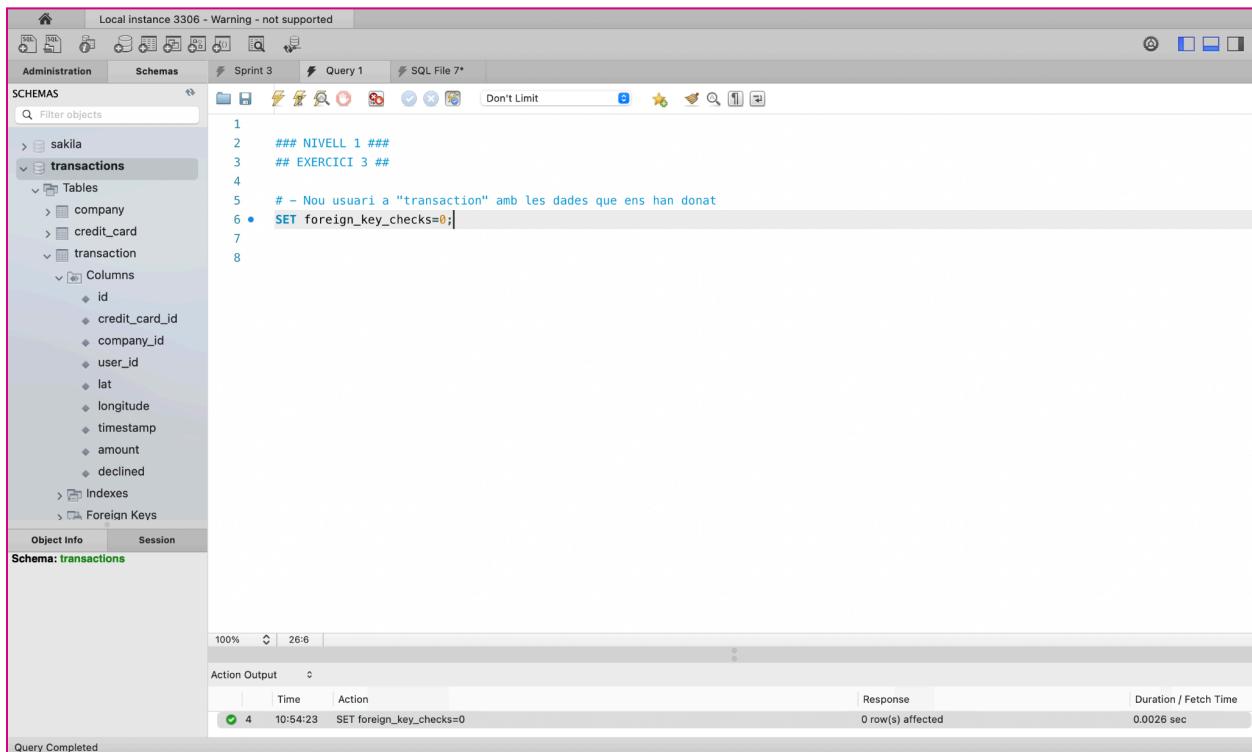
```
1 10:36:57 INSERT into transaction (id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) VALUE... Error Code: 1452. Cannot add or update a child row: a... 0.018 sec
```

A note at the bottom of the interface states: "Query interrupted".

## Com que ens dóna error

```
Error Code: 1452. Cannot add or update a child row: a foreign key  
constraint fails (`transactions`.`transaction`, CONSTRAINT  
`transaction_ibfk_1` FOREIGN KEY (`company_id`) REFERENCES `company`  
(`id`))
```

Desactivarem les restriccions temporalment per a afegir aquesta entrada.



The screenshot shows the MySQL Workbench interface. The left sidebar displays the schema browser with the 'transactions' schema selected. The main area is the SQL editor, showing the following code:

```
1  
2  ### NIVELL 1 ###  
3  ## EXERCICI 3 ##  
4  
5  # - Nou usuari a "transaction" amb les dades que ens han donat  
6 • SET foreign_key_checks=0;
```

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

I ara podem afegir aquesta entrada

The screenshot shows the MySQL Workbench interface. In the left sidebar, under the 'Schemas' section, the 'transactions' schema is selected. The main area displays the following SQL code:

```
1
2  ### NIVELL 1 ###
3  ## EXERCICI 3 ##
4
5  # - Nou usuari a "transaction" amb les dades que ens han donat
6  SET foreign_key_checks=0;
7
8  •  INSERT into transaction (id, credit_card_id, company_id, user_id, lat, longitude, amount, declined)
9  VALUES ('108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999', 'b-9999', '9999', '829.999', '-117.999', '111.11', '0');
10
11
```

The results pane at the bottom shows the execution details:

| Action  | Time     | Response          | Duration / Fetch Time |
|---|----------|-------------------|-----------------------|
| INSERT into transaction (id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) VALUES ('108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999', 'b-9999', '9999', '829.999', '-117.999', '111.11', '0') | 10:55:40 | 1 row(s) affected | 0.0063 sec            |

Query Completed

Comprovem que l'entrada s'ha afegit a la nostra taula

The screenshot shows the MySQL Workbench interface. In the left sidebar, under the 'Schemas' section, the 'transactions' schema is selected. The main area displays the following SQL code:

```
1 •  SELECT *
2   FROM transaction
3   WHERE id = '108B1D1D-5B23-A76C-55EF-C568E49A99DD';
```

The results pane at the bottom shows the execution details and the retrieved data:

| Action  | Time     | Response          | Duration / Fetch Time   |
|---|----------|-------------------|-------------------------|
| SELECT * FROM transaction WHERE id = '108B1D1D-5B23-A76C-55EF-C568E49A99DD' | 10:58:10 | 0 rows returned   | 0.0002 sec / 0.0000...  |
| SELECT * FROM transaction WHERE id = '108B1D1D-5B23-A76C-55EF-C568E49A99DD' | 10:59:12 | 1 row(s) returned | 0.00076 sec / 0.0000... |

Query Completed

Quan afegim de nou les restriccions, MySQL no revalida l'entrada que hem afegit

The screenshot shows the MySQL Workbench interface. The left sidebar displays the database schema for the 'transactions' table, including columns like id, credit\_card\_id, company\_id, user\_id, lat, longitude, timestamp, amount, and declined. The main query editor window contains the command:

```
1 • SET foreign_key_checks=1;
```

The status bar at the bottom indicates "Query Completed". Below the query editor, the "Action Output" section shows the results of the command:

| Action                   | Time     | Response          | Duration / Fetch Time |
|--------------------------|----------|-------------------|-----------------------|
| SET foreign_key_checks=1 | 11:01:37 | 0 row(s) affected | 0.00057 sec           |

## - Exercici 4: eliminar columna

Des de recursos humans et sol·liciten eliminar la columna "pan" de la taula credit\_card. Recorda mostrar el canvi realitzat.

Comencem donant un ull a la taula credit\_card

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

- Schemas:** sakila, transactions
- Tables:** company, credit\_card
- Columns:** id, iban, pan, pin, cvv, expiring\_date
- Object Info:** credit\_card
- Table:** credit\_card
- Columns:** id, iban, pan, pin, cvv, expiring\_date
- Query:** A query is being run:

```
2
3  ### NIVELL 1 ####
4  ## EXERCICI 4 ##
5  # - Eliminar la columna "pan" de la taula credit_card
6
7 •  SELECT *
8  FROM credit_card;
```
- Result Grid:** Shows the results of the query, listing 275 rows of data from the credit\_card table.
- Action Output:** Shows the execution details:

| Action | Time     | Action                    | Response            | Duration / Fetch Time  |
|--------|----------|---------------------------|---------------------|------------------------|
| 11     | 11:48:16 | SELECT * FROM credit_card | 275 row(s) returned | 0.037 sec / 0.00045... |

## Treiem la columna pan

The screenshot shows the MySQL Workbench interface. In the left sidebar, under the 'Schemas' section, the 'credit\_card' table is selected. In the main pane, a query editor window is open with the following SQL code:

```

1
2
3  ### NIVELL 1 ###
4  ## EXERCICI 4 ##
5  # - Eliminar la columna "pan" de la taula credit_card
6 • ALTER TABLE credit_card
7   DROP COLUMN pan;

```

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

I comprovem que la columna ja no està

The screenshot shows the MySQL Workbench interface. In the left sidebar, under the 'Schemas' section, the 'credit\_card' table is selected. In the main pane, a query editor window is open with the following SQL code:

```

1
2 • SELECT *
3   FROM credit_card;

```

The results grid displays the data from the 'credit\_card' table, which now lacks the 'pan' column. The status bar at the bottom indicates 'Query Completed'.

| id       | iban                          | pin  | cvv | expiring_date |
|----------|-------------------------------|------|-----|---------------|
| CcU-2938 | R323456312213576817699999     | 3257 | 984 | 10/30/22      |
| CcU-2945 | D026854763748537475216568689  | 9080 | 887 | 08/24/23      |
| CcU-2952 | BG45VQL52710525608255         | 4598 | 438 | 06/29/21      |
| CcU-2958 | CR7242477244335841535         | 3583 | 667 | 02/24/23      |
| CcU-2966 | BG72LKT015627628377363        | 4909 | 130 | 10/29/24      |
| CcU-2973 | PT87806228135024294656346     | 8760 | 887 | 01/30/25      |
| CcU-2980 | PT87806228135024294656346     | 5970 | 597 | 01/30/25      |
| CcU-2987 | GE989143483774578113          | 2588 | 797 | 10/11/23      |
| CcU-2994 | BH627144238380667652094       | 7545 | 595 | 09/28/22      |
| CcU-3001 | CY4908742665474581266832110   | 9562 | 867 | 09/16/22      |
| CcU-3008 | LU507216693616119230          | 1856 | 740 | 04/05/25      |
| CcU-3015 | PS119398216295715668342456821 | 3246 | 822 | 01/31/22      |
| CcU-3022 | G791651628505456977423121857  | 5610 | 342 | 04/25/25      |
| CcU-3029 | AZ6231741398241418123739746   | 9708 | 505 | 09/02/23      |
| CcU-3036 | Z23933600292584265843941994   | 2233 | 565 | 10/27/25      |
| CcU-3043 | TN648814398241418123739746    | 5034 | 196 | 06/07/25      |
| CcU-3050 | PR5167744368175836831854477   | 4834 | 126 | 10/09/23      |
| CcU-3057 | LU931822574697545215          | 6805 | 648 | 09/14/25      |
| CcU-3064 | PS14696554544925337627273133  | 5985 | 498 | 08/03/25      |

The status bar at the bottom indicates '275 row(s) returned'.

# Nivell 2

## - Exercici 1: eliminar registre

Elimina de la taula transaction el registre amb ID 02C6201E-D90A-1859-B4EE-88D2986D3B02 de la base de dades.

Comencem localitzant aquest regista a la taula

The screenshot shows the MySQL Workbench interface. On the left, the 'Schemas' tree view is open, showing the 'transactions' schema with its tables: 'company', 'credit\_card', and 'transaction'. The 'credit\_card' table is selected. The main area displays a SQL editor with the following query:

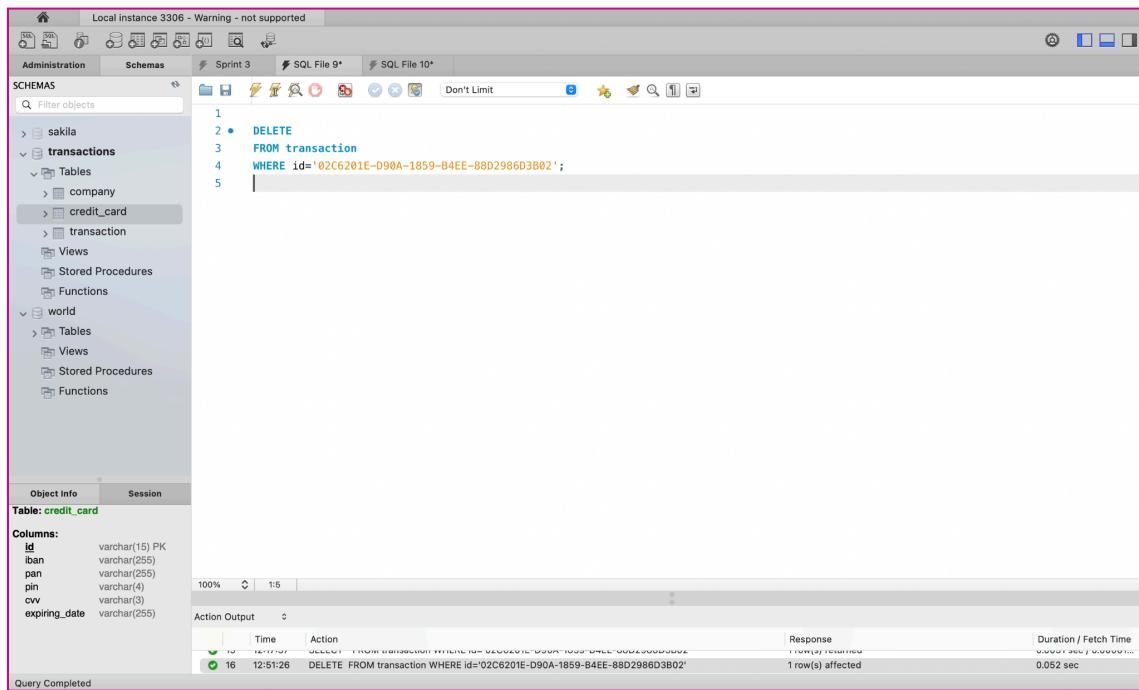
```
1 •  SELECT *
2   FROM transaction
3  WHERE id='02C6201E-D90A-1859-B4EE-88D2986D3B02';
```

Below the SQL editor is a 'Result Grid' showing the results of the query. The grid has columns: id, credit\_card\_id, company\_id, user\_id, lat, longitude, timestamp, amount, and declined. One row is visible, corresponding to the ID specified in the query. The timestamp column shows '2021-08-28 23:42:24'. The 'Field Types' panel on the right indicates that the 'id' column is of type 'BLOB'.

| id   | credit_card_id   | company_id     | user_id    | lat             | longitude        | timestamp                   | amount         | declined  |
|--|------------------|----------------|------------|-----------------|------------------|-----------------------------|----------------|-----------|
| 02C6201E-D90A-1859-B4EE-88D2986...<br>NULL | CcU-2938<br>NULL | b-2362<br>NULL | 92<br>NULL | 81.9185<br>NULL | -12.5276<br>NULL | 2021-08-28 23:42:24<br>NULL | 466.92<br>NULL | 0<br>NULL |

At the bottom, the 'Action Output' section shows the query execution details: 1 row(s) returned, duration 0.0031 sec / 0.00001..

## L'esborrem

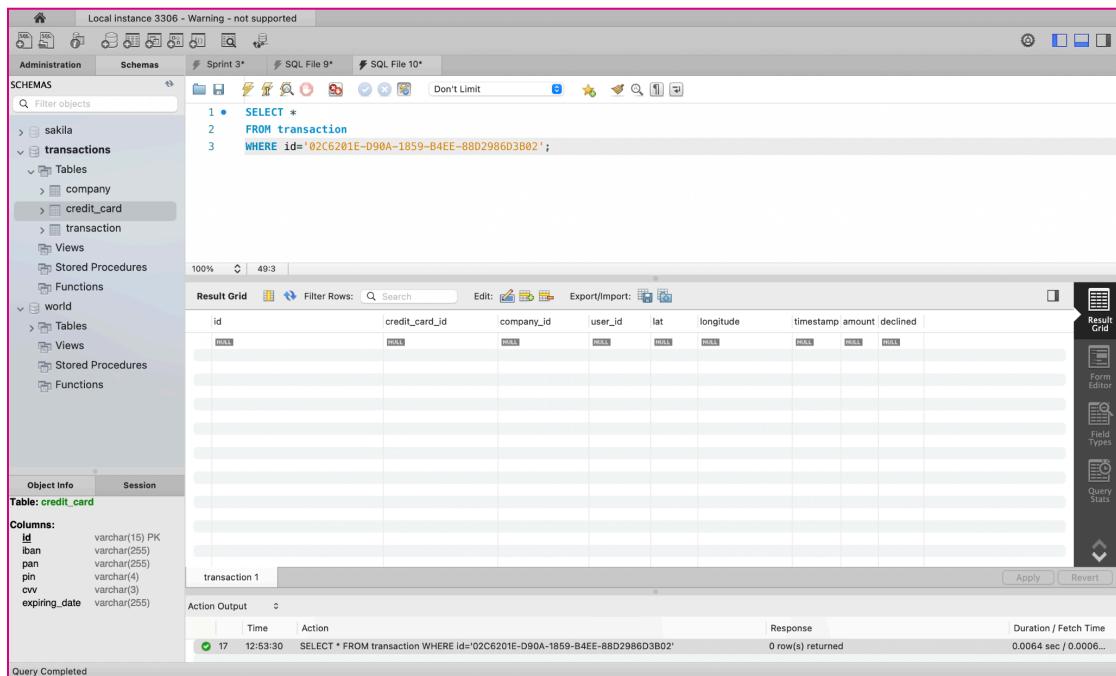


The screenshot shows the MySQL Workbench interface. In the left sidebar, under the 'Schemas' section, the 'credit\_card' table is selected. The main pane displays a SQL query:

```
1
2 •  DELETE
3   FROM transaction
4   WHERE id='02C6201E-D90A-1859-B4EE-88D298603B02';
```

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

I comprovem que ja no està



The screenshot shows the MySQL Workbench interface. In the left sidebar, under the 'Schemas' section, the 'credit\_card' table is selected. The main pane displays a SQL query:

```
1 •  SELECT *
2   FROM transaction
3   WHERE id='02C6201E-D90A-1859-B4EE-88D298603B02';
```

The results pane shows a 'Result Grid' with columns: id, credit\_card\_id, company\_id, user\_id, lat, longitude, timestamp, amount, declined. All fields are marked as 'NULL'. The status bar at the bottom indicates "Query Completed".

## - Exercici 2: vista

La secció de màrqueting desitja tenir accés a informació específica per a realitzar anàlisi i estratègies efectives. S'ha sol·licitat crear una vista que proporcioni detalls clau sobre les companyies i les seves transaccions. Serà necessària que creïs una vista anomenada VistaMarketing que contingui la següent informació: Nom de la companyia. Telèfon de contacte. País de residència. Mitjana de compra realitzat per cada companyia. Presenta la vista creada, ordenant les dades de major a menor mitjana de compra.

Vista: VistaMarketing

company.company\_name - Nom de la companyia.

company.phone - Telèfon de contacte.

company.country - País de residència.

avg(amount), WHERE declined = 0 - Mitjana de compra realitzat per cada companyia.

ORDER BY avg(amount) DESC - Order by major a menor mitjana de compra

## - Exercici 3: filtrar vista

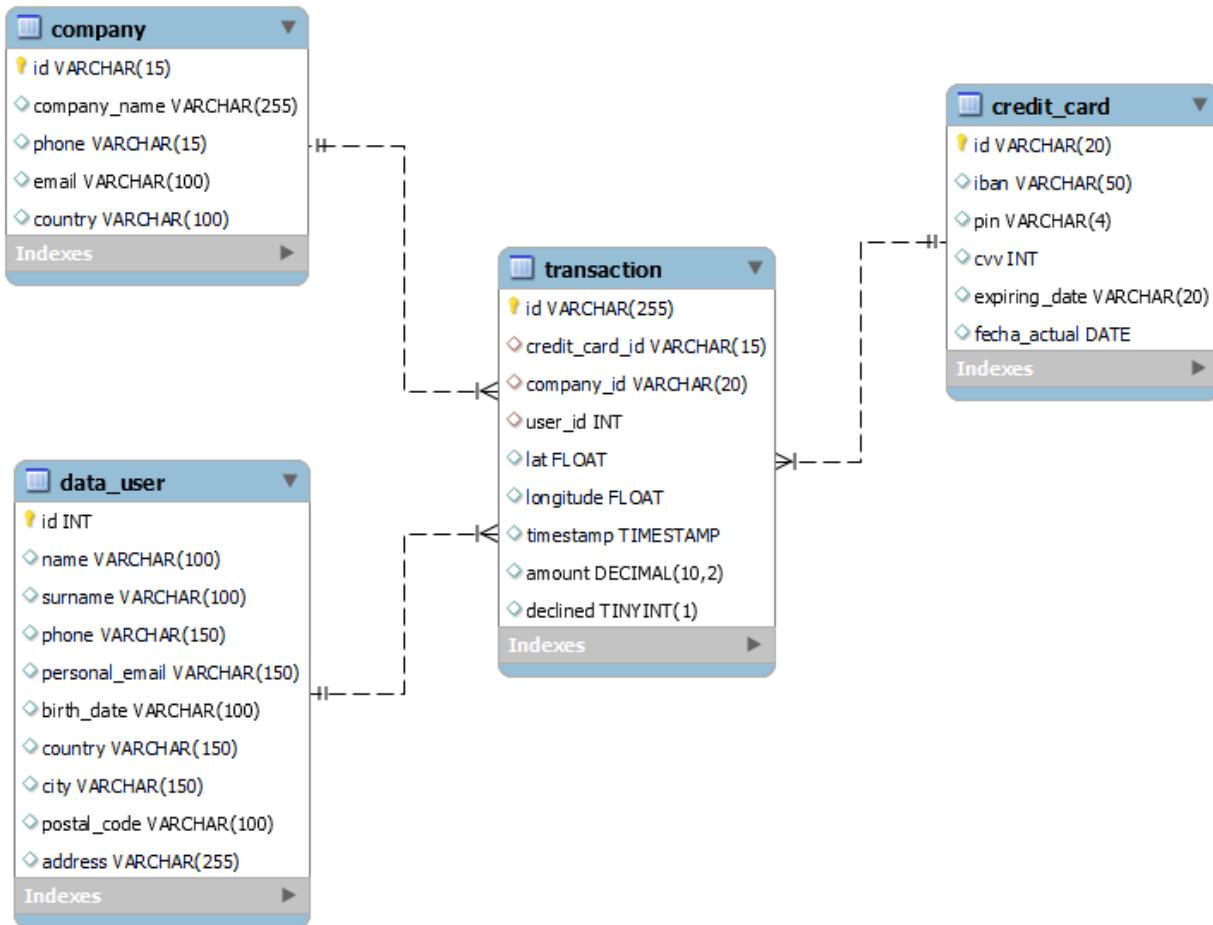
Filtra la vista VistaMarketing per a mostrar només les companyies que tenen el seu país de residència en "Germany"

WHERE country ='Germany'

# Nivell 3

## - Exercici 1: modificacions base dades

La setmana vinent tindràs una nova reunió amb els gerents de màrqueting. Un company del teu equip va realitzar modificacions en la base de dades, però no recorda com les va realitzar. Et demana que l'ajudis a deixar els comandos executats per a obtenir el següent diagrama:



### Recordatori

En aquesta activitat, és necessari que descriguis el "pas a pas" de les tasques realitzades. És important realitzar descripcions senzilles, simples i fàcils de comprendre. Per a realitzar aquesta activitat hauràs de treballar amb els arxius denominats "estructura\_dades\_user" i "dades\_introduir\_user"

## - Exercici 2: informe técnico

L'empresa també et sol·licita crear una vista anomenada "InformeTecnico" que contingui la següent informació:

- ID de la transacció
- Nom de l'usuari/ària
- Cognom de l'usuari/ària
- IBAN de la targeta de crèdit usada.
- Nom de la companyia de la transacció realitzada.
- Assegura't d'incloure informació rellevant de totes dues taules i utilitza àlies per a canviar de nom columnes segons sigui necessari.

Mostra els resultats de la vista, ordena els resultats de manera descendente en funció de la variable ID de transaction.

```
SELECT *
transaction.id
JOIN transaction.user_id per a nom i cognom
JOIN transaction.credit_card_id per a IBAN
JOIN company per a company.company_name

ORDER BY transaction.id DESC
```