

SPRINT 3

NIVELL 1

EXERCICI 1: CREACIÓ DE LA TAULA I CARREGA DE DADES

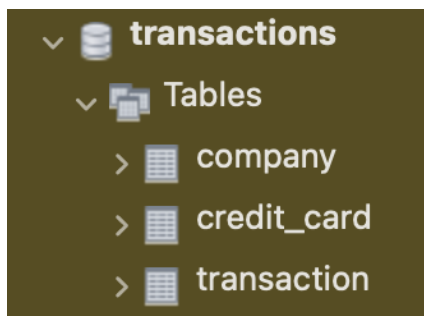
```
1 • USE transactions;
2 -- Creamos la tabla credit_card
3 • CREATE TABLE IF NOT EXISTS credit_card(
4     id VARCHAR(15) PRIMARY KEY,
5     iban VARCHAR(50),
6     pan VARCHAR(25),
7     pin VARCHAR(4),
8     cvv INT,
9     expiring_date VARCHAR(25)
10 );
```

100% 3:10

Apply Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
100087	11:58:54	CREATE TABLE IF NOT EXISTS credit_card(id VARCHAR(15) PRIMARY KEY, iban VARCHAR(50), pan VARCHAR(25), pin...	0 row(s) affected	0.0098 sec



IMPORTANT: Perquè hem creat cvv com a tipus INT? Més endavant en el exercici 3 ens demanaran aconseguir un diagrama objectiu de relació de taules. A més, ens demanaran afegir informació i nous registres per desenvolupar l'exercici, llavors no hem afegit NOT NULL. D'aquesta forma, durant aquest sprint evitem problemes relacionals entre taules.

Don't Limit

```
4973 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9553', 'XX89710088228491001466600', '6132314248329652', '4878', '969', '05
4974 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9554', 'XX366231785108694001180034', '7286190003946581', '4956', '455', '0
4975 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9555', 'XX35148493822666549409840', '9845506307968068', '3716', '722', '12
4976 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9556', 'XX506597154102777286379842', '0969864428658706', '6815', '244', '1
4977 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9557', 'XX367047365382331461740598', '9738640999130600', '8965', '342', '0
4978 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9558', 'XX903176610998317940719617', '9605955439619330', '3479', '749', '1
4979 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9559', 'XX928088270276443278028612', '2920048483121919', '7803', '459', '1
4980 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9560', 'XX335261985101999024420526', '3084508088432594', '9258', '689', '0
4981 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9561', 'XX842287760526866727040752', '5247195334352545', '4956', '326', '1
4982 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9562', 'XX639604292186089282464578', '6116239298415107', '8566', '201', '0
4983 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9563', 'XX392846417866192835897237', '2373131904258200', '5044', '675', '0
4984 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9564', 'XX641179722562813208059896', '3101008088023097', '1822', '746', '0
4985 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9565', 'XX642860021926055745163758', '5522454509376387', '3053', '879', '0
4986 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9566', 'XX327046332926811278055630', '6161849983263025', '6889', '278', '0
4987 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9567', 'XX856381783872538683280064', '0745947204130257', '4955', '190', '0
4988 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9568', 'XX386536547822381431747659', '2296680186377148', '8326', '522', '0
4989 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9569', 'XX305272728964047897361563', '0734570924276822', '6083', '424', '0
4990 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9570', 'XX633942010258286181516573', '7233675965034598', '5619', '285', '0
4991 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9571', 'XX484915382437141996579468', '1265066247957405', '6585', '104', '1
4992 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9572', 'XX405448186269730388404508', '8296622848225053', '1995', '220', '0
4993 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9573', 'XX965338931053088901924906', '9099040179637171', '2277', '224', '0
4994 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9574', 'XX662761758361432686520775', '3171178331318656', '5084', '706', '1
4995 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9575', 'XX499881216073626571196473', '8086833007377786', '7256', '660', '1
4996 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9576', 'XX52971093058771264172007', '4554226978064107', '4884', '724', '0
4997 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9577', 'XX158914078594808633147086', '8110437271856107', '5864', '772', '1
4998 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9578', 'XX991539646456110567870254', '8999808823061411', '2872', '772', '0
4999 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9579', 'XX296393091587170202131236', '9690060468678689', '8379', '134', '1
5000 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9580', 'XX781258889851950806677358', '5541182364498931', '9273', '737', '0
5001 INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9581', 'XX915670516405388124390147', '2624305470167630', '4336', '926', '0
5002
```

100% 1:5002

Action Output

	Time	Action	Response	Duration / Fetch Time
105087	12:10:09	INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9578', 'XX991539646456110567870254', '8999...	1 row(s) affected	0.00016 sec
105088	12:10:09	INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9579', 'XX296393091587170202131236', '9690...	1 row(s) affected	0.00014 sec
105089	12:10:09	INSERT INTO credit_card (id, iban, pan, pin, cvv, expiring_date) VALUES ('CcS-9580', 'XX781258889851950806677358', '5541...	1 row(s) affected	0.00014 sec

1 SELECT * FROM transactions.credit_card;

100% 1:1

Result Grid

id	iban	pan	pin	cvv	expiring_date
CcS-4858	XX8581768137002436094025	6982720299715533	3964	817	12/28/28
CcS-4859	XX7826930491423553909370	8861684536289642	4983	277	11/26/26
CcS-4860	XX5595930368833304845299	2481155515498459	6876	661	07/27/27
CcS-4861	XX2035182677195191627007	1308933031149597	5710	308	04/25/28
CcS-4862	XX474721462463645409758	8713617009807829	4042	174	11/27/28
CcS-4863	XX1476829664245046207111	31402679819451394	5969	449	12/27/29
CcS-4864	XX8380298893385731196159	5783672133649114	8481	139	02/28/26
CcS-4865	XX7085078596101025280599	5101552687251312	7847	903	11/25/28
CcS-4866	XX4792859188206596406839	8080768801072613	9271	961	02/28/25
CcS-4867	XX6038298816319374853717	7761849537661098	4820	862	11/30/25
CcS-4868	XX3929101617300533368044	4160419663151801	6880	540	08/25/25
CcS-4869	XX1566712066111831886465	2829300716233310	4775	448	09/29/25

credit_card 1

Action Output

	Time	Action	Response	Duration / Fetch Time
105091	12:10:38	SELECT * FROM transactions.credit_card	5000 row(s) returned	0.0015 sec / 0.0066...
105092	12:12:01	SELECT * FROM transactions.credit_card	5000 row(s) returned	0.0016 sec / 0.0066...

Establím la relació entre taules:

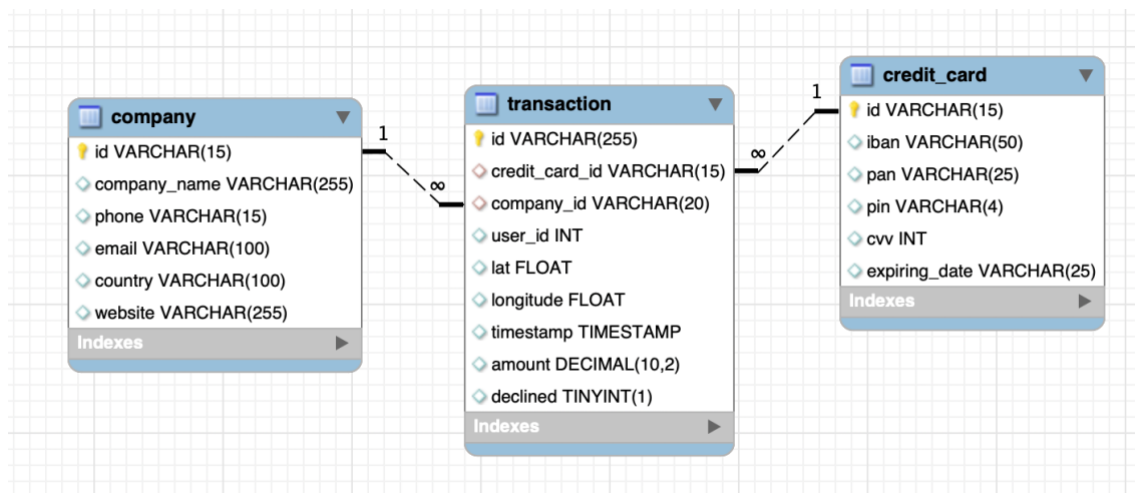
```
12 • ALTER TABLE transaction
13 ADD CONSTRAINT fk_transaction_credit_card
14 FOREIGN KEY (credit_card_id) REFERENCES credit_card(id);
```

160% 57:14

Apply Revert

	Time	Action	Response	Duration / Fetch Time
105092	12:12:01	SELECT * FROM transactions.credit_card	5000 row(s) returned	0.0016 sec / 0.0066
105093	12:28:15	ALTER TABLE transaction ADD CONSTRAINT fk_transaction_credit_card FOREIGN KEY (credit_card_id) REFERENCES credit_card(id);	100000 row(s) affected Records: 100000 Duplic...	1.509 sec

I aquest és el nostre diagrama fins ara:



EXERCICI 2: CANVIA LA TRANSACCIÓ DE CcU-2938

Prèviament, aquest era el resultat d'aquesta query:

```
SELECT *
FROM credit_card
WHERE id='CcU-2938';
```

```

22 -----
23 -- La targeta de crèdit CcU-2938 ha de mostrar com a número de compte: TR323456312213576817699999
24 -----
25 • SELECT *
26 FROM credit_card cc
27 WHERE cc.id='CcU-2938';
28
29 • UPDATE credit_card cc
30 SET cc.iban='TR323456312213576817699999'
31 WHERE cc.id='CcU-2938';

```

24:27

Result Grid

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

credit_card 8 credit_card 9 Apply Revert

Action Output

Time	Action	Response	Duration / Fetch Time
105104 12:54:05	UPDATE credit_card cc SET cc.iban='TR323456312213576817699999' WHERE cc.id='CcU-2938'	1 row(s) affected Rows matched: 1 Changed: 1...	0.013 sec
105105 12:54:25	SELECT * FROM credit_card cc WHERE cc.id='CcU-2938'	1 row(s) returned	0.0010 sec / 0.00003...

Després d'executar el UPDATE si busquem de nou els registres coincidents, en efecte, veiem el canvi:

```

22 -----
23 -- La targeta de crèdit CcU-2938 ha de mostrar com a número de compte: TR323456312213576817699999
24 -----
25 • SELECT *
26 FROM credit_card cc
27 WHERE cc.id='CcU-2938';
28
29 • UPDATE credit_card cc
30 SET cc.iban='TR323456312213576817699999'
31 WHERE cc.id='CcU-2938';

```

24:27

Result Grid

id	iban	pan	pin	cvv	expiring_date
CcU-2938	TR323456312213576817699999	5424465566813633	3257	984	10/30/22
NULL	NULL	NULL	NULL	NULL	NULL

credit_card 8 credit_card 9 Apply Revert

Action Output

Time	Action	Response	Duration / Fetch Time
105104 12:54:05	UPDATE credit_card cc SET cc.iban='TR323456312213576817699999' WHERE cc.id='CcU-2938'	1 row(s) affected Rows matched: 1 Changed: 1...	0.013 sec
105105 12:54:25	SELECT * FROM credit_card cc WHERE cc.id='CcU-2938'	1 row(s) returned	0.0010 sec / 0.00003...

IMPORTANT: A l'hora de corregir he tret els àlies, aquí no feien falta

```

25 • UPDATE credit_card
26 SET iban='TR323456312213576817699999'
27 WHERE id='CcU-2938';

```

EXERCICI 3: INGRESA UNA NOVA TRANSACCIÓ

En el següent exercici, ens demanen afegir una nova transacció. Primer, afegim el credit_card_id ('CcU-9999') i el company_id ('b-9999') en la taules pare com nous id. Sino saltará un error com:

“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`))”.

PD: Com no hem afegit res més en la resta de d'atributs en la taula pare, aquests quedaran com nulls com figura en la següent captura de pantalla:

The screenshot shows a database interface with a 'Result Grid' at the top displaying data for a table with columns: id, iban, pan, pin, cvv, and expiring_date. The first row shows 'CcU-9999' for id and 'NULL' for the other fields. Below the grid, the 'Action Output' section shows the execution of three SQL statements:

```

30 -- En la taula "transaction" ingressa una nova transacció amb nova informació:
31
32 INSERT INTO credit_card(id)
33 VALUES('CcU-9999');
34
35 INSERT INTO company(id)
36 VALUES('b-9999');
37
38 INSERT INTO transaction(id, credit_card_id, company_id, user_id, lat, longitude, amount, declined)
39 VALUES('108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999', 'b-9999', '9999', '829.999', '-117.999', '111.11', '0');
40

```

The 'Action Output' table shows the following results:

Time	Action	Response	Duration / Fetch Time
10:51:12	SELECT * FROM transactions.company	100 row(s) returned	0.0009 sec / 0.0000 sec
10:51:13	INSERT INTO company(id) VALUES('b-9999')	1 row(s) affected	0.0060 sec
10:51:14	INSERT INTO transaction(id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) VALUES('108B1D1D-5B23-A...	1 row(s) affected	0.0028 sec

EXERCICI 4:

The screenshot shows a database interface with a 'Result Grid' at the top displaying data for a table with columns: id, iban, pin, cvv, and expiring_date. The first row shows 'CcS-4857' for id and 'XX4857591835292505850771' for iban. Below the grid, the 'Action Output' section shows the execution of three SQL statements:

```

41 -- Eliminar la columna "pan" de la taula credit_card
42
43
44 ALTER TABLE credit_card
45 DROP pan;
46
47 SELECT *
48 FROM credit_card;

```

The 'Action Output' table shows the following results:

Time	Action	Response	Duration / Fetch Time
10:51:14	INSERT INTO transaction(id, credit_card_id, company_id, user_id, lat, longitude, amount, declined) VALUES('108B1D1D-5B23-A...	1 row(s) affected	0.0028 sec
10:51:15	ALTER TABLE credit_card DROP pan	0 row(s) affected Records: 0 Duplicates: 0 Warn...	0.181 sec
10:51:16	SELECT * FROM credit_card	5001 row(s) returned	0.036 sec / 0.0064 sec

ALTER TABLE... DROP... funciona però es millor utilitzar:

```

44 ALTER TABLE credit_card
45 DROP COLUMN pan;

```

NIVELL 2

EXERCICI 1:


```

50
51 -- Nivell 2: Elimina de la taula transaction el registre amb ID 000447FE-B650-4DCF-85DE-C7ED0EE1CAAD.
52
53 DELETE
54 FROM transaction
55 WHERE id='000447FE-B650-4DCF-85DE-C7ED0EE1CAAD';

```

49:55

Action Output

	Time	Action	Response	Duration / Fetch Time
105115	14:08:10	ALTER TABLE credit_card DROP pan	0 row(s) affected Records: 0 Duplicates: 0 Warn...	0.161 sec
105116	14:09:09	SELECT * FROM credit_card	5001 row(s) returned	0.036 sec / 0.0064 sec
105117	10:25:08	DELETE FROM transaction WHERE id='000447FE-B650-4DCF-85DE-C7ED0EE1CAAD'	1 row(s) affected	0.089 sec

```

57
58 -- Crea una vista amb: Nom de la companyia, telèfon, país, mitjana de compra per companyia.
59
60 SELECT c.company_name, c.phone, c.country, ROUND(AVG(t.amount), 2) AS avg_purchase
61 FROM transaction t
62 JOIN company c ON t.company_id=c.id
63 WHERE declined=0
64 GROUP BY c.id, c.company_name;
65

```

31:44

Result Grid

company_name	phone	country	avg_purchase
Eget Tincidunt Dui Institute	05 35 93 32 44	Netherlands	254.62
Neque Tellus Imperdiet Corp.	09 15 42 22 11	Ireland	263.66
Fusce Corp.	08 14 97 58 65	United States	265.12
Mus Aenean Eget Foundation	06 25 15 52 43	Sweden	266.00
Aliquam Iaculis Lacus Corp.	04 43 07 91 26	Belgium	260.20
Lorem Ipsum Dolor Corp.	09 03 14 76 02	Sweden	259.17
Amet Luctus Vulputate Foundation	03 18 54 24 19	Canada	258.46
Nulla Integer Vulputate Corp.	04 57 90 84 48	Sweden	262.28
Auctor Mauris Corp.	05 62 87 14 41	Germany	254.68

Result 37

Action Output

	Time	Action	Response	Duration / Fetch Time
10064	13:23:39	SELECT c.company_name, c.phone, c.country, ROUND(AVG(t.amount), 2) AS avg_purchase FROM transaction t JOIN company...	101 row(s) returned	0.316 sec / 0.00033...

Primer, elaborem la consulta i visualitzem haver obtingut el resultat desitjat. Ara ja podem crear la vista.

```

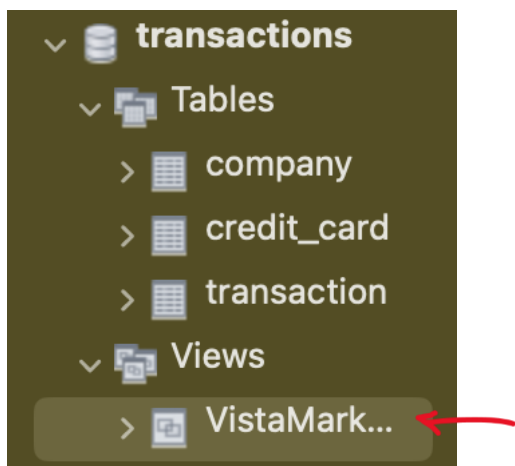
57
58 -- Crea una vista amb: Nom de la companyia, telèfon, país, mitjana de compra per companyia.
59
60 CREATE VIEW VistaMarketing AS
61 SELECT c.company_name, c.phone, c.country, ROUND(AVG(t.amount), 2) AS avg_purchase
62 FROM transaction t
63 JOIN company c ON t.company_id=c.id
64 WHERE declined=0
65 GROUP BY c.id, c.company_name;
66

```

31:45

Action Output

	Time	Action	Response	Duration / Fetch Time
10069	13:32:51	CREATE VIEW VistaMarketing AS SELECT c.company_name, c.phone, c.country, ROUND(AVG(t.amount), 2) AS avg_purchase F...	0 row(s) affected	0.0076 sec



```

67 -----
68 -- Ordena la vista amb les dades de major a menor mitjana de compra.
69 -----
70 SELECT *
71 FROM VistaMarketing
72 ORDER BY avg_purchase DESC;
73

```

company_name	phone	country	avg_purchase
Uma Convallis Associates	06 01 24 77 04	United States	273.57
At Associates	09 56 61 10 65	New Zealand	272.74
Metus Vitae Associates	08 25 44 40 66	Australia	270.05
Aliquet Diam Limited	02 76 61 47 48	United States	269.29
Nec Locust LLC	02 14 71 75 73	Norway	268.60
Neque Tellus Incorporated	04 43 18 34 19	Ireland	267.56
Cras Consulting	07 50 10 85 63	Belgium	267.38
Sed LLC	01 63 16 26 52	Belgium	266.61
Final Inerm Ltd	03 67 44 66 72	United States	266.27

VistaMarketing 38

Time	Action	Response	Duration / Fetch Time
10070 13:34:34	SELECT * FROM VistaMarketing ORDER BY avg_purchase DESC	101 row(s) returned	0.330 sec / 0.00010...

```

74 -----
75 -- Filtra la vista VistaMarketing per a mostrar només les companyies que tenen el seu país de residència en "Germany"
76 -----
77 SELECT *
78 FROM VistaMarketing
79 WHERE country='Germany';
80

```

company_name	phone	country	avg_purchase
Auctor Mauris Corp.	05 62 87 14 41	Germany	254.68
Ac Fermentum Incorporated	06 85 56 52 33	Germany	284.91
Nunc Interdum Incorporated	05 18 15 48 13	Germany	259.32
Aliquam PC	01 45 73 52 16	Germany	252.96
Ac Industries	09 34 05 40 60	Germany	255.17
Convallis In Incorporated	06 66 57 29 50	Germany	257.69
Rutrum Non Inc.	02 66 31 61 09	Germany	255.14
Augue Foundation	08 88 43 15 63	Germany	253.56

VistaMarketing 39

Time	Action	Response	Duration / Fetch Time
10071 13:35:12	SELECT * FROM VistaMarketing WHERE country='Germany'	8 row(s) returned	0.332 sec / 0.000043...

NIVELL 3

EXERCICI 1:

```

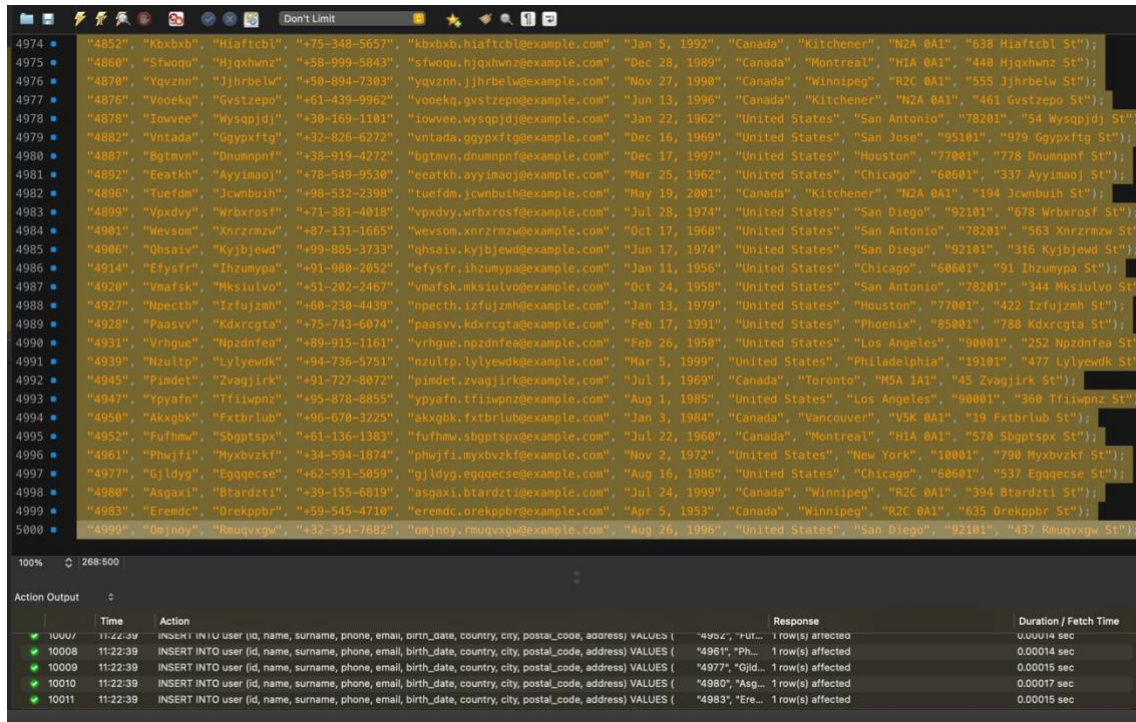
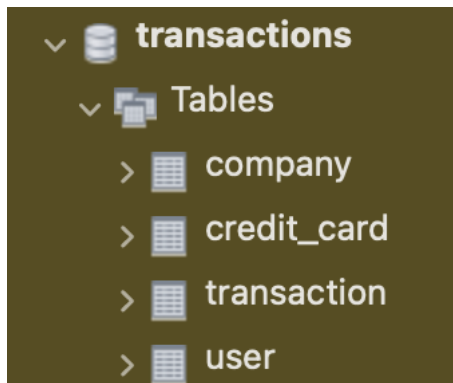
78 -----
79 -- Nivell 3: Deixar els comandos executats per a obtenir el següent diagrama
80 -----
81 CREATE TABLE IF NOT EXISTS user (
82     id CHAR(10) PRIMARY KEY,
83     name VARCHAR(100),
84     surname VARCHAR(100),
85     phone VARCHAR(150),
86     email VARCHAR(150),
87     birth_date VARCHAR(100),
88     country VARCHAR(150),
89     city VARCHAR(150),
90     postal_code VARCHAR(100),
91     address VARCHAR(255)
92 );

```

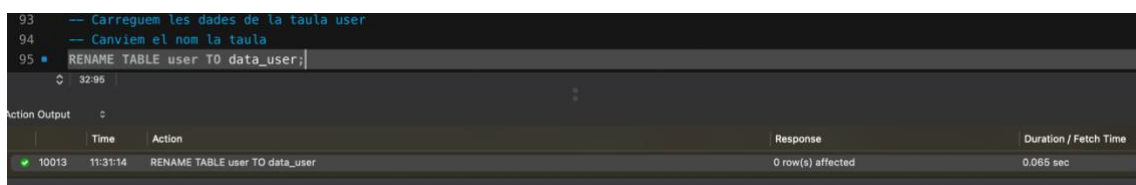
3:92

Time	Action	Response	Duration / Fetch Time
5011 11:21:26	CREATE TABLE IF NOT EXISTS user (id CHAR(10) PRIMARY KEY, name VARCHAR(100), surname VARCHAR(100), phone VAR...	0 row(s) affected	0.018 sec

IMPORTANT: Hem posat aquest límits de caràcters per fer un diagrama idèntic al diagrama objectiu, cal dir que en la pràctica no es efficient utilitzar 150 caràcters per atributs com el telèfon, la data de naixement, codi postal, etc.



En aquest exercici ens demanen obtenir un diagrama concret, doncs canviarem ja el nom de la taula user a data_user abans d'establir les relacions entre taules:



Ara canviem el tipus de atribut del data_user.id per poder establir la relació entre taules. No obstant, obtenim un error → Hi ha almenys 1 valor a la taula de fets (transaction) que no existeix a data_user.


```

93 -- Carreguem les dades de la taula user
94 -- Canviem el nom la taula
95 • RENAME TABLE user TO data_user;
96 -- Canviem el tipus de parametre id
97 • ALTER TABLE data_user
98   MODIFY COLUMN id INT;
99 -- Establim la relació entre la taula pare (User) i filla (Transaction)
100 • ALTER TABLE transaction
101   ADD CONSTRAINT fk_transaction_data_user
102   FOREIGN KEY (user_id) REFERENCES data_user(id);

```

	Time	Action	Response	Duration / Fetch Time
10016	11:41:49	ALTER TABLE data_user MODIFY COLUMN id INT	0000 row(s) affected Records: 0000 Duplicates: 0.124 sec	0.124 sec
10017	11:41:49	ALTER TABLE transaction ADD CONSTRAINT fk_transaction_data_user FOREIGN KEY (user_id) REFERENCES data_user(id)	Error Code: 1452. Cannot add or update a child r...	0.161 sec

Busquem quin o quins són els registres no coincidents:

```

104 • SELECT DISTINCT t.user_id
105   FROM transaction t
106  LEFT JOIN data_user u ON t.user_id = u.id
107 WHERE u.id IS NULL;

```

user_id
9999

	Time	Action	Response	Duration / Fetch Time
10019	11:48:15	SELECT DISTINCT t.user_id FROM transaction t LEFT JOIN data_user u ON t.user_id = u.id WHERE u.id IS NULL	1 row(s) returned	0.158 sec / 0.00026...

És el registre que vam afegir fa poc a la taula transaction, l'afegirem a continuació a la taula data_user. I ara sí, podem veure que la relació s'ha executat i ho revisarem amb el diagrama.

```

78 -----
79 -- Nivell 3: Deixar els comandos executats per a obtenir el següent diagrama
80 -----
81 • CREATE TABLE IF NOT EXISTS user (
82   id CHAR(10) PRIMARY KEY,
83   name VARCHAR(100),
84   surname VARCHAR(100),
85   phone VARCHAR(150),
86   email VARCHAR(150),
87   birth_date VARCHAR(100),
88   country VARCHAR(150),
89   city VARCHAR(150),
90   postal_code VARCHAR(100),
91   address VARCHAR(255)
92 );
93 -- Carreguem les dades de la taula user
94 -- Canviem el nom la taula
95 • RENAME TABLE user TO data_user;
96 -- Canviem el tipus de parametre id
97 • ALTER TABLE data_user
98   MODIFY COLUMN id INT;
99 -- Afegim el id 9999(anteriorment el vam afegir manualment a la taula transaction)
100 • INSERT INTO data_user(id)
101   VALUES ('9999');
102 -- Establim la relació entre la taula pare (User) i filla (Transaction)
103 • ALTER TABLE transaction
104   ADD CONSTRAINT fk_transaction_data_user
105   FOREIGN KEY (user_id) REFERENCES data_user(id);

```

	Time	Action	Response	Duration / Fetch Time
10020	11:53:31	INSERT INTO data_user(id) VALUES ('9999')	1 row(s) affected	0.015 sec
10021	11:53:40	ALTER TABLE transaction ADD CONSTRAINT fk_transaction_data_user FOREIGN KEY (user_id) REFERENCES data_user(id)	100000 row(s) affected Records: 100000 Duplic...	1.874 sec

DIAGRAMES OBJECTIU:

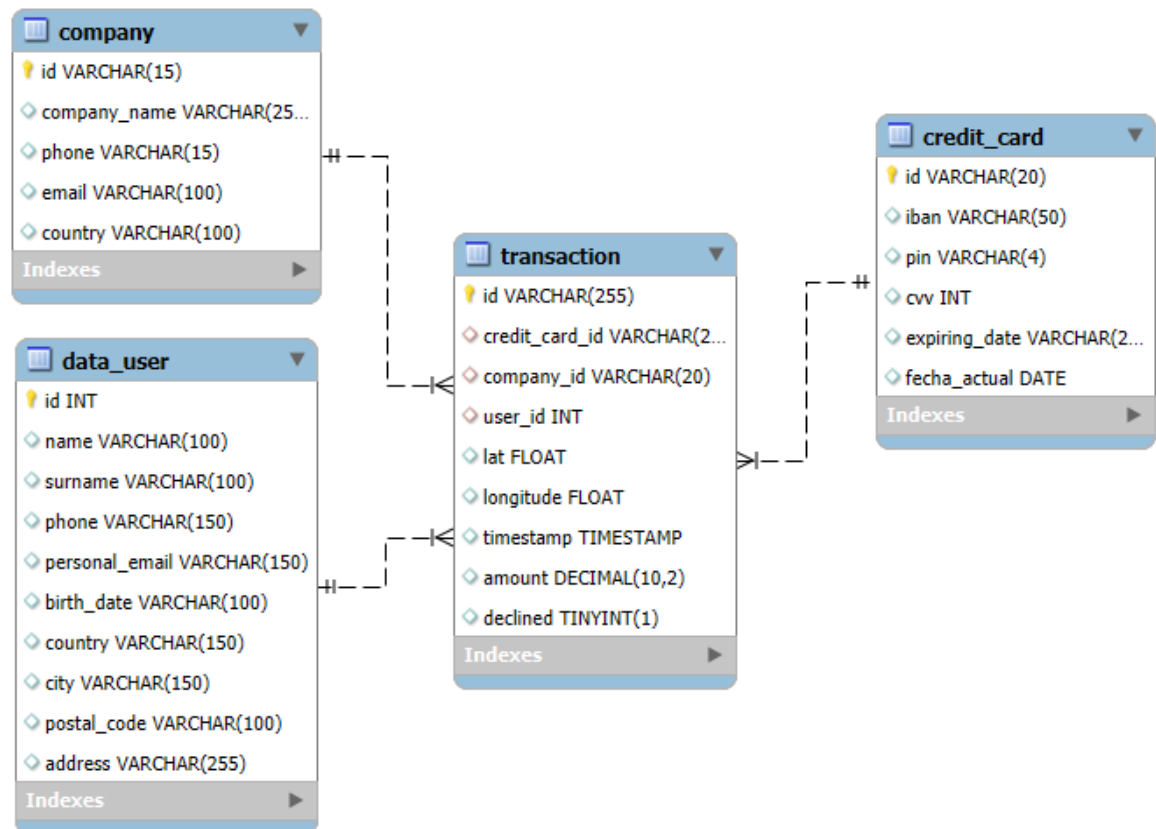
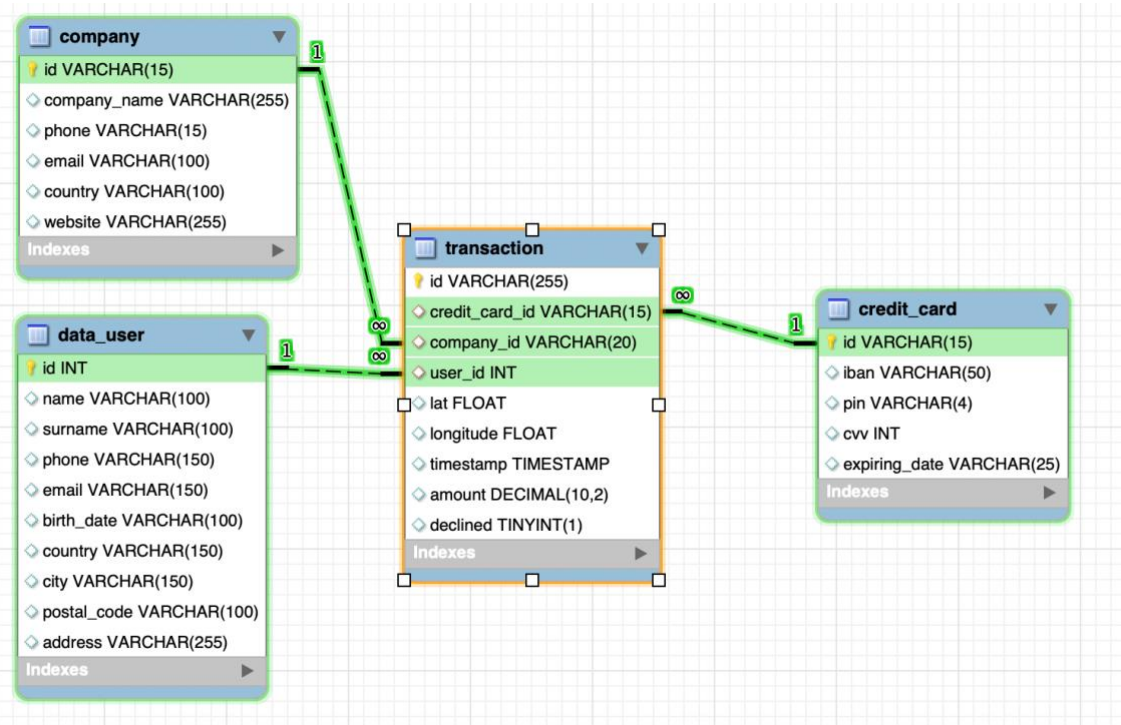


DIAGRAMA ACTUAL:



Observem els següents canvis pendents:

- En el diagrama objectiu no existeix l'atribut company.website
- En el diagrama objectiu si existeix l'atribut expiring_date a credit_card

- El límit de caràcters de VARCHAR de credit_card.id i transaction.
credit_card.id ha de ser de 20
- En el diagrama objectiu l'atribut email s'anomena personal_email.

Doncs farem els següents canvis:

```

109 -- Eliminem la variable website de company
110 ALTER TABLE company
111 DROP COLUMN website;
112
113 SELECT *
114 FROM company;

```

id	company_name	phone	email	country
b-2230	Fusce Corp.	06 14 97 58 85	raus@protonmail.edu	United States
b-2231	Convalis In Incorporated	06 66 57 29 50	mauris.ut@aol.co.uk	Germany
b-2238	Ante Iaculis Nec Foundation	06 23 04 99 53	sed.dictum.proin@outlook.ca	New Zealand
b-2242	Donec Ltd	01 25 51 37 37	at.iaculis@hotmail.co.uk	Norway
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom
b-2250	Amet Nunc Donec Corporation	07 15 25 14 74	matris.integer.eu@protonmail.net	Italy
b-2254	Nascetur Ridiculus Mus Inc.	06 26 87 61 84	suspendisse.dui@icloud.net	United States
b-2258	Vestibulum Lorem PC	02 02 87 33 40	aenean.massa.integer@aol.net	Belgium
b-2262	Ultricies Sarcitis LLP	03 81 28 53 97	turpis.ullam@proton.ca	Switzerland

company 40

Action Output

Time	Action	Response	Duration / Fetch Time
10072 13:41:24	SELECT * FROM company	101 row(s) returned	0.0013 sec / 0.0004...

```

110 SELECT *
111 FROM company;
112 -- Afegim variable fecha_actual
113 ALTER TABLE credit_card
114 ADD COLUMN fecha_actual DATE DEFAULT (CURDATE());
115
116 SELECT *
117 FROM credit_card;

```

id	iban	pin	cvv	expiring_date	fecha_actual
CcS-4857	XX4857591835292505850771	1819	467	09/27/25	2025-11-20
CcS-4858	XX8581768137002436094025	3964	817	12/28/28	2025-11-20
CcS-4859	XX782683049142353609370	4983	277	11/26/26	2025-11-20
CcS-4860	XX58599036883304945299	8878	661	01/27/27	2025-11-20
CcS-4861	XX2035182877195191627307	6710	398	04/25/28	2025-11-20
CcS-4862	XX4774721462463845409758	4042	174	11/27/26	2025-11-20
CcS-4863	XX1476829664245046207111	5969	449	12/27/29	2025-11-20
CcS-4864	XX8380298893385731196159	8481	139	02/28/26	2025-11-20
CcS-4865	XX7085078596101025280599	7847	1903	11/25/28	2025-11-20

credit_card 30

Action Output

Time	Action	Response	Duration / Fetch Time
10053 11:51:53	SELECT * FROM credit_card	5001 row(s) returned	0.0049 sec / 0.0042...

De forma predeterminada s'afegeix la nova columna 'fecha_actual' al final, si haguéssim volgut afegir-la al principi o en una altra posició haver utilitzat FIRST o AFTER en la consulta.

```

118 -- Canviem el límit de caràcters
119 ALTER TABLE transaction
120 MODIFY COLUMN credit_card_id VARCHAR(20);
121
122 ALTER TABLE credit_card
123 MODIFY COLUMN id VARCHAR(20);

```

Action Output

Time	Action	Response	Duration / Fetch Time
10036 13:33:06	ALTER TABLE transaction MODIFY COLUMN credit_card_id VARCHAR(20)	0 row(s) affected Records: 0 Duplicates: 0 Warn...	0.072 sec
10037 13:33:09	ALTER TABLE credit_card MODIFY COLUMN id VARCHAR(20)	0 row(s) affected Records: 0 Duplicates: 0 Warn...	0.013 sec

```

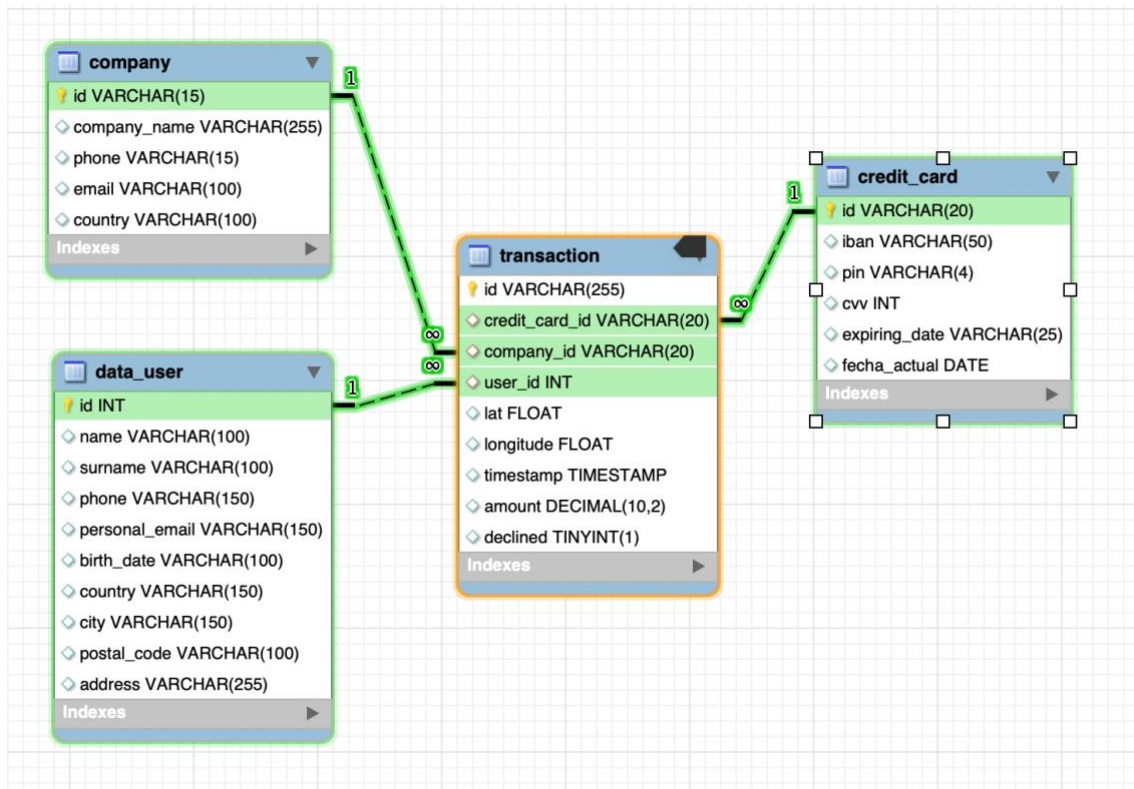
124 -- Canviem el nom de la variable email a personal_email
125 ALTER TABLE data_user
126 RENAME COLUMN email TO personal_email;

```

Action Output

Time	Action	Response	Duration / Fetch Time
10037 13:33:09	ALTER TABLE credit_card MODIFY COLUMN id VARCHAR(20)	0 row(s) affected Records: 0 Duplicates: 0 Warn...	0.013 sec
10038 13:41:35	ALTER TABLE data_user RENAME COLUMN email TO personal_email	0 row(s) affected Records: 0 Duplicates: 0 Warn...	0.093 sec

DIAGRAMA FINAL:



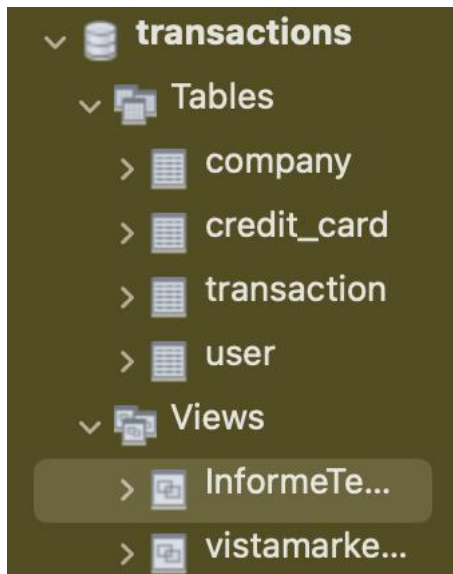
EXERCICI 2:

```

131
132 -- L'empresa també us demana crear una vista anomenada "InformeTecnico" que contingui la següent informació:
133
134 CREATE VIEW InformeTecnico AS
135 SELECT t.id AS transaction_id, u.name AS user_name, u.surname AS user_surname, cc.iban, c.company_name
136 FROM transaction t
137 JOIN data_user u ON t.user_id=u.id
138 JOIN credit_card cc ON t.credit_card_id=cc.id
139 JOIN company c ON t.company_id=c.id;
140

```

Time	Action	Response	Duration / Fetch Time
13:43:06	CREATE VIEW InformeTecnico AS SELECT t.id AS transaction_id, u.name AS user_name, u.surname AS user_surname, cc.iban, c...	0 row(s) affected	0.014 sec



```

137
138 -- Mostra els resultats de la vista i ordena'ls de forma descendent en funció de la variable ID de transacció.
139
140 SELECT *
141 FROM InformeTecnico
142 ORDER BY transaction_id DESC;

```

transaction_id	user_name	user_surname	iban	company_name
FFFD31D6-9495-47CE-B54A-7D8BE1CC274B	Bmrgil	Tprvmrc	XX794814451211289182490922	Turpis Company
FFFCF76D-ECF0-4985-A2DD-B2A7B75998FC	Dfmed	Vlqjdl	XX636251701647892036676034	Amet Nulla Donec Corporation
FFFC9E8D-27C7-4ADE-98F2-7633EF4DF126	Securp	Faotvty	XX162677143304223631437567	Nunc Interdum Incorporated
FFFB270D-F53A-4D9D-9668-E8307C53CC34	Cgqjpa	Urjzjh	XX395114267026019952587052	Viverra Donec Foundation
FFFB3CE-234E-408C-ABEF-F8CAD577224A	Yahmq	Zpejleed	XX8845462156537570367941	Convalis In Incorporated
FFFB9E178-6CD2-4DF9-9990-49AE068809B1	Jevexpx	Xxwczwnm	XX321405515711654384711481	Mus Aenean Eget Foundation
FFFB67C9-17B5-4B1F-AFD9-F8023AAA449E	Fqlngd	Lvhfgysj	XX278446342932680979729426	Cras Vehicula Aliquet Industries
FFF7042D-18C6-4DD0-823C-4D90A4AC8F26	Njoraa	Egsequil	XX405009272572550082027209	Piacerat LLP
FFF660D4-4244-47F6-9210-E5D1DCB99DB0	Loozai	Itanfvav	XX63376659736627454015125	Pede Cum Ltd

InformeTecnico 29

Action Output

Time	Action	Response	Duration / Fetch Time
10050	14:09:55 SELECT * FROM InformeTecnico ORDER BY transaction_id DESC	100000 row(s) returned	0.639 sec / 0.038 sec

Comentaris de millora Peer-to-Peer aplicats:

- Utilitzar DEFAULT (CURDATE()) per complementar al detall l'exercici que implica la creació de la columna 'fecha actual' del nivell 3.
- Per demostrar el coneixement del codi, fer la creació de les vistes en la pròpia consulta en lloc de amb l'eina crear vista.
- ALTER TABLE... DROP COLUMN → afegir COLUMN en la query.
- Treure àlies on son prescindibles.