

Bootcamp Data Analytics

Bàrbara Partegàs

SPRINT 3

En aquest sprint, es simula una situació empresarial en la qual has de realitzar diverses manipulacions en les taules de la base de dades. Al seu torn, hauràs de treballar amb índexs i vistes. En aquesta activitat, continuaràs treballant amb la base de dades que conté informació d'una empresa dedicada a la venda de productes en línia. En aquesta tasca, començaràs a treballar amb informació relacionada amb targetes de crèdit.

NIVELL 1 – ex.1

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.

TAULA credit_card

- 🔑 id VARCHAR (20)
 - iban VARCHAR (50)
 - pan VARCHAR (50)
 - pin VARCHAR (4)
 - cvv VARCHAR (3)
 - expiring_date VARCHAR (10)
- Aquestes son les columnes que necessitem i les seves característiques.
 - Id serà la Primary Key, que establirà una relació 1 a 1 amb credit_card_id de la taula transaction

The screenshot shows a SQL IDE window titled "creacio_taula_credit_card". The main editor contains the following SQL code:

```
1 CREATE TABLE IF NOT EXISTS credit_card (  
2     id VARCHAR(20) PRIMARY KEY,  
3     iban VARCHAR (50),  
4     pan VARCHAR (50),  
5     pin VARCHAR (4),  
6     cvv VARCHAR (3),  
7     expiring_date VARCHAR (10)  
8 );
```

On the right side, there is a "SQLAdditions" panel with a message: "Automatic context help disabled. Use the toolbar manually get help for the current caret position or toggle automatic help". Below this is a "Context Help" and "Snippets" section.

At the bottom, there is an "Output" panel showing the "Action Output" log. It contains the following entries:

#	Time	Action	Message	Duration / Fetch
1	11:29:00	CREATE TABLE IF NOT EXISTS user (id INT PRIMARY KEY, name VARCHAR(100), ...	Error Code: 1822. Failed to add the foreign key constraint. Missing index for constraint 'user_bfk_1' in th...	0.031 sec
2	11:29:07	CREATE INDEX idx_user_id ON transaction(user_id)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.203 sec
3	11:29:10	CREATE TABLE IF NOT EXISTS user (id INT PRIMARY KEY, name VARCHAR(100), ...	0 row(s) affected	0.047 sec
4	12:09:06	CREATE TABLE IF NOT EXISTS credit_card (id VARCHAR(20) PRIMARY KEY, iban VARC...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your My...	0.031 sec
5	12:13:13	CREATE TABLE IF NOT EXISTS credit_card (id VARCHAR(20) PRIMARY KEY, iban VARC...	0 row(s) affected	0.046 sec

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```

260 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4681', 'GE38261236401561281317', '448 57826 38974 722', '6486', '707', '04/1
261 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4688', 'IS383255756743611896271082', '347635882232257', '3159', '350', '01/0
262 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4695', 'GT44327784356731801238887639', '376558773427717', '8297', '734', '10
263 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4702', 'DK7772824378841077', '348642676875332', '3880', '445', '09/19/22');
264 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4709', 'GE45504127369280160124', '453233 846716 4597', '4796', '233', '11/04
265 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4716', 'PL75422719203842155307261926', '546684 833417 5543', '4252', '997', '
266 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4723', 'FI8248793454336573', '3414 376437 29598', '7936', '243', '07/31/20')
267 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4730', 'EE541536644818872885', '373396765877539', '5988', '988', '03/08/25')
268 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4737', 'AT278617748359359721', '3426 555216 37521', '9048', '509', '02/25/22
269 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4744', 'AZ58751886174806034766368322', '5256255735951122', '6209', '606', '1
270 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4751', 'PK8373046933330403264694', '3436 372241 88142', '6392', '760', '06/1
271 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4758', 'GBS1GUVH61469185263634', '378486693428441', '5241', '571', '07/27/23
272 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4765', 'SA2888713798782221436615', '448 51353 39347 393', '1667', '153', '02
273 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4772', 'ME59832015454148127328', '455 63485 32288 611', '1201', '552', '09/2
274 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4779', 'FI9109231810971761', '513 92416 26288 645', '8788', '131', '08/18/23
275 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4786', 'SI51703104173167515', '557 97688 75435 755', '9002', '199', '05/15/2
276 • INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcU-4793', 'HU95215627749276573565556322', '471662 767641 7624', '7216', '848', '

```

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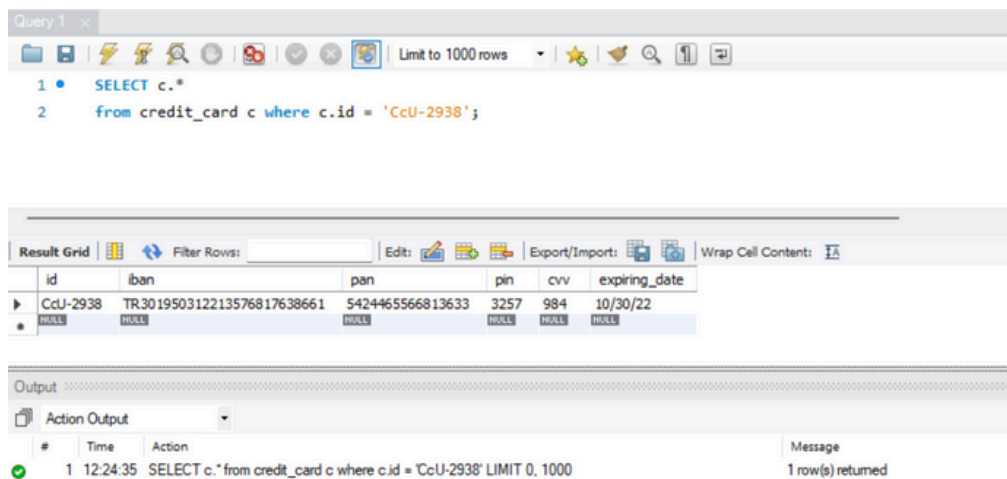
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NIVELL 1 – ex. 2

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.

Comprovació inicial:



Query 1

```
1 • SELECT c.*
2   from credit_card c where c.id = 'CcU-2938';
```

Limit to 1000 rows

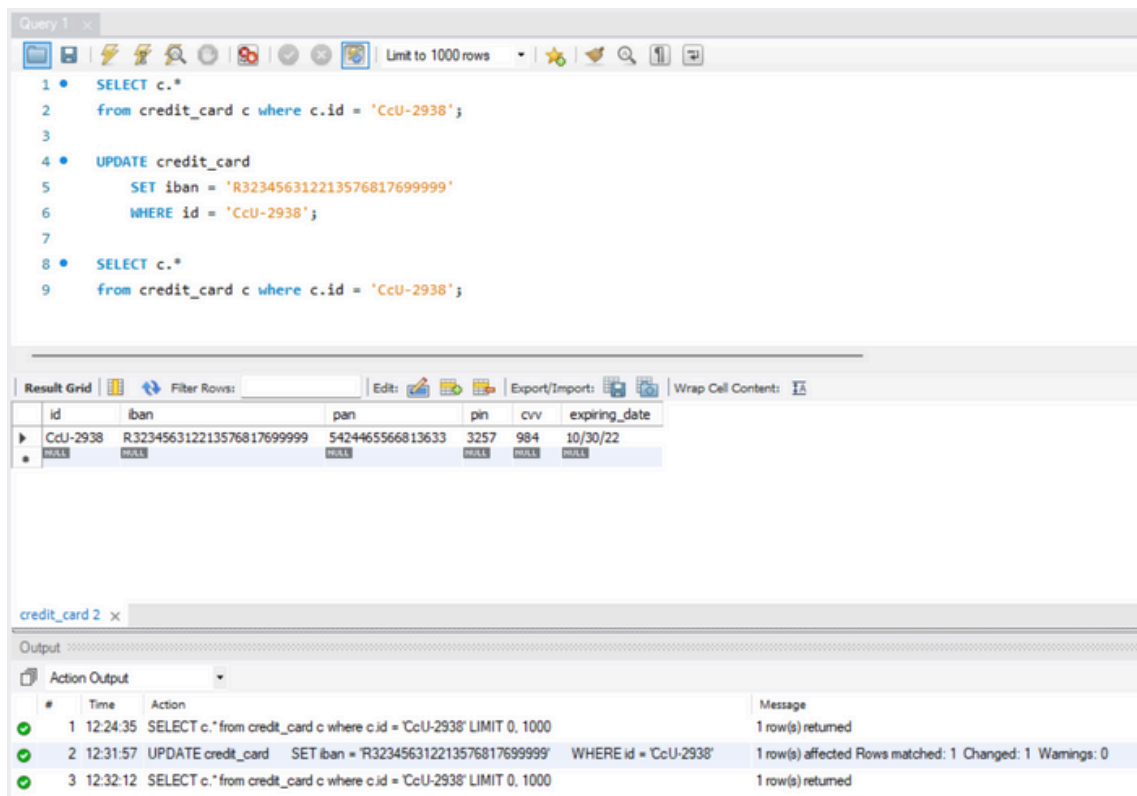
id	iban	pan	pin	cvv	expiring_date
CcU-2938	TR301950312213576817638661	5424465566813633	3257	984	10/30/22
NULL	NULL	NULL	NULL	NULL	NULL

Output

Action Output

#	Time	Action	Message
1	12:24:35	SELECT c.* from credit_card c where c.id = 'CcU-2938' LIMIT 0, 1000	1 row(s) returned

Els 3 passos:



Query 1

```
1 • SELECT c.*
2   from credit_card c where c.id = 'CcU-2938';
3
4 • UPDATE credit_card
5     SET iban = 'R323456312213576817699999'
6     WHERE id = 'CcU-2938';
7
8 • SELECT c.*
9   from credit_card c where c.id = 'CcU-2938';
```

Limit to 1000 rows

id	iban	pan	pin	cvv	expiring_date
CcU-2938	R323456312213576817699999	5424465566813633	3257	984	10/30/22
NULL	NULL	NULL	NULL	NULL	NULL

credit_card 2

Output

Action Output

#	Time	Action	Message
1	12:24:35	SELECT c.* from credit_card c where c.id = 'CcU-2938' LIMIT 0, 1000	1 row(s) returned
2	12:31:57	UPDATE credit_card SET iban = 'R323456312213576817699999' WHERE id = 'CcU-2938'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
3	12:32:12	SELECT c.* from credit_card c where c.id = 'CcU-2938' LIMIT 0, 1000	1 row(s) returned

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NIVELL 1 – ex. 3

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

M'he trobat amb error 1452

```
13 • INSERT INTO transaction (Id, credit_card_id, company_id, user_id, lat, longitude, amount, declined)
14     VALUES ('108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999', 'b-9999', 9999, 829.999, -117.999, 111.11, 0);
```

#	Time	Action	Message
✓ 1	12:24:35	SELECT c.* from credit_card c where c.id = 'CcU-2938' LIMIT 0, 1000	1 row(s) returned
✓ 2	12:31:57	UPDATE credit_card SET iban = 'R323456312213576817699999' WHERE id = 'CcU-2938'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
✓ 3	12:32:12	SELECT c.* from credit_card c where c.id = 'CcU-2938' LIMIT 0, 1000	1 row(s) returned
✗ 4	12:53:41	INSERT INTO transaction (Id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) ...	Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails ('transactions', 'trans...

- Per això he anat a comprovar si tenim aquest valor a la taula "pare"
- L'he creat i he tornat a executar l'script de UPDATE

```
--
13 • INSERT INTO transaction (Id, credit_card_id, company_id, user_id, lat, longitude, amount, declined)
14     VALUES ('108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999', 'b-9999', 9999, 829.999, -117.999, 111.11, 0);
15
16 • SELECT c.*
17     from company c where c.id = 'b-9999';
18
19 • INSERT INTO company (id) VALUES ('b-9999');
```

#	Time	Action	Message	Duration /
✓ 1	12:24:35	SELECT c.* from credit_card c where c.id = 'CcU-2938' LIMIT 0, 1000	1 row(s) returned	0.000 sec
✓ 2	12:31:57	UPDATE credit_card SET iban = 'R323456312213576817699999' WHERE id = 'CcU-2938'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
✓ 3	12:32:12	SELECT c.* from credit_card c where c.id = 'CcU-2938' LIMIT 0, 1000	1 row(s) returned	0.000 sec
✗ 4	12:53:41	INSERT INTO transaction (Id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) ...	Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails ('transactions', 'trans...	0.031 sec
✗ 5	13:04:40	SELECT c.* from company c where c.id = 'b-9999' LIMIT 0, 1000	Error Code: 1146. Table 'transactions.companyd' doesn't exist	0.016 sec
✓ 6	13:05:36	INSERT INTO company (id) VALUES ('b-9999')	1 row(s) affected	0.031 sec
✗ 7	13:05:41	SELECT c.* from company c where c.id = 'b-9999' LIMIT 0, 1000	Error Code: 1146. Table 'transactions.companyd' doesn't exist	0.000 sec
✓ 8	13:05:51	SELECT c.* from company c where c.id = 'b-9999' LIMIT 0, 1000	1 row(s) returned	0.000 sec
✓ 9	13:06:48	INSERT INTO transaction (Id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) ...	1 row(s) affected	0.032 sec

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NIVELL 1 – ex. 4

Des de recursos humans et sol·liciten eliminar la columna "pan" de la taula credit_*card. Recorda mostrar el canvi realitzat.

Abans

```
21 • DESCRIBE credit_card;
```

Field	Type	Null	Key	Default	Extra
id	varchar(20)	NO	PRI	HULL	
iban	varchar(50)	YES		HULL	
pan	varchar(50)	YES		HULL	
pin	varchar(4)	YES		HULL	
cvv	varchar(3)	YES		HULL	
expiring_date	varchar(10)	YES		HULL	

Després de ALTER TABLE

```
21 • DESCRIBE credit_card;
22
23 • ALTER TABLE credit_card
24 drop column pan;
```

Field	Type	Null	Key	Default	Extra
id	varchar(20)	NO	PRI	HULL	
iban	varchar(50)	YES		HULL	
pin	varchar(4)	YES		HULL	
cvv	varchar(3)	YES		HULL	
expiring_date	varchar(10)	YES		HULL	

NIVELL 2 – ex. 1

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

- Abans d'eliminar-la, he provat de trobar-la per veure com escriure correctament el codi.

```
1 • SELECT t.*
2 FROM transaction t where t.id = 'ID 02C6201E-D90A-1859-B4EE-88D2986D3B02';
3
4 • SELECT t.*
5 FROM transaction t where t.id = '02C6201E-D90A-1859-B4EE-88D2986D3B02';
6
7 • DELETE FROM transaction
8 WHERE id = '02C6201E-D90A-1859-B4EE-88D2986D3B02';
9
10 • SELECT t.*
11 FROM transaction t where t.id = '02C6201E-D90A-1859-B4EE-88D2986D3B02';
```

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

transaction 8 x

Output

#	Time	Action	Message
1	13:28:50	SELECT t.* from transaction t where t.id = 'ID 02C6201E-D90A-1859-B4EE-88D2986D3B02' LIMIT 0...	0 row(s) returned
2	13:28:59	SELECT t.* from transaction t where t.id = 'ID02C6201E-D90A-1859-B4EE-88D2986D3B02' LIMIT 0...	0 row(s) returned
3	13:29:18	SELECT t.* LIMIT 0, 1000	Error Code: 1051. Unknown table 't'
4	13:29:41	SELECT t.* FROM transaction t where t.id = 'ID02C6201E-D90A-1859-B4EE-88D2986D3B02' LIMIT...	0 row(s) returned
5	13:29:49	SELECT t.* FROM transaction t LIMIT 0, 1000	588 row(s) returned
6	13:30:06	SELECT t.* FROM transaction t where t.id = 'ID 02C6201E-D90A-1859-B4EE-88D2986D3B02' LIM...	0 row(s) returned
7	13:30:27	SELECT t.* FROM transaction t where t.id = 'ID02C6201E-D90A-1859-B4EE-88D2986D3B02' LIM...	0 row(s) returned
8	13:30:33	SELECT t.* FROM transaction t where t.id = '02C6201E-D90A-1859-B4EE-88D2986D3B02' LIM...	1 row(s) returned

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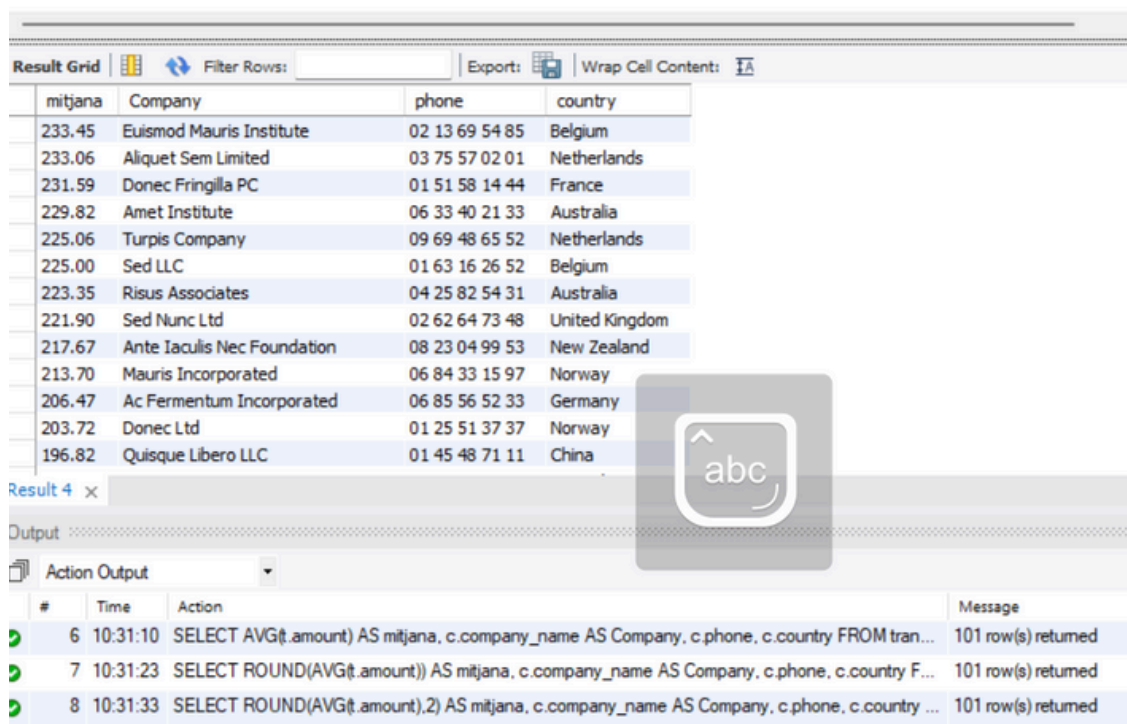
SPRINT 3

NIVELL 2- ex. 2

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.

- Primer creo la consulta que necessitem:

```
18
19 -- Sprint3 Nivell 2 ex.2
20 • SELECT ROUND(AVG(t.amount),2) AS mitjana, c.company_name AS Company, c.phone, c.country
21 FROM transaction t
22 INNER JOIN Company c ON c.id=t.company_id
23 GROUP BY c.id
24 ORDER BY mitjana DESC;
```



mitjana	Company	phone	country
233.45	Eusmod Mauris Institute	02 13 69 54 85	Belgium
233.06	Aliquet Sem Limited	03 75 57 02 01	Netherlands
231.59	Donec Fringilla PC	01 51 58 14 44	France
229.82	Amet Institute	06 33 40 21 33	Australia
225.06	Turpis Company	09 69 48 65 52	Netherlands
225.00	Sed LLC	01 63 16 26 52	Belgium
223.35	Risus Associates	04 25 82 54 31	Australia
221.90	Sed Nunc Ltd	02 62 64 73 48	United Kingdom
217.67	Ante Iaculis Nec Foundation	08 23 04 99 53	New Zealand
213.70	Mauris Incorporated	06 84 33 15 97	Norway
206.47	Ac Fermentum Incorporated	06 85 56 52 33	Germany
203.72	Donec Ltd	01 25 51 37 37	Norway
196.82	Quisque Libero LLC	01 45 48 71 11	China

Result 4 x

Output

Action Output

#	Time	Action	Message
6	10:31:10	SELECT AVG(t.amount) AS mitjana, c.company_name AS Company, c.phone, c.country FROM tran...	101 row(s) returned
7	10:31:23	SELECT ROUND(AVG(t.amount)) AS mitjana, c.company_name AS Company, c.phone, c.country F...	101 row(s) returned
8	10:31:33	SELECT ROUND(AVG(t.amount),2) AS mitjana, c.company_name AS Company, c.phone, c.country ...	101 row(s) returned

- Afegeixo a dalt CREATE VIEW i executo:

```
-- Sprint3 Nivell 2 ex.2
CREATE VIEW VistaMarketing AS
SELECT ROUND(AVG(t.amount),2) AS mitjana, c.company_name AS Company, c.phone, c.country
FROM transaction t
INNER JOIN Company c ON c.id=t.company_id
GROUP BY c.id
ORDER BY mitjana DESC;
```

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- Tenim la view anomenada VistaMarketing a l'apartat de "views"

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'SCHEMAS' pane shows the 'vistamarketing' view under the 'Views' folder. The 'Columns' pane shows the columns: 'mitjana' (decimal(11,2)), 'Company' (varchar(255)), 'phone' (varchar(15)), and 'country' (varchar(100)). The 'Result Grid' pane shows the data for the 'vistamarketing' view, with columns: 'mitjana', 'Company', 'phone', and 'country'. The data is sorted by 'mitjana' in descending order. The 'Output' pane shows the execution of the query, with the message: '101 row(s) returned'.

mitjana	Company	phone	country
473.08	Eget Ipsum Ltd	03 67 44 56 72	United States
468.35	Non Magna LLC	06 71 73 13 17	United Kingdom
461.21	Sed Id Limited	07 28 18 18 13	United States
443.64	Justo Eu Arcu Ltd	08 42 56 71 52	Italy
442.52	Eget Tincidunt Dui Institute	05 35 93 32 44	Netherlands
442.28	Viverra Donec Foundation	03 33 12 32 73	United Kingdom
434.06	Vestibulum Lorem PC	02 02 87 33 40	Belgium
425.64	Aliquet Diam Limited	02 76 61 47 46	United States
408.62	Maecenas Malesuada Fringilla Inc.	09 38 53 76 61	Netherlands
407.79	Non Ante LLP	08 89 47 65 08	Sweden
406.11	Egestas Nunc Sed Limited	06 01 02 70 47	Italy
405.36	Nunc Sit Incorporated	07 28 42 63 63	Norway
396.32	Magna A Neque Industries	04 14 44 64 62	Australia
390.33	Amet Luctus Vulputate Foundation	03 18 54 24 19	Canada
385.27	Aliquam PC	01 45 73 52 16	Germany
364.01	Neque Tellus Incorporated	04 43 18 34 19	Ireland
357.08	Placerat LLP	05 43 67 24 41	Netherlands
351.84	Elit Etiam Laoreet Associates	07 69 74 17 45	Canada
350.13	Fusce Corp.	08 14 97 58 85	United States
349.66	Sapien Nunc Pulvinar LLP	08 37 12 58 11	New Zealand
346.88	Mauris Institute	05 29 60 36 87	Sweden
326.86	Tincidunt Orci Limited	01 78 18 81 44	Norway
325.34	Netus Et Malesuada Ltd	02 55 43 68 46	Netherlands

NIVELL 2- ex. 3

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

- Per a filtrar la vista utilitzo WHERE (sense especificar la taula).

The screenshot shows the SQL Server Enterprise Manager interface. The 'Result Grid' pane shows the data for the 'vistamarketing' view, filtered by 'country = Germany'. The data is sorted by 'mitjana' in descending order. The 'Output' pane shows the execution of the query, with the message: '8 row(s) returned'.

mitjana	Company	phone	country
385.27	Aliquam PC	01 45 73 52 16	Germany
289.65	Ac Industries	09 34 65 40 60	Germany
266.90	Rutrum Non Inc.	02 66 31 61 09	Germany
244.03	Nunc Interdum Incorporated	05 18 15 48 13	Germany
240.80	Augue Foundation	06 88 43 15 63	Germany
206.47	Ac Fermentum Incorporated	06 85 56 52 33	Germany
184.31	Auctor Mauris Corp.	05 62 87 14 41	Germany
156.73	Convallis In Incorporated	06 66 57 29 50	Germany

NIVELL 3- ex. 1

La setmana vinent tindràs una nova reunió amb els gerents de màrqueting.

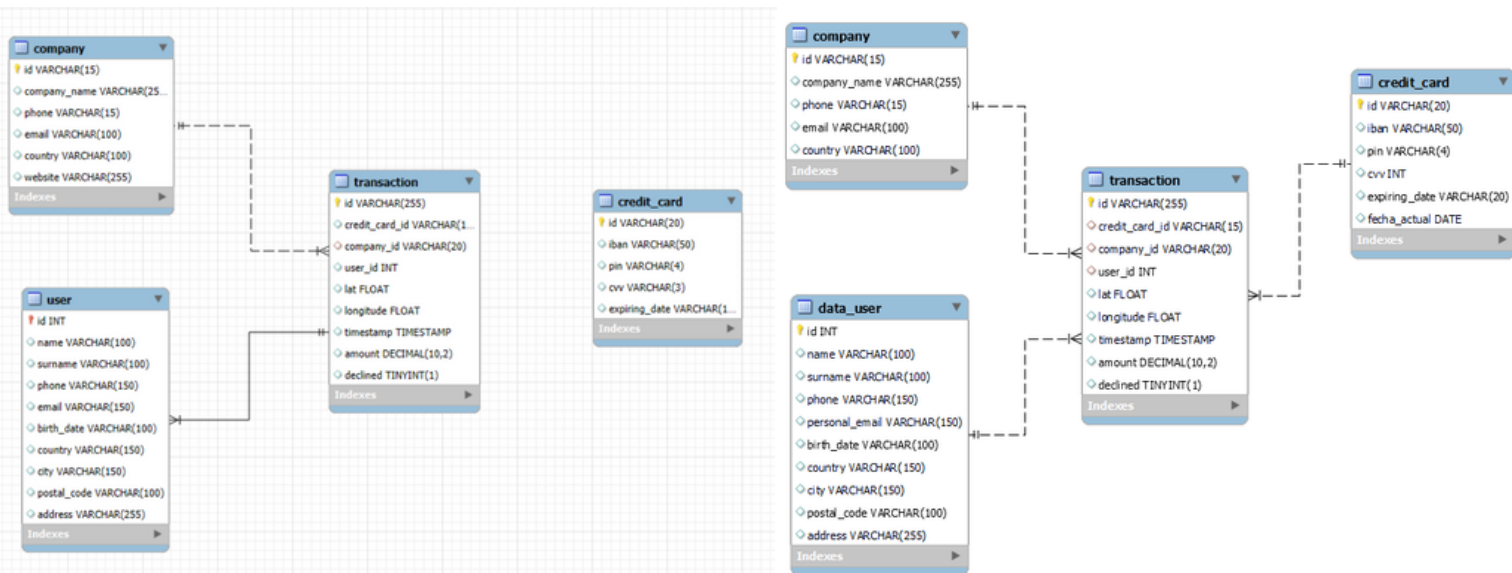
Un company del teu equip va realitzar modificacions en la base de dades, però no recorda com les va realitzar. Et demana que l'ajudis a deixar els comandos executats per a obtenir el següent diagrama:

- Creo el diagrama actual per poder comparar-lo (amb Reverse Engineer).

inicial



final



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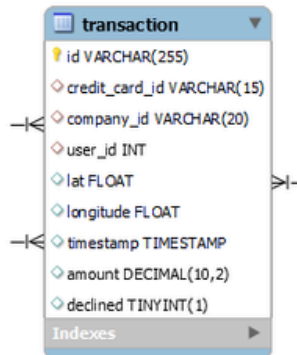
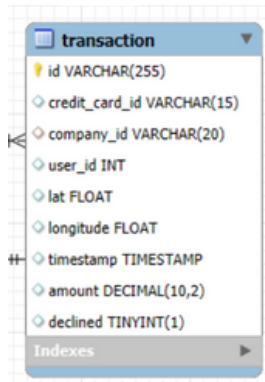
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SPRINT 3

- Comparo taula a taula i busco les diferències

Inici → Final

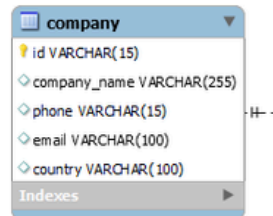
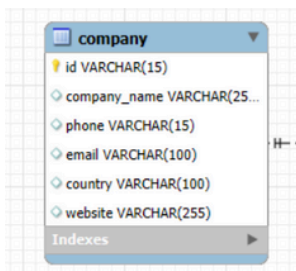
Diferència



Columnes

Relacions

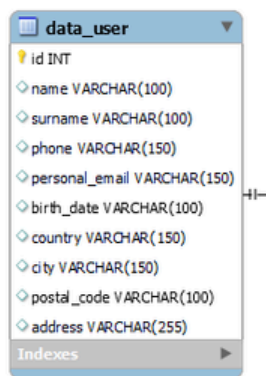
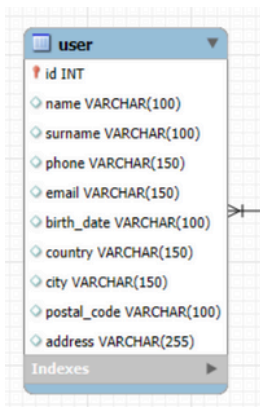
- credit_card
- user_id



Columnes

- Eliminar website

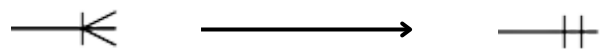
Relacions



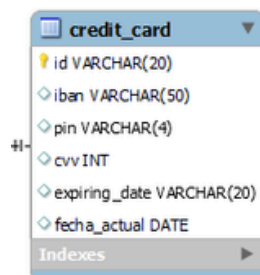
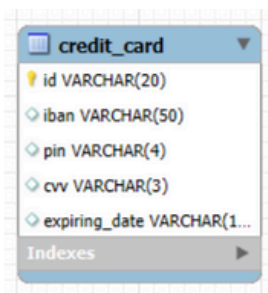
Columnes

- Canviar nom de la taula user > data_user
- Canviar nom email > personal_email

Relacions



- De “un o molts” a “Un i només un”



Columnes

- cvv de VARCHAR a INT
- expiring_date de VARCHAR 10 a 20
- afegir fecha_actual DATE

Relacions

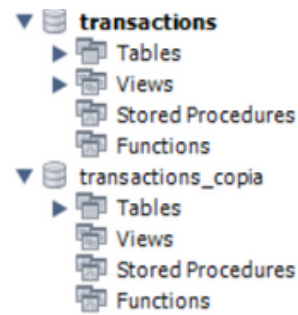
- establir “1 i només 1” amb transaction a credit_card_id

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Bàrbara Partegàs

SPRINT 3

- Abans d'executar aquests canvis i per seguretat faré una còpia de la base de dades (transaction copia)



- Creo el codi per a dur a terme cada canvi.
- Faré primer els canvis de les columnes i després els de relacions

COMPANY

- Eliminar website

```
ALTER TABLE company  
DROP COLUMN website;
```

USER

- Canviar nom de la taula
user > data_user
- Canviar nom email >
personal_email

```
ALTER TABLE user  
RENAME TO data_user;
```

```
ALTER TABLE data_user  
CHANGE COLUMN email personal_email VARCHAR(150);
```

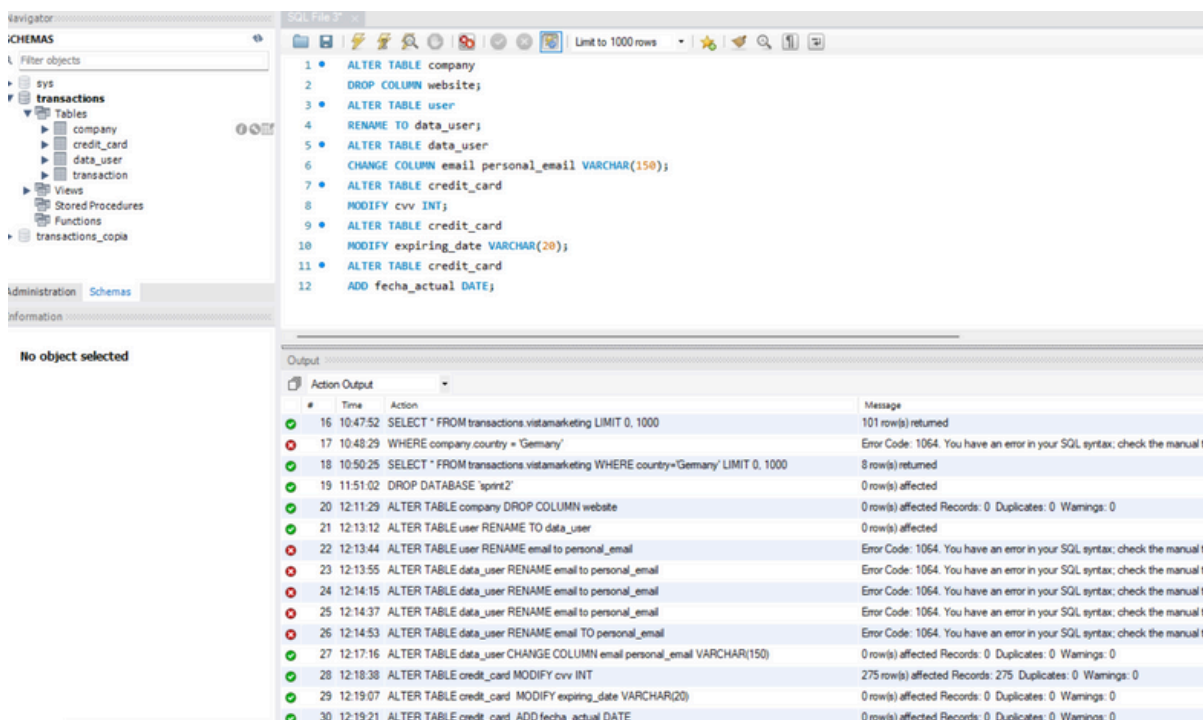
CREDIT CARD

- cvv de VARCHAR a INT
- expiring_date de
VARCHAR 10 a 20
- afegir fecha_actual
DATE

```
ALTER TABLE credit_card  
MODIFY cvv INT;
```

```
ALTER TABLE credit_card  
MODIFY expiring_date VARCHAR(20);
```

```
ALTER TABLE credit_card  
ADD fecha_actual DATE;
```



The screenshot shows a database management interface with a left sidebar for navigation and a main window for SQL queries and results.

Navigation Sidebar:

- Filter objects
- sys
- transactions
 - Tables
 - company
 - credit_card
 - data_user
 - transaction
 - Views
 - Stored Procedures
 - Functions
- transactions_copia
 - Tables
 - Views
 - Stored Procedures
 - Functions

SQL File 3:

```
1 ALTER TABLE company  
2 DROP COLUMN website;  
3 ALTER TABLE user  
4 RENAME TO data_user;  
5 ALTER TABLE data_user  
6 CHANGE COLUMN email personal_email VARCHAR(150);  
7 ALTER TABLE credit_card  
8 MODIFY cvv INT;  
9 ALTER TABLE credit_card  
10 MODIFY expiring_date VARCHAR(20);  
11 ALTER TABLE credit_card  
12 ADD fecha_actual DATE;
```

Output:

#	Time	Action	Message
16	10:47:52	SELECT * FROM transactions.vistamarketing LIMIT 0, 1000	101 row(s) returned
17	10:48:29	WHERE company.country = 'Germany'	Error Code: 1064. You have an error in your SQL syntax; check the manual
18	10:50:25	SELECT * FROM transactions.vistamarketing WHERE country='Germany' LIMIT 0, 1000	8 row(s) returned
19	11:51:02	DROP DATABASE 'sprint2'	0 row(s) affected
20	12:11:29	ALTER TABLE company DROP COLUMN website	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0
21	12:13:12	ALTER TABLE user RENAME TO data_user	0 row(s) affected
22	12:13:44	ALTER TABLE data_user RENAME email to personal_email	Error Code: 1064. You have an error in your SQL syntax; check the manual
23	12:13:55	ALTER TABLE data_user RENAME email to personal_email	Error Code: 1064. You have an error in your SQL syntax; check the manual
24	12:14:15	ALTER TABLE data_user RENAME email to personal_email	Error Code: 1064. You have an error in your SQL syntax; check the manual
25	12:14:37	ALTER TABLE data_user RENAME email to personal_email	Error Code: 1064. You have an error in your SQL syntax; check the manual
26	12:14:53	ALTER TABLE data_user RENAME email to personal_email	Error Code: 1064. You have an error in your SQL syntax; check the manual
27	12:17:16	ALTER TABLE data_user CHANGE COLUMN email personal_email VARCHAR(150)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0
28	12:18:38	ALTER TABLE credit_card MODIFY cvv INT	275 row(s) affected Records: 0 Duplicates: 0 Warnings: 0
29	12:19:07	ALTER TABLE credit_card MODIFY expiring_date VARCHAR(20)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0
30	12:19:21	ALTER TABLE credit_card ADD fecha_actual DATE	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0

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Bàrbara Partegàs

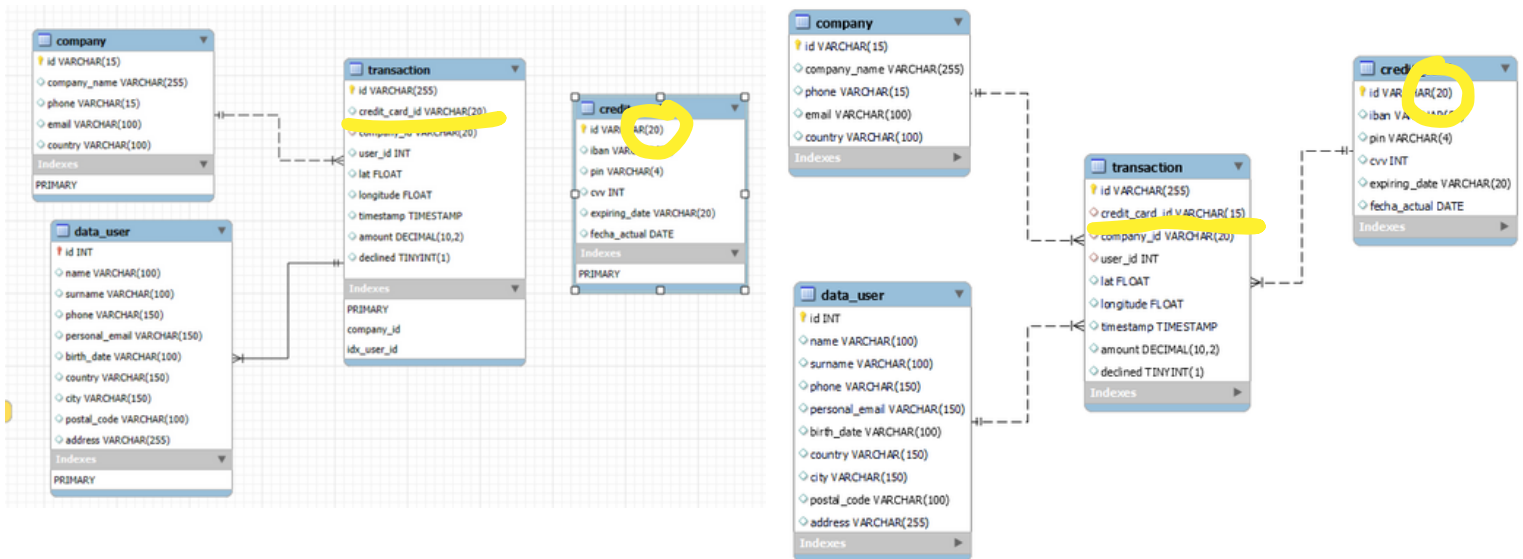
SPRINT 3

- Abans de passar a establir canvis en les relacions, reviso que noms i columnes i característiques han canviat com calia

inicial
(2)



final



- I veig que hauria de canviar credit_card_id a VARCHAR 15, però de fet prefereixo NO FER-HO, ja que hauria de ser igual que id a credit_card i en el cas del model que em dona el company, no ho és. Li ho explicaré. També és millor no intentar canviar cap a més petit. Per tant, deixaré aquesta diferència i explicaré els motius.
- Abans de treballar amb les RELACIONS, consulto les FOREIGN KEYS amb aquests scripts per a cada taula:

```
SELECT table_name, constraint_name, column_name, referenced_table_name,
referenced_column_name
FROM information_schema.key_column_usage
WHERE table_name = 'transaction';
```

TABLE_NAME	CONSTRAINT_NAME	COLUMN_NAME	REFERENCED_TABLE_NAME	REFERENCED_COLUMN_NAME
transaction	PRIMARY	id		
transaction	transaction_ibfk_1	company_id	company	id

TABLE_NAME	CONSTRAINT_NAME	COLUMN_NAME	REFERENCED_TABLE_NAME	REFERENCED_COLUMN_NAME
company	PRIMARY	id		
company	PRIMARY	id		

TABLE_NAME	CONSTRAINT_NAME	COLUMN_NAME	REFERENCED_TABLE_NAME	REFERENCED_COLUMN_NAME
data_user	PRIMARY	id		
data_user	data_user_ibfk_1	id	transaction	user_id

TABLE_NAME	CONSTRAINT_NAME	COLUMN_NAME	REFERENCED_TABLE_NAME	REFERENCED_COLUMN_NAME
credit_card	PRIMARY	id		
credit_card	PRIMARY	id		

Bootcamp Data Analytics

Bàrbara Partegàs

SPRINT 3

- Crear FOREIGN KEYS a credit_card
- Primer comprovo que no hi ha valors trencats.
- En trobo 1
- En aquest cas, em sembla bona idea utilitzar el recurs "placeholder".

```
72 • SELECT DISTINCT credit_card_id
73 FROM transaction t
74 LEFT JOIN credit_card c ON t.credit_card_id = c.id
75 WHERE c.id IS NULL AND t.credit_card_id IS NOT NULL;
76
77 • INSERT INTO credit_card (id, iban, pin, cvv, expiring_date, fecha_actual)
78 VALUES ('CcU-9999', 'IBAN_PLACEHOLDER', '0000', 999, '2099-12-31', CURDATE());
```

Output

#	Time	Action	Message
✓ 19	12:13:00	SELECT t.* FROM transaction t LEFT JOIN data_user u ON t.user_id = u.id WHERE u.id IS NULL A...	587 row(s) returned
✓ 20	12:15:15	SELECT DISTINCT user_id FROM transaction WHERE user_id NOT IN (SELECT id FROM data_us...	217 row(s) returned
✓ 21	12:18:12	SHOW CREATE TABLE transaction	1 row(s) returned
✓ 22	12:24:05	SELECT DISTINCT credit_card_id FROM transaction t LEFT JOIN credit_card c ON t.credit_card_id ...	1 row(s) returned
✓ 23	12:27:39	INSERT INTO credit_card (id, iban, pin, cvv, expiring_date, fecha_actual) VALUES ('CcU-9999', 'IBA...	1 row(s) affected

- Ara tindrem un valor "CcU-9999" amb valors ficticis" però vàlids.
- I ja puc establir FOREIGN KEY

```
80 • ALTER TABLE transaction
81 ADD CONSTRAINT fk_transaction_credit_card
82 FOREIGN KEY (credit_card_id)
83 REFERENCES credit_card(id)
84 ON DELETE SET NULL
85 ON UPDATE CASCADE;
```

Output

#	Time	Action	Message
✓ 22	12:24:05	SELECT DISTINCT credit_card_id FROM transaction t LEFT JOIN credit_card c ON t.credit_card_id ...	1 row(s) returned
✓ 23	12:27:39	INSERT INTO credit_card (id, iban, pin, cvv, expiring_date, fecha_actual) VALUES ('CcU-9999', 'IBA...	1 row(s) affected
✓ 24	12:28:30	ALTER TABLE transaction ADD CONSTRAINT fk_transaction_credit_card FOREIGN KEY (credit_c...	587 row(s) affected Records: 587 Duplicates: 0 Warnings: 0

- En el cas de company, no hi ha valors trencats i per tant, puc establir la FK

```
87 • SELECT DISTINCT company_id
88 FROM transaction t
89 LEFT JOIN company c ON t.company_id = c.id
90 WHERE c.id IS NULL AND t.company_id IS NOT NULL;
91
92 • ALTER TABLE transaction
93 ADD CONSTRAINT fk_transaction_company
94 FOREIGN KEY (company_id)
95 REFERENCES company(id)
96 ON DELETE SET NULL
97 ON UPDATE CASCADE;
```

Output

#	Time	Action	Message
✓ 24	12:28:30	ALTER TABLE transaction ADD CONSTRAINT fk_transaction_credit_card FOREIGN KEY (credit_c...	587 row(s) affected Records: 587 Duplicates: 0 Warnings: 0
✓ 25	12:32:36	SELECT DISTINCT company_id FROM transaction t LEFT JOIN company c ON t.company_id = c.id ...	0 row(s) returned
✓ 26	12:32:57	ALTER TABLE transaction ADD CONSTRAINT fk_transaction_company FOREIGN KEY (company_j...	587 row(s) affected Records: 587 Duplicates: 0 Warnings: 0

Bootcamp Data Analytics

Bàrbara Partegàs

SPRINT 3

- En el cas de data_user trobo que hi ha 217 valors trencats, i no sé com seguir.
- Torno a posar els diagrames. Em surten 2 línies de FK entre company i transaction. N'elimino una.

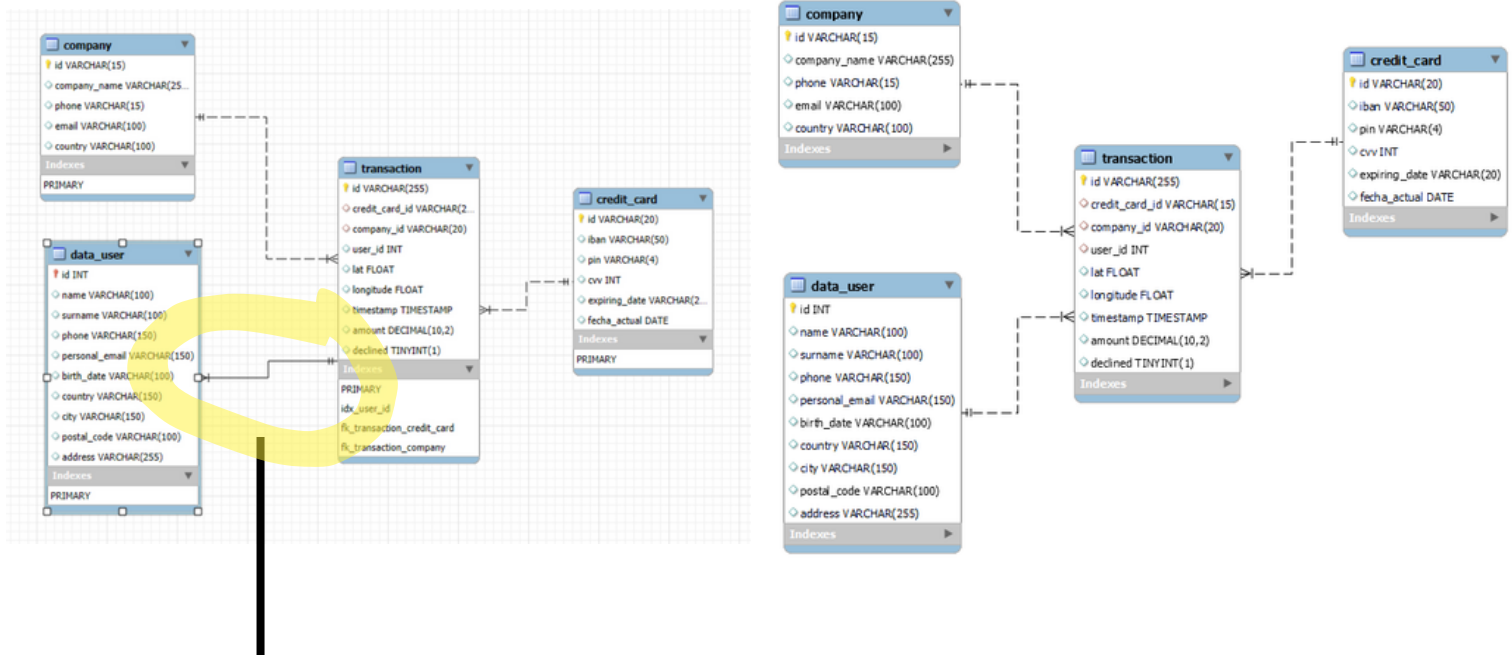
```
100 • SELECT CONSTRAINT_NAME, TABLE_NAME, COLUMN_NAME, REFERENCED_TABLE_NAME, REFERENCED_
101       FROM information_schema.KEY_COLUMN_USAGE
102       WHERE TABLE_NAME = 'transaction'
103       AND REFERENCED_TABLE_NAME = 'company';
104
105 • ALTER TABLE transaction
106       DROP FOREIGN KEY transaction_ibfk_1;
```

CONSTRAINT_NAME	TABLE_NAME	COLUMN_NAME	REFERENCED_TABLE_NAME	REFERENCED_COLUMN_NAME
fk_transaction_company	transaction	company_id	company	id
transaction_ibfk_1	transaction	company_id	company	id

resultat meu (3)



final



Em faltaria solucionar tema dels valors trencats de user per arreglar la relació transaction-user amb la FK.
(vull entregar l'Sprint 3 així de moment, potser més endavant torno a donar-li voltes i ho torno a presentar)