

Sprint 1 - Nivel 1

• Ejercicio 1

En el siguiente print de pantalla se encuentra la creacion de la base de datos y sus respectivas tablas.

Script estructura_datos:

The screenshot shows a SQL script in a file named 'estructura_datos'. The script creates a database named 'transactions' and two tables: 'company' and 'transaction'.

```
1 -- Creamos la base de datos
2 CREATE DATABASE IF NOT EXISTS transactions;
3 USE transactions;
4
5 -- Creamos la tabla company
6 CREATE TABLE IF NOT EXISTS company (
7     id VARCHAR(15) PRIMARY KEY,
8     company_name VARCHAR(255),
9     phone VARCHAR(15),
10    email VARCHAR(100),
11    country VARCHAR(100),
12    website VARCHAR(255)
13 );
14
15 -- Creamos la tabla transaction
16 CREATE TABLE IF NOT EXISTS transaction (
17     id VARCHAR(255) PRIMARY KEY,
18     credit_card_id VARCHAR(15) REFERENCES credit_card(id),
19     company_id VARCHAR(20),
20     user_id INT REFERENCES user(id),
21 );
```

The output window shows the execution of the script:

#	Time	Action	Message	Duration / Fetch
1	12:45:49	DROP DATABASE 'world'	3 row(s) affected	0.140 sec
2	12:45:59	DROP DATABASE 'transactions'	2 row(s) affected	0.046 sec
3	12:46:38	CREATE DATABASE IF NOT EXISTS transactions	1 row(s) affected	0.000 sec
4	12:46:38	USE transactions	0 row(s) affected	0.000 sec
5	12:46:38	CREATE TABLE IF NOT EXISTS company (id VARCHAR(15) PRIMARY KEY, compan...	0 row(s) affected	0.031 sec
6	12:46:38	CREATE TABLE IF NOT EXISTS transaction (id VARCHAR(255) PRIMARY KEY, credi...	0 row(s) affected	0.047 sec

Script datos_introducir

The screenshot shows a SQL script in a file named 'datos_introducir'. The script inserts data into the 'transaction' table.

```
1 USE transactions;
2
3 -- Insertamos datos de company
4 INSERT INTO company (id, company_name, phone, email, country, website) VALUES (
5     'b-2222', 'Ac Fermentum Incorporated', '06 85 56 52 33', 'donec.porti
6     'b-2226', 'Magna A Neque Industries', '04 14 44 64 62', 'risus.donec.
7     'b-2230', 'Fusce Corp.', '08 14 97 58 85', 'risus@protonmail.edu', 'l
8     'b-2234', 'Convallis In Incorporated', '06 66 57 29 50', 'mauris.ut@
9     'b-2238', 'Ante Iaculis Nec Foundation', '08 23 04 99 53', 'sed.dicti
10    'b-2242', 'Donec Ltd', '01 25 51 37 37', 'at.iaculis@hotmail.couk', '
11    'b-2246', 'Sed Nunc Ltd', '02 62 64 73 48', 'nibh@yahoo.org', 'Unit
12    'b-2250', 'Amet Nulla Donec Corporation', '07 15 25 14 74', 'mattis.:
13    'b-2254', 'Nascetur Ridiculus Mus Inc.', '06 26 87 61 84', 'suspendi
14    'b-2258', 'Vestibulum Lorem PC', '02 02 87 33 40', 'aenean.massa.inte
15    'b-2262', 'Gravida Sagittis LLP', '03 81 28 33 97', 'turpis.vitae@goc
16    'b-2266', 'Mus Aenean Eget Foundation', '06 25 15 52 43', 'mi.duis@h
17    'b-2270', 'Dis Parturient Institute', '05 36 29 78 74', 'purus@protor
18    'b-2274', 'Sed LLC', '01 63 16 26 52', 'at@outlook.com', 'Belgium', '
19    'b-2278', 'Arcu LLP', '06 46 04 41 45', 'dui@aol.ca', 'Norway', 'htt
20    'b-2282', 'Pretium Neque Corp.', '07 77 48 55 28', 'eleifend.nec.mali
21    'b-2286', 'Fringilla LLC', '08 29 15 93 57', 'gravida@protonmail.cou
22    'b-2290', 'Quisque Libero LLC', '01 45 48 71 11', 'sapien.molestie.or
```

The output window shows the execution of the script:

#	Time	Action	Message	Duration / Fetch
683	12:48:58	INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, am...	1 row(s) affected	0.000 sec
684	12:48:58	INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, am...	1 row(s) affected	0.000 sec
685	12:48:58	INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, am...	1 row(s) affected	0.000 sec
686	12:48:58	INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, am...	1 row(s) affected	0.016 sec
687	12:48:58	INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, am...	1 row(s) affected	0.000 sec
688	12:48:58	INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, timestamp, am...	1 row(s) affected	0.000 sec

Diagrama generado

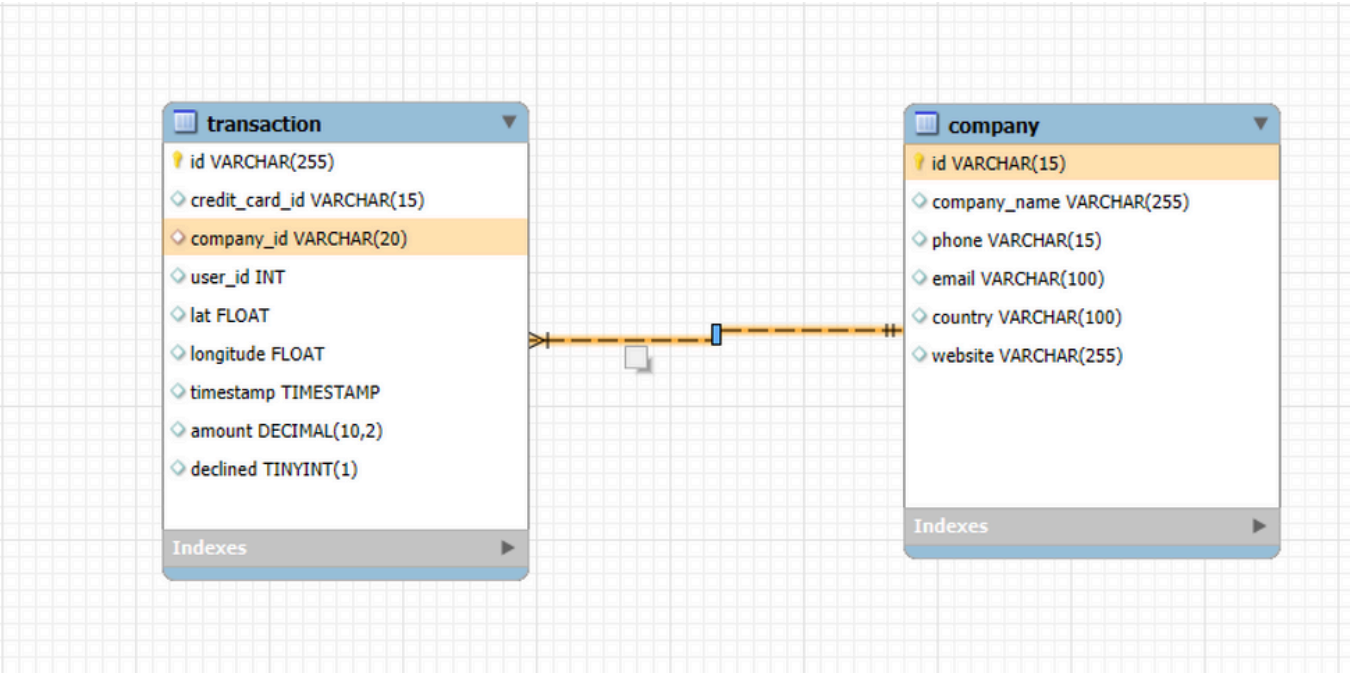


Tabla company:

Columns in table			
Column	Type	Nullable	Indexes
id	varchar(15)	NO	PRIMARY
company_name	varchar(255)	YES	
phone	varchar(15)	YES	
email	varchar(100)	YES	
country	varchar(100)	YES	
website	varchar(255)	YES	

La columna "id" es la primary key de la tabla, permitiendo solo valores unicos y no nulos, ademas es de tipo VARCHAR(255) lo cual acepta hasta 255 caracteres.

Las columnas "credit_card_id" y "company_id" tambien son de tipo VARCHAR(), siendo esta ultima la clave foránea, referenciando la tabla company .

La columna "user_id" es de tipo INT, lo cual acepta solo numeros enteros (sin decimal)

Las columnas "lat" y "longitude" son de tipo float, lo cual aceptan valores con decimales

La columna "timestamp" es de tipo timestamp, lo cual acepta una fecha (año, mes, día) y hora (horas, minutos, segundos)

La columna "amount" es de tipo decimal (10,2), lo cual permite numeros con 10 digitos y hasta 2 decimales.

La columna "declined" es de tipo tinyint(1), ya que se usa para almacenar 0 y 1 como un booleano.

Relacion entre tablas:

Existe una relación uno a muchos (1:N) desde la tabla company a la tabla transaction. La clave foránea "company_id" en la tabla transaction conecta cada transacción con la compañía correspondiente en la tabla company (columna "id"). Esto significa que una compañía puede tener múltiples transacciones asociadas, pero cada transacción pertenece a una única compañía

- **Ejercicio 2** Utilizando JOIN

Listado de los países que están realizando compras:

The screenshot shows a database query interface. The top section contains a SQL query editor with the following text:

```
1 • SELECT DISTINCT country
2 FROM transaction
3 JOIN company
4 ON transaction.company_id = company.id;
5
```

Below the query editor is a toolbar with icons for various database operations. The bottom section displays the results of the query. It includes a 'Result Grid' with a table of countries, an 'Output' section, and an 'Action Output' section.

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

The 'Output' section shows the following message:

```
Result 8 x
```

The 'Action Output' section shows the following message:

```
Output
# Time Action Message
1 09:51:41 SELECT DISTINCT country FROM transaction JOIN company ON transaction.company_id = company.id LIMIT 0, 1000 15 row(s) returned
```

Desde cuántos países se realizan las compras:

```
1 SELECT COUNT(DISTINCT country)
2 FROM transaction
3 JOIN company
4 ON transaction.company_id = company.id;
```

Result Grid

COUNT(DISTINCT country)
15

Result 13 x

Output

Action Output

#	Time	Action	Message
1	10:01:12	SELECT COUNT(DISTINCT country) FROM transaction JOIN company ON transaction.company_id = company.id LIMIT 0, 1000	1 row(s) returned

Identifica a la compañía con la mayor media de ventas:

```
1 SELECT AVG(amount) as Promedio_ventas, company_name
2 FROM transaction
3 JOIN company
4 ON transaction.company_id = company.id
5 GROUP BY company_name
6 ORDER BY Promedio_ventas DESC
7 LIMIT 1;
```

Result Grid

Promedio_ventas	company_name
473.075000	Eget Ipsum Ltd

Result 26 x

Output

Action Output

#	Time	Action	Message
1	10:20:08	SELECT AVG(amount) as Promedio_ventas, company_name FROM transaction JOIN company ON transaction.company_id = company.id GROUP BY company_name ORDER BY Promedio_ventas DESC LIMIT 1;	1 row(s) returned

• Ejercicio 3 (sin utilizar JOIN)

Muestra todas las transacciones realizadas por empresas de Alemania

```

1 SELECT *
2 FROM transaction
3 WHERE company_id IN (
4     SELECT id
5     FROM company
6     WHERE country = "Germany");
7

```

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
1088 ID 1D-5B23-A76C-55EF-C568E49A05DD	CoU-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
EA2C3281-C9C1-A387-44F8-729FB4B51C76	CoU-2938	b-2222	275	20.2004	-116.84	2021-05-09 10:25:08	119.36	1
00D2E608-SC9E-D1B3-4999-699F-43AD735A	CoU-2959	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
AB069F53-965E-A2A8-CE06-CABCFD92501	CoU-2959	b-2234	275	1.64819	-158.007	2021-04-15 13:37:18	60.99	0
0466A42E-47CF-8D24-FD01-C0B689713128	CoU-4219	b-2302	170	-43.9695	-117.525	2021-07-26 07:29:18	49.53	0
0A476ED9-0C13-1962-F87B-D3563924B539	CoU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
122DC333-E19F-D629-D0D8-9C54CF1E889A	CoU-4366	b-2302	221	29.6372	-166.173	2021-06-09 06:04:14	172.01	0
135267BA-2E7D-957C-C42C-6450A2B3ED54	CoU-4520	b-2302	210	20.6724	14.9732	2021-12-29 20:38:23	17.97	0
14CAE585-8FB1-3E4A-4C85-0EA4167534F4	CoU-4849	b-2302	189	-53.6202	93.0533	2021-12-31 00:29:42	388.04	0
158A3ACB-541C-D8CC-65BD-6373CC67BF1C	CoU-4849	b-2302	183	42.5424	-170.347	2022-03-08 05:02:19	240.29	0
162C7E78-2B68-7971-A1E4-D2124E732451	CoU-4527	b-2302	210	-69.1381	58.0017	2021-04-11 05:59:18	231.26	0
1717FD6B-ADAD-7082-A748-9112BE892CCC	CoU-4219	b-2302	172	69.4892	-138.411	2021-12-29 16:18:54	249.91	0
1753A288-9FC1-52E6-5C39-A1FFB97B0D3A	CoU-4345	b-2302	222	57.9422	-114.729	2021-08-17 05:32:08	497.84	0
186F53DE-DE27-81FE-B82F-15B61CEB7726	CoU-4310	b-2302	225	-72.7448	36.6211	2021-12-20 13:13:45	238.16	0
18C4E2D0-1E4C-F35E-2198-C6608D1DC25	CoU-4849	b-2302	177	68.0133	91.4839	2021-09-24 18:55:25	237.04	0
18CBA7C-ABC1-813D-FAF3-4B4897429368	CoU-4219	b-2302	173	51.3881	-156.371	2021-06-21 03:21:34	58.16	0
19E1EC3E-2119-1EFD-BAAE-5930D4A4E63F	CoU-4219	b-2302	154	-56.0839	116.987	2021-07-06 21:40:15	29.63	0
1B117D49-936C-BAGC-E94B-30C3293AA239	CoU-4219	b-2302	163	-75.099	109.034	2021-05-09 23:56:04	371.35	0
1B521826-5860-5A86-5364-6EB6A5CC21B7	CoU-4226	b-2302	231	-53.4613	49.1484	2021-08-14 02:39:50	476.33	0

transaction 31 x

Output

Action Output

Time Action Message

1 12:15:19 SELECT * FROM transaction WHERE company_id IN (SELECT id FROM company WHERE country = "Germany") LIMIT 0, 1000 118 row(s) returned

Lista las empresas que han realizado transacciones por un amount superior a la media de todas las transacciones.

```

1 SELECT DISTINCT *
2 FROM company
3 WHERE id IN (
4     SELECT company_id
5     FROM transaction
6     WHERE amount > (SELECT AVG(amount) FROM transaction)
7 );
8
9
10

```

id	company_name	phone	email	country	website
b-2222	Ac Permentum Incorporated	06 85 56 52 33	donec.porrttor.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-2238	Ante Iaculis Nec Foundation	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.iaculis@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://cnr.com/jone
b-2254	Nascetur Ridiculus Mus Inc.	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 Foundation	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/jone
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-2286	Fringilla LLC	08 29 15 93 57	gravida@protonmail.co.uk	New Zealand	https://reddit.com/user/110
b-2298	Elit Etiam Laoreet Associates	07 69 74 17 45	ultrices@google.co.uk	Canada	https://yahoo.com/fr
b-2302	Nunc Interdum Incorporated	05 18 15 48 13	non@outlook.com	Germany	https://wikipedia.org/en-us
b-2306	Augue Foundation	06 88 43 15 63	mauris@yahoo.com	Germany	https://baidu.com/sub/cars
b-2310	Non Magna LLC	06 71 73 13 17	nisi.quisque.fringilla@hotmail.ca	United Kingdom	https://whatsapp.com/site
b-2314	A Institute	03 34 91 68 65	metus.aliquam@google.edu	Belgium	https://reddit.com/fr

company 41 x

Output

Action Output

Time Action Message

1 13:27:54 SELECT DISTINCT * FROM company WHERE id IN (SELECT company_id FROM transaction WHERE amount > (SELECT AVG(amount) FROM transaction)) 70 row(s) returned

Eliminarán del sistema las empresas que carecen de transacciones registradas, entrega el listado de estas empresas

