



## Sprint 4 - Nivel 1

Descarga los archivos CSV, estudiales y diseña una base de datos con un esquema de estrella que contenga, al menos 4 tablas

### Nueva Base de datos:

The screenshot shows the MySQL Workbench interface with the 'user' tab selected. The SQL editor contains the following commands:

```
1 • CREATE SCHEMA `nueva_db`;  
2 • USE nueva_db;  
3
```

The Output window shows the results of the executed commands:

#	Time	Action	Message
✓ 1	11:07:04	CREATE SCHEMA `nueva_db`	1 row(s) affected
✓ 2	11:07:06	USE nueva_db	0 row(s) affected

### Creo la tabla transactions (Fact table)

The screenshot shows the MySQL Workbench interface with the SQL editor containing the following commands:

```
3  
4 • CREATE TABLE IF NOT EXISTS transactions(  
5   id VARCHAR(50) PRIMARY KEY,  
6   card_id VARCHAR(20),  
7   business_id VARCHAR(20),  
8   timestamp TIMESTAMP,  
9   amount DECIMAL(10,2),  
10  declined TINYINT(1),  
11  product_ids VARCHAR(20),  
12  user_id INT,  
13  lat FLOAT,  
14  longitude FLOAT);  
15  
16  
30 • LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/transactions.csv'  
31 INTO TABLE transactions  
32 FIELDS TERMINATED BY ','  
33 LINES TERMINATED BY '\n'  
34 IGNORE 1 ROWS;  
35  
36
```

The Output window shows the results of the executed commands:

#	Time	Action	Message	Duration / Fetch
⚠ 1	11:30:45	CREATE TABLE IF NOT EXISTS transactions(idVARCHAR(50) PRIMARY KEY, card_idV...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future relea...	0.031 sec
⚠ 2	10:12:15	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/transactions.csv' INTO T...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be rem...	
✓ 3	10:12:23	SELECT * FROM nueva_db.transactions LIMIT 0, 1000	588 row(s) returned	

```
1 • SELECT * FROM nueva_db.transactions;
```

Result Grid											
Filter Rows:											
Edit:      Export/Import:     Wrap Cell Content:											
	id	card_id	business_id	timestamp	amount	declined	product_ids	user_id	lat	longitude	
	02C6201E-D90A-1859-B4EE-88D2986D3802	CcU-2938	b-2362	28/08/2021 23:42	466.92	0	71, 1, 19	92	819,184,589,824	-125,275,561,984	
	0466A42E-47CF-8D24-FD01-C0B689713128	CcU-4219	b-2302	26/07/2021 07:29	49.53	0	47, 97, 43	170	-439,694,885,888	-1,175,251,835,904	
	063FBA79-99EC-66FB-29F7-25726D1764A5	CcU-2987	b-2250	06/01/2022 21:25	92.61	0	47, 67, 31, 5	275	-81,222,680,576	-129,049,879,552	
	0668296C-CD89-A883-76BC-2E4C4F8C8AE	CcU-3743	b-2618	26/01/2022 02:07	394.18	0	89, 83, 79	265	-343,593,055,232	-100,555,928,064	
	06CD9AA5-9842-D684-DDDD-A5E394FEB499	CcU-2959	b-2346	26/10/2021 23:00	279.93	0	43, 31	92	337,381,445,632	158,298,210,304	
	07A46D48-31A3-7E87-6589-0DA902AD109F	CcU-3225	b-2386	28/06/2021 21:11	340.87	1	47, 23	272	388,341,526,528	92,190,545,408	
	09DE92CE-6F27-2B87-1385-9385B2B388E2	CcU-3071	b-2298	11/05/2021 20:40	303.05	1	67, 7	275	711,705,612,288	105,756,752,896	
	0A476ED9-0C13-1962-F87B-D3563924B539	CcU-4359	b-2302	26/02/2022 20:33	430.49	0	29, 41, 11	221	-56,490,077,696	1,148,012,315,648	
	08EB80B7-9D66-1707-CE4B-90C7E71914B5	CcU-3141	b-2338	04/03/2022 14:54	288.81	1	19, 41, 29, 3	272	233,264,027,648	-136,036,868,096	
	0C7C3A33-9947-3BC1-846D-7BE3D0D17598	CcU-3309	b-2434	10/04/2021 20:58	103.44	1	89, 31	272	633,614,763,008	-686,666,633,216	
	0CE957A6-CCAA-2B7A-6839-8A4B1B324853	CcU-3435	b-2506	02/02/2022 07:29	428.69	1	83, 43, 73, 61	269	-693,537,422,336	-102,600,429,568	
	0DD2E608-5C9E-D1B3-4999-B99F43AD735A	CcU-2959	b-2234	17/04/2021 05:30	252.47	1	7, 47, 17	275	96,881,091,584	130,282,389,504	
	1017AA59-3D5F-7A4C-1992-D151A8D1FA0A	CcU-3701	b-2618	01/11/2021 01:02	447.11	0	37, 13	267	4,276,451,328	-1,015,540,074,496	

## Creo la tabla companies (Dimension table)

```
37 • CREATE TABLE IF NOT EXISTS companies(
38     company_id VARCHAR(20) PRIMARY KEY,
39     company_name VARCHAR(25),
40     phone VARCHAR(30),
41     email VARCHAR(50),
42     country VARCHAR(50),
43     website VARCHAR(100)
44 );
45
```

Output			
Action Output			
#	Time	Action	Message
1	10:07:04	CREATE TABLE IF NOT EXISTS companies( company_id VARCHAR(20) PRIMARY KEY, compan...	0 row(s) affected

```
35 • LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv'
36 INTO TABLE companies
37 FIELDS TERMINATED BY ','
38 LINES TERMINATED BY '\n'
39 IGNORE 1 ROWS;
40
```

Output			
Action Output			
#	Time	Action	Message
9	10:26:06	SELECT * FROM nueva_db.transactions LIMIT 0, 1000	588 row(s) returned
10	10:26:37	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv' INTO T...	100 row(s) affected, 21 warning(s): 1265 Data truncated for column 'company_name' ...
11	10:26:43	SELECT * FROM nueva_db.companies LIMIT 0, 1000	100 row(s) returned

1 • `SELECT * FROM nueva_db.companies;`

company_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-2226	Magna A Neque Industries	04 14 44 64 62	risus.donec.nibh@icloud.org	Australia	https://whatsapp.com/group/9
b-2230	Fusce Corp.	08 14 97 58 85	risus@protonmail.edu	United States	https://pinterest.com/sub/cars
b-2234	Convallis In Incorporated	06 66 57 29 50	mauris.ut@aol.co.uk	Germany	https://cnn.com/user/110
b-2238	Ante Taculis Nec Foundati	08 23 04 99 53	sed.dictum.proin@outlook.ca	New Zealand	https://netflix.com/settings
b-2242	Donec Ltd	01 25 51 37 37	at.iaaculis@hotmail.co.uk	Norway	https://nytimes.com/user/110
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one
b-2250	Amet Nulla Donec Corporat	07 15 25 14 74	mattis.integer.eu@protonmail.net	Italy	https://netflix.com/sub/cars
b-2254	Nascetur Ridiculus Mus In	06 26 87 61 84	suspendisse.dui@icloud.net	United States	https://ebay.com/sub
b-2258	Vestibulum Lorem PC	02 02 87 33 40	aenean.massa.integer@aol.net	Belgium	https://pinterest.com/sub/cars
b-2262	Gravida Sagittis LLP	03 81 28 33 97	turpis.vitae@google.ca	Sweden	https://naver.com/site
b-2266	Mus Aenean Eget Foundatio	06 25 15 52 43	mi.duis@hotmail.net	Sweden	https://instagram.com/group/9
b-2270	Dis Parturient Institute	05 36 29 78 74	purus@protonmail.org	Ireland	https://google.com/one
b-2274	Sed LLC	01 63 16 26 52	at@outlook.com	Belgium	https://reddit.com/fr
b-2278	Arcu LLP	06 46 04 41 45	dui@aol.ca	Norway	https://yahoo.com/sub
b-2282	Pretium Neque Corp.	07 77 48 55 28	eleifend.nec.malesuada@proton...	Australia	https://netflix.com/sub
b-2286	Fringilla LLC	08 29 15 93 57	gravida@protonmail.co.uk	New Zealand	https://reddit.com/user/110
b-2290	Quisque Libero LLC	01 45 48 71 11	sapien.molestie.orci@hotmail.co.uk	China	https://baidu.com/group/9
b-2294	Auctor Mauris Vel LLP	08 09 28 74 14	nec.tempus@icloud.co.uk	United States	https://instagram.com/fr
b-2298	Elit Etiam Laoreet Associ	07 69 74 17 45	ultrices@google.co.uk	Canada	https://yahoo.com/fr

companies 4 x

Output

Action Output

#	Time	Action	Message
9	10:26:06	SELECT * FROM nueva_db.transactions LIMIT 0, 1000	588 row(s) returned
10	10:26:37	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv' INTO T...	100 row(s) affected, 21 warning(s): 1265 Data truncated for column 'company_name'
11	10:26:43	SELECT * FROM nueva_db.companies LIMIT 0, 1000	100 row(s) returned

## Creo la tabla credit\_cards (Dimension table)

41	-- Tabla credit_card
42	CREATE TABLE IF NOT EXISTS credit_cards (
43	id VARCHAR(20) PRIMARY KEY,
44	user_id INT,
45	Iban VARCHAR(50),
46	pan VARCHAR(50),
47	pin VARCHAR(4),
48	cvv VARCHAR(3),
49	Track1 VARCHAR(100),
50	Track2 VARCHAR(100),
51	expiring_date date
52	);
53	

Output

Action Output

#	Time	Action	Message
1	10:30:37	CREATE TABLE IF NOT EXISTS credit_cards (id VARCHAR(20) PRIMARY KEY, user_id INT, Iban VARCHAR...	0 row(s) affected

54	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/credit_cards.csv'
55	INTO TABLE credit_cards
56	FIELDS TERMINATED BY ','
57	LINES TERMINATED BY '\n'
58	IGNORE 1 ROWS;
59	

Output

Action Output

#	Time	Action	Message
1	10:31:36	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/credit_cards.csv' INTO TA...	275 row(s) affected, 275 warning(s): 1265 Data truncated for column 'expiring_date' at ro...

```
1 • SELECT * FROM nueva_db.credit_cards;
```

Result Grid									
Filter Rows:									
Edit: Export/Import: Wrap Cell Content:									
id	user_id	Iban	pan	pin	cvv	Track1	Track2	expiring_date	
CcU-2938	275	TR301950312213576817638661	5424465566813633	3257	984	%88383712448554646^WovsxexDpwiev^8604...	%87653863056044187=800716333673	0000-00-00	
CcU-2945	274	DO26854763748537475216568689	5142423821948828	9080	887	%84621311609958661^UftuyfsSeimxn^06106...	%84149568437843501=510714033071	0000-00-00	
CcU-2952	273	BG451VQL52710525608255	4556 453 55 5287	4598	438	%82183285104307501^CddytytLxwfdq^5907...	%86778580257827162=6906859740077	0000-00-00	
CcU-2959	272	CR7242477244335841535	372461377349375	3583	667	%87281111956795320^XocddyBckecd^09016...	%84246154489281853=280522391678	0000-00-00	
CcU-2966	271	BG72LKTQ15627628377363	448566 886747 7265	4900	130	%84728932322756223^JhlgvsuFbmwgj^7202...	%82318571115599881=890821578475	0000-00-00	
CcU-2973	270	PT87806228135092429456346	544 58654 54343 384	8760	887	%84761405253275637^HjnnipoBlejrl^7108515...	%87816169831446746=1310277279	0000-00-00	
CcU-2980	269	DE39241881883086277136	402400 7145845969	5075	596	%87320483593870549^OokzqxHpsed^4901...	%82474313962214151=041221913175	0000-00-00	
CcU-2987	268	GE89681434837748781813	3763 747687 76666	2298	797	%84750646345146674^PjmylrfGwwtrf^83051...	%85441935173418615=410370453677	0000-00-00	
CcU-2994	267	BH62714428368066765294	344283273252593	7545	595	%81583759784015674^GmqoyhtUtoqrn^2507...	%84141467473024349=6506800955074	0000-00-00	
CcU-3001	266	CY49087426654774581266832110	511722 924833 2244	9562	867	%86227288756728648^AwxlfcFmgvdy^2808...	%83429355750963453=530526830573	0000-00-00	
CcU-3008	265	LU507216693616119230	4485744464433884	1856	740	%87182449430529226^MkoutyhTfdvpo^1708...	%86235123731781366=940563816678	2004-05-25	
CcU-3015	264	PS119398216295715968342456821	3784 662233 17389	3246	822	%85776250106724742^QvvzkrCwrovrm^530...	%83561372148267521=190547316677	0000-00-00	
CcU-3022	263	GT9169516280556977423121857	5164 1379 4842 3951	5610	342	%88456622214332875^XmwvhenXwoxbt^050...	%87761154174374063=230423342974	0000-00-00	

credit\_cards 1 x

Output

Action Output

#	Time	Action	Message
1	10:31:36	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/credit_cards.csv' INTO T...	275 row(s) affected, 275 warning(s): 1265 Data truncated for column 'expiring_date' at r...
2	10:32:23	SELECT * FROM nueva_db.credit_cards LIMIT 0, 1000	275 row(s) returned

## Creo la tabla products (Dimension table)

60	-- Tabla product
61	• CREATE TABLE IF NOT EXISTS products (
62	id VARCHAR(100) PRIMARY KEY,
63	product_name VARCHAR(50),
64	price DECIMAL(10,2),
65	colour VARCHAR(20),
66	weight DECIMAL(10,2),
67	warehouse_id VARCHAR(20)
68	);
69	

Output

Action Output

#	Time	Action	Message
1	10:34:36	CREATE TABLE IF NOT EXISTS products (id VARCHAR(100) PRIMARY KEY, product_name VARCHAR(50)...	0 row(s) affected

70	• LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/products.csv'
71	INTO TABLE products
72	FIELDS TERMINATED BY ','
73	LINES TERMINATED BY '\n'
74	IGNORE 1 ROWS;
75	

Output

Action Output

#	Time	Action	Message
1	10:35:43	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/products.csv' INTO TABL...	100 row(s) affected, 100 warning(s): 1366 Incorrect decimal value: '\$161.11' for column '...

```
1 • SELECT * FROM nueva_db.products;
```

Result Grid						
Filter Rows: <input type="text"/>						
Edit:    Export/Import:   Wrap Cell Content: <input type="checkbox"/>						
	id	product_name	price	colour	weight	warehouse_id
▶	1	Direwolf Stannis	0.00	#7c7c7c	1.00	WH-4
	10	Karstark Dorne	0.00	#f4f4f4	2.40	WH--5
	100	south duel	0.00	#6d6d6d	3.00	WH--95
	11	Karstark Dorne	0.00	#141414	2.70	WH--6
	12	duel Direwolf	0.00	#a8a8a8	2.10	WH--7
	13	palpatine chewbacca	0.00	#2b2b2b	1.00	WH--8
	14	Direwolf	0.00	#c4c4c4	2.00	WH--9
	15	Stannis warden	0.00	#dbdbdb	1.50	WH--10
	16	the duel warden	0.00	#666666	3.00	WH--11
	17	skywalker ewok sith	0.00	#7c7c7c	3.20	WH--12
	18	Karstark warden	0.00	#c4c4c4	0.80	WH--13
	19	dooku solo	0.00	#3f3f3f	0.60	WH--14
	2	Tarly Stark	0.00	#919191	2.00	WH-3

products 1 x

Output

Action Output

#	Time	Action	Message
1	10:35:43	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/products.csv' INTO TABL...	100 row(s) affected, 100 warning(s): 1366 Incorrect decimal value: '\$161.11' for column ...
2	10:36:20	SELECT * FROM nueva_db.products LIMIT 0, 1000	100 row(s) returned

## Creo la tabla users (Dimension table)

```
79 -- Tabla users
80 • CREATE TABLE IF NOT EXISTS users (
81     id INT PRIMARY KEY,
82     name VARCHAR(50),
83     surname VARCHAR(50),
84     phone VARCHAR(30),
85     email VARCHAR(50),
86     birth_date VARCHAR(30),
87     country VARCHAR(50),
88     city VARCHAR(50),
89     post_code VARCHAR(50),
90     address VARCHAR(50)
91 );
92
93
```

Output			
Action Output			
#	Time	Action	Message
✓ 1	10:38:36	CREATE TABLE IF NOT EXISTS users (id INT PRIMARY KEY, name VARCHAR(50), surname VARCHAR(50)...	0 row(s) affected

```
93 • LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_usa.csv'
94 INTO TABLE users
95 FIELDS TERMINATED BY ','
96 LINES TERMINATED BY '\n'
97 IGNORE 1 ROWS;
98
99 • LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_ca.csv'
100 INTO TABLE users
101 FIELDS TERMINATED BY ','
102 LINES TERMINATED BY '\n'
103 IGNORE 1 ROWS;
104
105 • LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_uk.csv'
106 INTO TABLE users
107 FIELDS TERMINATED BY ','
108 LINES TERMINATED BY '\n'
109 IGNORE 1 ROWS;
```

Output			
Action Output			
#	Time	Action	Message
⚠ 1	10:40:03	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_usa.csv' INTO TAB...	150 row(s) affected, 150 warning(s): 1262 Row 1 was truncated; it contained more data t...
⚠ 2	10:40:45	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_ca.csv' INTO TAB...	75 row(s) affected, 75 warning(s): 1262 Row 1 was truncated; it contained more data tha...
⚠ 3	10:41:19	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_uk.csv' INTO TAB...	50 row(s) affected, 50 warning(s): 1262 Row 1 was truncated; it contained more data tha...



```
1 • SELECT * FROM nueva_db.users;
```

Result Grid										
Filter Rows:										
Edit: Export/Import: Wrap Cell Contents:										
	id	name	surname	phone	email	birth_date	country	city	post_code	address
142	Wyatt	Morris		1-402-317-8621	consequat@google.org	"Oct 11 1992"	United States	Salt Lake ...	37463	
143	Genevi...	Nolan		1-346-724-1579	quis@outlook.com	"Sep 3 1990"	United States	Springfield	37616	
144	Jeanette	Blanchard		1-287-355-3938	amet.dapibus@google.couk	"Jul 6 1996"	United States	San Jose	26707	
145	Ursula	Stewart		1-442-838-6756	commodo.auctor.velit@outlook.ca	"Feb 17 1994"	United States	Lincoln	69791	
146	Priscilla	Slinner		(468) 855-0771	laoreet.lectus@aol.edu	"Jul 31 1980"	United States	Sandy	86701	
147	Brody	Talley		(307) 307-2751	metus.sit.amet@outlook.org	"Jun 13 1991"	United States	Fayetteville	42374	
148	Kerry	Adkins		(528) 872-1974	augue.eu.tempor@idoud.couk	"Mar 13 1983"	United States	Dallas	86373	
149	Brock	Doyle		(265) 140-9567	curtus.a@aol.edu	"Feb 19 1986"	United States	Tuscaloosa	77945	
150	Oleg	Coleman		1-131-139-5673	dis@outlook.edu	"Dec 2 1981"	United States	Indianapolis	28528	
151	Meghan	Hayden		0800 746 6747	arcu.vel@hotmail.ca	"Jul 2 1980"	United Kingdom	Tullbody	A1Y 3TC	
152	Hakeem	Alford		(0111) 367 0184	adipiscing.ligula@google.edu	"Sep 30 1979"	United Kingdom	Kettering	O21 7JV	
153	Keegan	Pugh		(016977) 3851	sodales.nisi@aol.org	"Jul 27 1994"	United Kingdom	Whitehaven	HQ8V ...	
154	Cooper	Bullock		(021) 2521 6627	et@outlook.net	"Nov 2 1986"	United Kingdom	Presteigne	U18 0DN	
155	Joshua	Russell		055 4409 5286	justo.nec.ante@outlook.edu	"Jan 23 1984"	United Kingdom	Hatfield	B5H 5CS	
156	Remedios	Case		055 3114 1566	molis.phasellus.libero@aol.com	"Oct 9 1994"	United Kingdom	North Ber...	QR0 8CW	
157	Philip	Carey		0800 640 6251	phasellus@yahoo.net	"Oct 10 1992"	United Kingdom	Lochgilphed	CE2 6HT	
158	Fatima	Dyer		0800 1111	adipiscing@google.org	"Dec 24 1988"	United Kingdom	Northampton	IL3X 6XD	
159	Kylynn	Acevedo		056 5727 9602	dignissim.lacus.aliquam@google.org	"May 10 2000"	United Kingdom	Pitlochry	K3 8UL	
160	Lael	Moody		07123 850737	nunc.sed@aol.org	"Nov 19 1987"	United Kingdom	Brora	Q87 5JM	
161	Nora	Reeves		(01692) 29410	ac@aol.com	"Dec 24 1989"	United Kingdom	Blaenau Ff...	T37 SPO	

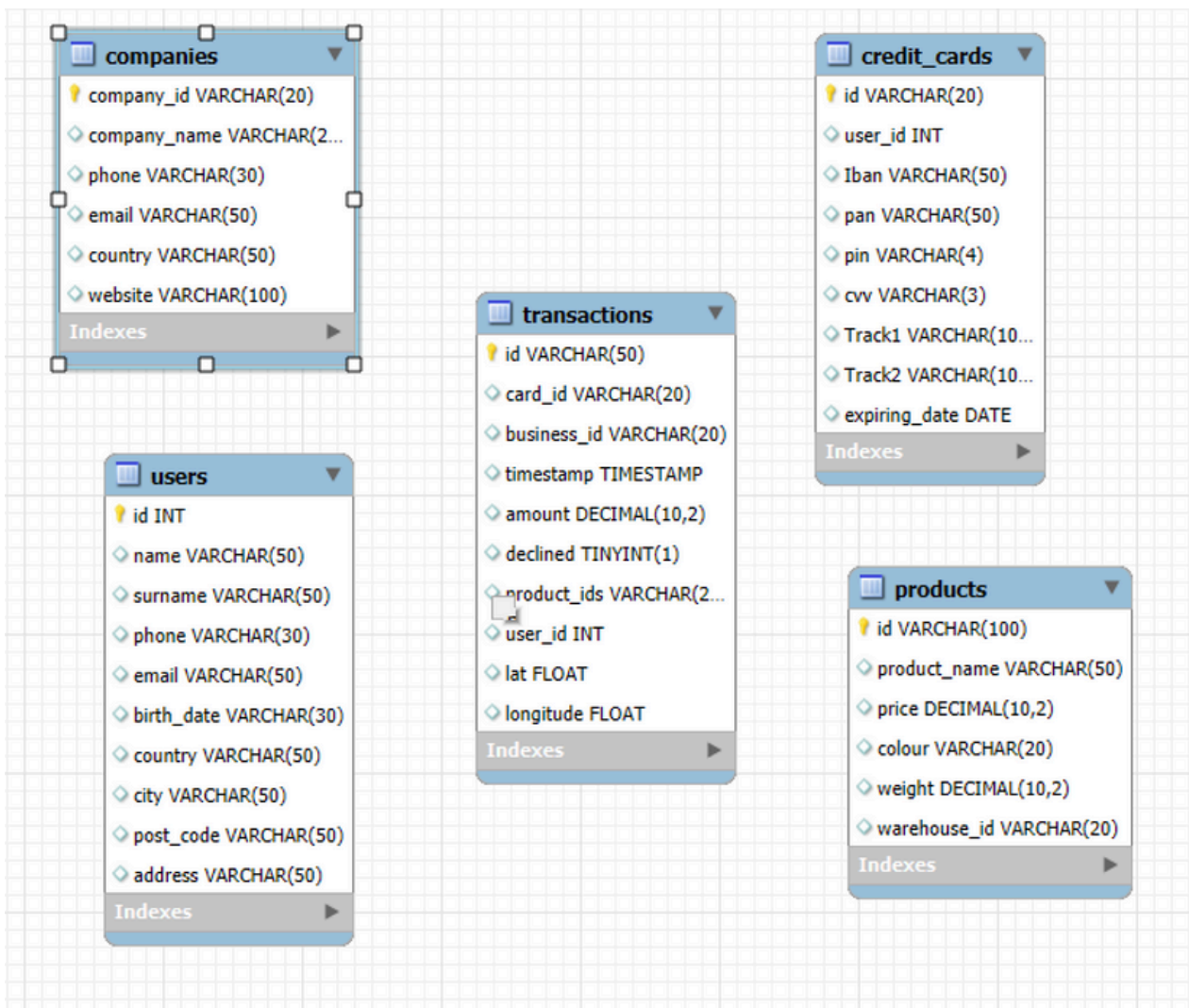
users 1 x

Output

Action Output

#	Time	Action	Message
2	10:40:45	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_ca.csv' INTO TA...	75 row(s) affected, 75 warning(s): 1262 Row 1 was truncated; it contained more data t...
3	10:41:19	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/users_uk.csv' INTO TA...	50 row(s) affected, 50 warning(s): 1262 Row 1 was truncated; it contained more data t...
4	10:42:47	SELECT * FROM nueva_db.users LIMIT 0, 1000	275 row(s) returned

## Tablas cradas sin relaciones



## Creo las Foreign Key para relacionar las tablas

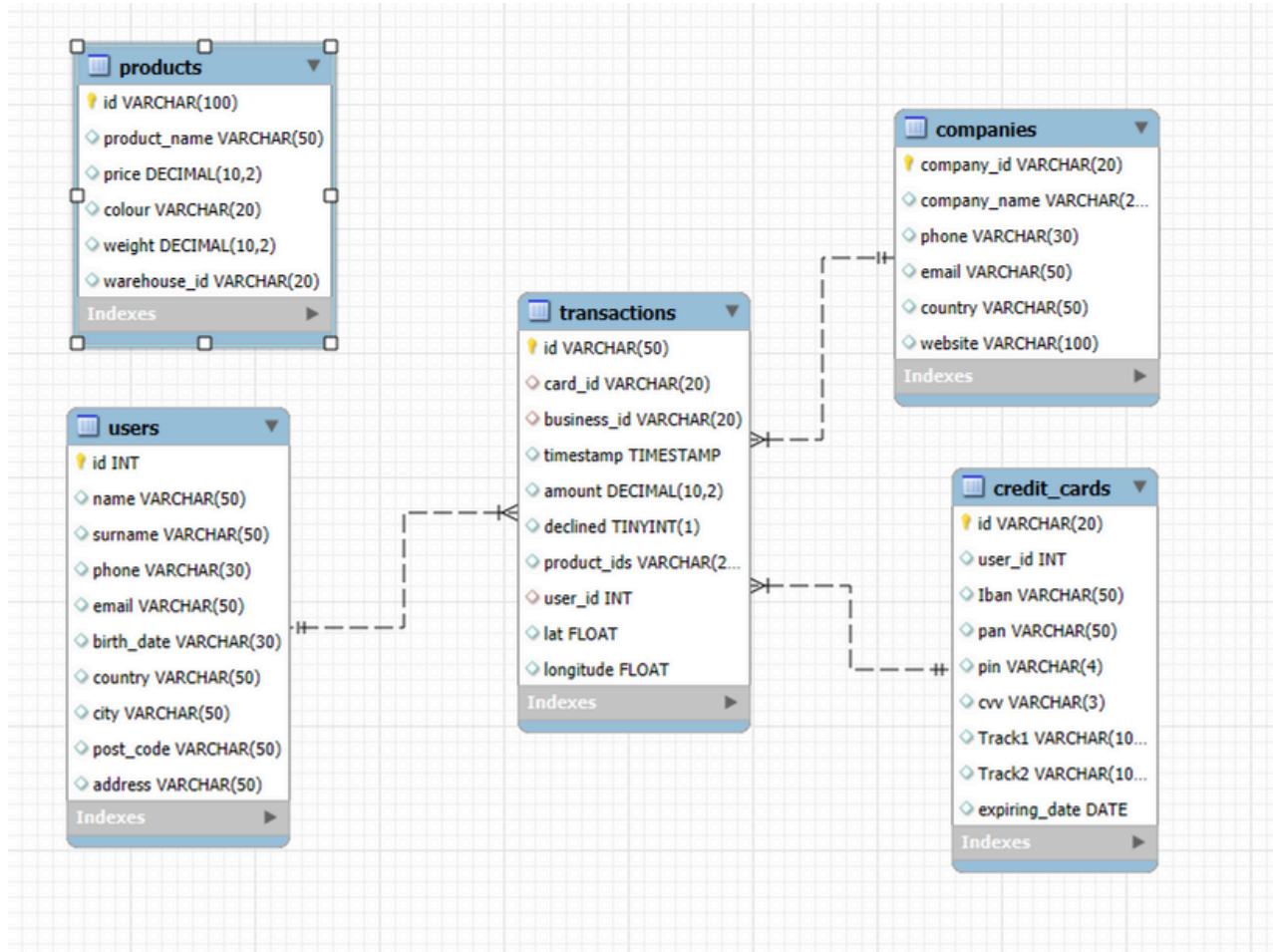
```
111 -- Claves Foraneas
112 • ALTER TABLE transactions
113   ADD CONSTRAINT fk_companies_id
114   FOREIGN KEY (business_id) REFERENCES companies(company_id);
115
116 • ALTER TABLE transactions
117   ADD CONSTRAINT fk_credit_cards_id
118   FOREIGN KEY (card_id) REFERENCES credit_cards(id);
119
```

Output

#	Time	Action	Message	Duration / Fetch
1	12:37:05	ALTER TABLE transactions ADD CONSTRAINT fk_companies_id FOREIGN KEY (business_id) REFERENCE...	587 row(s) affected Records: 587 Duplicates: 0 Warnings: 0	0.109 sec
2	12:37:10	ALTER TABLE transactions ADD CONSTRAINT fk_credit_cards_id FOREIGN KEY (card_id) REFERENCES c...	587 row(s) affected Records: 587 Duplicates: 0 Warnings: 0	0.110 sec

```
120 • ALTER TABLE transactions
121   ADD CONSTRAINT fk_users_id
122   FOREIGN KEY (user_id) REFERENCES users(id);
123
```

**Diagrama luego de las conexiones realizadas (1:N) con la tabla transactions.**  
La tabla products por ahora no se realiza conexion ya que se hará más adelante.



## Ejercicio 1

Realiza una subconsulta que muestre a todos los usuarios con más de 30 transacciones utilizando al menos 2 tablas.

```
124 -- Usuarios con mas de 30 transacciones
125 • SELECT id, name, surname
126 FROM users
127 WHERE id IN (
128     SELECT transactions.user_id
129     FROM transactions
130     GROUP BY transactions.user_id
131     HAVING COUNT(transactions.id) > 30
132 );
133
```

Result Grid			
Filter Rows: <input type="text"/>			
Edit:     Export/Import:   Wrap Cell Content:			
id	name	surname	
NULL	NULL	NULL	

users 13 x			
Output			
Action Output			
#	Time	Action	Message
✓ 1	13:26:53	SELECT id, name, surname FROM users WHERE id IN ( SELECT transactions.user_id FROM transactio...	0 row(s) returned

## Ejercicio 2

Muestra la media de amount por IBAN de las tarjetas de crédito en la compañía Donec Ltd., utiliza por lo menos 2 tablas.

```
142 -- Compania Donec LTD
143 • SELECT cc.Iban, AVG(t.amount) as Media_amount
144 FROM credit_cards cc
145 JOIN transactions t ON cc.id = t.card_id
146 JOIN companies c ON t.business_id = c.company_id
147 WHERE c.company_name = 'Donec Ltd'
148 GROUP BY cc.Iban;
149
```

Result Grid			
Filter Rows: <input type="text"/>			
Export:  Wrap Cell Content:			
Iban	Media_amount		
PT87806228135092429456346	203.715000		

Result 14 x			
Output			
Action Output			
#	Time	Action	Message
✓ 1	10:09:25	SELECT cc.Iban, AVG(t.amount) as Media_amount FROM credit_cards cc JOIN transactions t ON cc.id = t.card_id JOIN companies c ON t.business...	1 row(s) returned





## Sprint 4 - Nivel 2

Crea una nueva tabla que refleje el estado de las tarjetas de crédito basado en si las últimas tres transacciones fueron declinadas y genera la siguiente consulta:

1 - ¿Cuántas tarjetas están activas?

```
5 • CREATE TABLE credit_card_status (  
6     card_id VARCHAR(20) PRIMARY KEY,  
7     active tinyint,  
8     FOREIGN KEY (card_id) REFERENCES credit_cards(id)  
9 );
```

Output

Action Output

#	Time	Action	Message
1	22:06:03	CREATE TABLE credit_card_status ( card_id VARCHAR(20) PRIMARY KEY, active tinyint, FOREIGN KEY (card_id) REFERENCES credit_car...	0 row(s) affected

```
57 • SELECT  
58     cc.id,  
59     CASE  
60     WHEN (SELECT COUNT(*)  
61             FROM transactions t  
62             WHERE t.card_id = cc.id  
63             ORDER BY t.timestamp DESC  
64             LIMIT 3  
65             ) = 3 AND  
66             (SELECT COUNT(*)  
67             FROM transactions t  
68             WHERE t.card_id = cc.id  
69             AND t.declined = 1  
70             ORDER BY t.timestamp DESC  
71             LIMIT 3) = 3  
72     THEN 0  
73     ELSE 1  
74     END AS active  
75 FROM credit_cards cc;
```

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

	id	active
▶	CcU-2938	1
	CcU-2945	1
	CcU-2952	1
	CcU-2959	1
	CcU-2966	1
	CcU-2973	1
	CcU-2980	1

Result 14 x

Output

Action Output

#	Time	Action	Message
1	21:58:37	SELECT cc.id, CASE WHEN (SELECT COUNT(*) FROM transactions t WHERE t.card_id = cc.id ORDER BY t.ti...	275 row(s) returned

```

55 • INSERT INTO credit_card_status (card_id, active)
56 SELECT
57     cc.id,
58     CASE
59         WHEN (SELECT COUNT(*)
60               FROM transactions t
61               WHERE t.card_id = cc.id
62               ORDER BY t.timestamp DESC
63               LIMIT 3
64               ) = 3 AND
65             (SELECT COUNT(*)
66               FROM transactions t
67               WHERE t.card_id = cc.id
68               AND t.declined = 1
69               ORDER BY t.timestamp DESC
70               LIMIT 3) = 3
71         THEN 0
72         ELSE 1
73     END AS active
74 FROM credit_cards cc;

```

Output

Action Output

#	Time	Action	Message
1	22:07:48	INSERT INTO credit_card_status (card_id, active) SELECT cc.id, CASE WHEN (SELECT COUNT(*) FROM transactions t WHERE t.card_id = cc.id ORDER BY t.timestamp DESC LIMIT 3) = 3 AND (SELECT COUNT(*) FROM transactions t WHERE t.card_id = cc.id AND t.declined = 1 ORDER BY t.timestamp DESC LIMIT 3) = 3 THEN 0 ELSE 1 END AS active FROM credit_cards cc;	... 275 row(s) affected Records: 275 Duplicates: 0 Warnings: 0

```

75 • SELECT COUNT(*) as Número_de_Tarjetas_Activas
76 FROM credit_card_status
77 WHERE active = 1;

```

Result Grid

Número_de_Tarjetas_Activas
275

Result 18 x

Output

Action Output

#	Time	Action	Message
1	22:11:36	SELECT COUNT(*) as Número_de_Tarjetas_Activas FROM credit_card_status WHERE active = 1 LIMIT 0, 1000	1 row(s) returned



## Sprint 4 - Nivel 3

Crea una tabla con la que podamos unir los datos del nuevo archivo products.csv con la base de datos creada, teniendo en cuenta que desde transaction tienes product\_ids. Genera la siguiente consulta:

### Ejercicio 1

Necesitamos conocer el número de veces que se ha vendido cada producto.

Para esto necesitamos crear una tabla intermedia con relacion de muchos a muchos

```

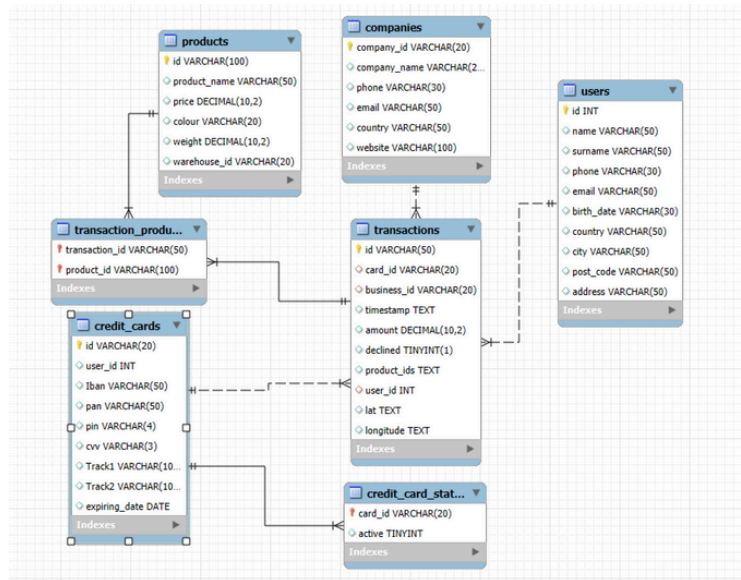
3 • CREATE TABLE transaction_products (
4     transaction_id VARCHAR(50),
5     product_id VARCHAR(100),
6     PRIMARY KEY (transaction_id, product_id),
7     FOREIGN KEY (transaction_id) REFERENCES transactions(id),
8     FOREIGN KEY (product_id) REFERENCES products(id)
9 );

```

Output

Action Output

#	Time	Action	Message
1	13:35:48	CREATE TABLE transaction_products ( transaction_id VARCHAR(50), product_id VARCHAR(100), PRIMARY KEY (transaction_id, product_id), FOREIGN KEY (transaction_id) REFERENCES transactions(id), FOREIGN KEY (product_id) REFERENCES products(id) );	0 row(s) affected



Insertamos los datos en la tabla 'transaction\_products' separando los product\_id que estaban en una misma celda con ','

```

10
11 • INSERT INTO transaction_products (transaction_id, product_id)
12   SELECT t.id as transaction_id, p.id as product_id
13   FROM transactions t
14   JOIN products p ON FIND_IN_SET(CAST(p.id AS CHAR), REPLACE(t.product_ids, ',', '')) > 0;
  
```

Output

#	Time	Action	Message
1	12:15:42	INSERT INTO transaction_products (transaction_id, product_id) SELECT t.id as transaction_id, p.id...	1452 row(s) affected Records: 1452 Duplicates: 0 Warnings: 0

```

16 • SELECT * FROM transaction_products;
17
  
```

Result Grid

transaction_id	product_id
02C620 1E-D90A-1859-B4EE-88D2986D3B02	1
122DC333-E19F-D629-DCD8-9C54CF1EB69A	1
1753A288-9FC1-52B6-5C39-A1FFB9780D3A	1
1A6CECFB-2E3A-65A3-72D9-2FDB58A1E4BA	1
1EA2B262-D507-AD14-4374-4D532967113F	1

transaction\_products 2 x

Output

#	Time	Action	Message
1	12:15:42	INSERT INTO transaction_products (transaction_id, product_id) SELECT t.id as transaction_id, p.i...	1452 row(s) affected Records: 1452 Duplicates: 0 Warnings: 0
2	12:17:07	SELECT * FROM transaction_products LIMIT 0, 1000	1000 row(s) returned

Numero de veces que se ha vendido cada producto

```

19 -- Numero de veces que se ha vendido cada producto
20 • SELECT tp.product_id, p.product_name, COUNT(*) as Ventas_totales
21   FROM transaction_products tp
22   JOIN products p ON tp.product_id = p.id
23   GROUP BY tp.product_id, p.product_name
24   ORDER BY Ventas_totales DESC;
  
```

Result Grid

product_id	product_name	Ventas_totales
23	riverlands north	68
67	Winterfell	68
79	Direwolf riverlands the	66
43	duel	65
2	Tarly Stark	63
47	Tully	62
17	skywalker ewok sith	61
67	San Winterfell	61

Result 4 x

Output

#	Time	Action	Message
1	12:28:27	SELECT tp product_id, p product_name, COUNT(*) as Ventas_totales FROM transaction_products...	26 row(s) returned