

- Ejercicio 1

A partir de los documentos adjuntos (estructura_datos y datos_introducir), importa las dos tablas. Muestra las principales características del esquema creado y explica las diferentes tablas y variables que existen. Asegúrate de incluir un diagrama que ilustre la relación entre las distintas tablas y variables.

The screenshot shows a database management interface with the following components:

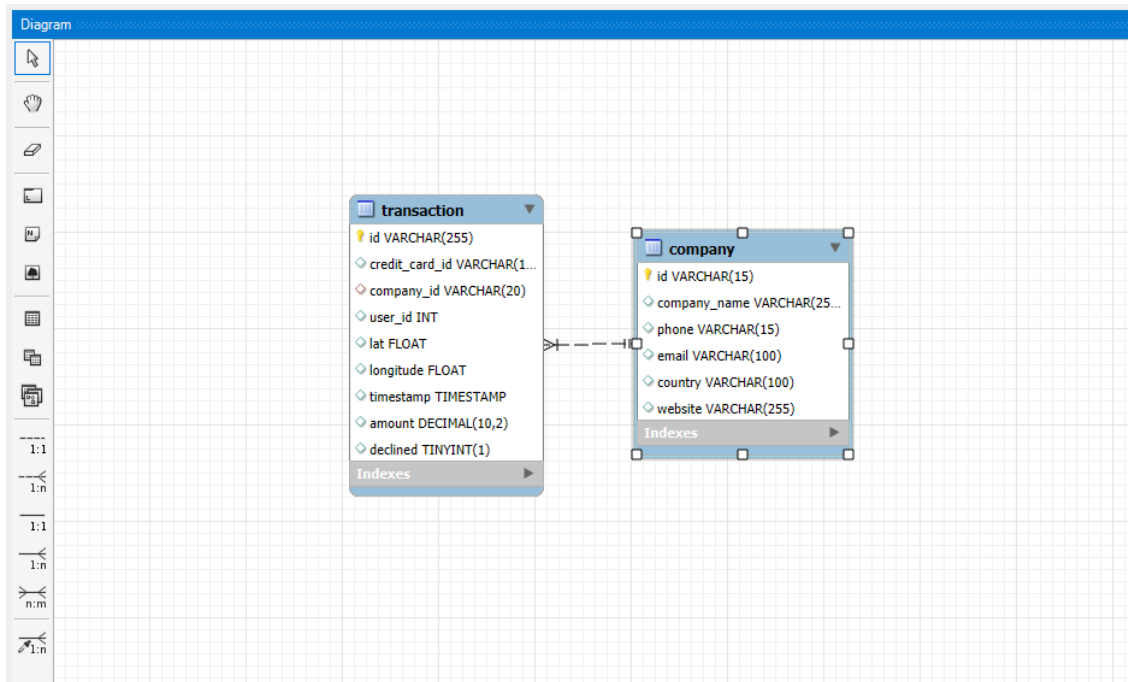
- Navigator:** Displays the schema hierarchy for 'hoteles_db', including tables like 'company', 'transaction', and 'transaction_log'.
- Query 1:** Contains the SQL query: `SELECT * FROM transactions.company;`
- Result Grid:** Displays the data for the 'company' table, including columns: id, company_name, phone, email, country, and website.
- Output:** Shows the execution results, including the number of rows affected and the total rows returned (100 rows).

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@idoud.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 Foundation	08 23 04 99 53	sed.dictum.proin@outlook.ca	New Zealand	https://netflix.com/settings

The screenshot shows the same database management interface, but with the following changes:

- Query 1:** Contains the SQL query: `SELECT * FROM transactions.transaction;`
- Result Grid:** Displays the data for the 'transaction' table, including columns: id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, and declined.
- Output:** Shows the execution results, including the number of rows affected and the total rows returned (587 rows).

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
02C6201E-D90A-1859-B4EE-88D2986D3802	CcU-2938	b-2362	92	81.9185	-12.5276	2021-08-28 23:42:24	466.92	0
0466A42E-47CF-8D24-FD01-C0B689713128	CcU-4219	b-2302	170	-43.9695	-117.525	2021-07-26 07:29:18	49.53	0
063FBA79-99EC-66FB-29F7-25726D1764A5	CcU-2987	b-2250	275	-81.2227	-129.05	2022-01-06 21:25:27	92.61	0
0668296C-CD89-A883-768C-2E4C4F8C8AE	CcU-3743	b-2618	265	-34.3593	-100.556	2022-01-26 02:07:14	394.18	0
06CD9AA5-9B42-D684-DDDD-A5E394FEB499	CcU-2959	b-2346	92	33.7381	158.298	2021-10-26 23:00:01	279.93	0



- Ejercicio 2

Utilizando JOIN realizarás las siguientes consultas:

- Listado de los países que están realizando compras.

Query 1 estructura_dades dades_introduir sql-sales-data-analysis-s2.01*

```

12  /* - Ejercicio 2
13  Utilizando JOIN realizarás las siguientes consultas:
14  2.1 Listado de los países que están realizando compras. */
15  • SELECT DISTINCT c.country AS Países_Haciendo_Compras
16  FROM company c
17  JOIN transaction t ON c.id = t.company_id
18  WHERE t.declined = 0;
  
```

Result Grid

Países_Haciendo_Compras
Canada
Germany
Italy
United Kingdom
Sweden
Ireland
United States
Norway
France
New Zealand
Netherlands
Belgium

Result 147 x

Output

Action Output

#	Time	Action	Message
✓ 860	13:47:53	SELECT DISTINCT c.country FROM company c JOIN transaction t ON c.id = t.compan...	15 row(s) returned
✓ 861	13:48:58	SELECT DISTINCT c.country AS Países Haciendo Compras FROM company c JOIN t...	15 row(s) returned

○ Desde cuántos países se realizan las compras.

The screenshot shows a SQL IDE interface with a query editor and a results pane. The query editor contains the following SQL code:

```
19
20  /* 2.2 Desde cuántos países se realizan las compras.*/
21  • SELECT COUNT(distinct c.country) AS Total_Paises_Realizan_Compras
22  FROM company c
23  JOIN transaction t ON c.id = t.company_id
24  WHERE t.declined = 0;
25
```

The results pane shows a single row with the value 15 for the column Total_Paises_Realizan_Compras.

Total_Paises_Realizan_Compras
15

Below the results pane, the 'Output' section shows the 'Action Output' table with the following rows:

#	Time	Action	Message
✓ 861	13:48:58	SELECT DISTINCT c.country AS Paises_Haciendo_Compras FROM company c JOIN t...	15 row(s) returned
✓ 862	13:50:40	SELECT COUNT(distinct c.country) AS Total_Paises_Realizan_Compras FROM compa...	1 row(s) returned

○

Identifica a la compañía con la mayor media de ventas.

The screenshot shows a SQL IDE interface with a query editor and a results pane. The query editor contains the following SQL code:

```
25
26  /* 2.3 Identifica a la compañía con la mayor media de ventas */
27  • SELECT c.company_name AS Compañía, AVG(t.amount) AS Mayor_Promedio_Ventas
28  FROM company c
29  JOIN transaction t ON c.id = t.company_id
30  WHERE t.declined = 0
31  GROUP BY c.company_name
32  ORDER BY Mayor_Promedio_Ventas DESC
33  LIMIT 1;
```

The results pane shows a single row with the company name 'Eget Ipsum Ltd' and the average sales value 481.860000 for the column Mayor_Promedio_Ventas.

Compañía	Mayor_Promedio_Ventas
Eget Ipsum Ltd	481.860000

Below the results pane, the 'Output' section shows the 'Action Output' table with the following rows:

#	Time	Action	Message
✓ 862	13:50:40	SELECT COUNT(distinct c.country) AS Total_Paises_Realizan_Compras FROM compa...	1 row(s) returned
✓ 863	13:51:56	SELECT c.company_name, AVG(t.amount) AS Mayor_Promedio_Ventas FROM compa...	1 row(s) returned
✓ 864	13:52:41	SELECT c.company_name AS Compañía, AVG(t.amount) AS Mayor_Promedio_Ventas ...	1 row(s) returned

○

3.1

Query 1 estructura_dades dades_introduir sql-sales-data-analysis-s2.01*

37 - Ejercicio 3
38 Utilizando sólo subconsultas (sin utilizar JOIN):
39 Muestra todas las transacciones realizadas por empresas de Alemania.
40 Lista las empresas que han realizado transacciones por un amount superior a la media de todas las transacciones.
41 Eliminarán del sistema las empresas que carecen de transacciones registradas, entrega el listado de estas empresas.
42 */ -- 3.1 Muestra todas las transacciones realizadas por empresas de Alemania.
43 SELECT *
44 FROM transaction
45 WHERE company_id IN (SELECT id
46 FROM company
47 WHERE country = 'Germany')
48 AND declined = 0;
49

Result Grid

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
108B1D1D-5B23-A76C-55EF-C568E49A05DD	CdU-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
AB069F53-965E-A2A8-CE06-CA8C4FD92501	CdU-2959	b-2234	275	1.64819	-158.007	2021-04-15 13:37:18	60.99	0
0466A42E-47CF-8D24-FD01-C0B689713128	CdU-4219	b-2302	170	-43.9695	-117.525	2021-07-26 07:29:18	49.53	0
0A476ED9-0C13-1962-F87B-D3563924B539	CdU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
122DC333-E19F-D629-DCD8-9C54CF1EBB9A	CdU-4366	b-2302	221	29.6372	-166.173	2021-06-09 06:04:14	172.01	0

transaction 152 x

Output

Action Output

#	Time	Action	Message
865	13:58:08	SELECT * FROM transaction WHERE company_id IN (SELECT id FROM company ...	111 row(s) returned
866	13:58:52	SELECT * FROM transaction WHERE company_id IN (SELECT id FROM company ...	111 row(s) returned

3.2

Query 1 estructura_dades dades_introduir sql-sales-data-analysis-s2.01*

49
50 -- 3.2 Lista las empresas que han realizado transacciones por un amount superior a la media de todas las transacciones.
51 SELECT c.company_name AS Empresas_C_Transac_Mayor_a_Media
52 FROM company c
53 WHERE id IN (SELECT company_id
54 FROM transaction
55 WHERE amount > (SELECT AVG(amount)
56 FROM transaction
57 WHERE declined = 0)
58 AND declined = 0);
59
60
61 -- 3.3 Eliminarán del sistema las empresas que carecen de transacciones registradas, entrega el listado de estas empresas.

Result Grid

Empresas_C_Transac_Mayor_a_Media
► Lorem Eu Incorporated
Non Institute
Ut Semper Foundation
Nunc Interdum Incorporated
Ac Fermentum Incorporated

company 153 x

Output

Action Output

#	Time	Action	Message
866	13:58:52	SELECT * FROM transaction WHERE company_id IN (SELECT id FROM company ...	111 row(s) returned
867	14:00:14	SELECT c.company_name AS Empresas_C_Transac_Mayor_a_Media FROM compan...	49 row(s) returned

3.3

Query 1 estructura_dades dades_introduir sql-sales-data-analysis-s2.01*

```
-- 3.3 Eliminarán del sistema las empresas que carecen de transacciones registradas, entrega el listado de estas empresas.
61
62
63 • SELECT *
64   FROM company
65  WHERE id NOT IN (
66      SELECT DISTINCT company_id
67      FROM transaction
68  );
69
70
```

Result Grid

id	company_name	phone	email	country	website
100%	100%	100%	100%	100%	100%

company 156 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 869	20:22:02	SELECT * FROM company WHERE id NOT IN (SELECT DISTINCT company_id	0 row(s) returned	0.593 sec / 0.000
✓ 870	20:22:57	SELECT * FROM company WHERE id NOT IN (SELECT DISTINCT company_id	0 row(s) returned	0.000 sec / 0.000

VIVEL 2, Ejercicio 1

Query 1 estructura_dades dades_introduir sql-sales-data-analysis-s2.01*

```
72 Nivel 2
73 Ejercicio 1
74 Identifica los cinco días que se generó la mayor cantidad de ingresos en la empresa por ventas.
75 Muestra la fecha de cada transacción junto con el total de las ventas. */
76 • SELECT DATE(timestamp) AS Fecha_Transaccion, SUM(amount) AS Total_Ventas
77   FROM transaction
78  WHERE declined = 0
79  GROUP BY Fecha_Transaccion
80  ORDER BY Total_Ventas DESC
81  LIMIT 5;
82
```

Result Grid

Fecha_Transaccion	Total_Ventas
2021-12-20	1532.36
2021-04-22	1397.96
2021-05-09	1344.37
2022-02-26	1337.62
2021-03-29	1325.12

Result 158 x

Output

Action Output

#	Time	Action	Message
✓ 871	20:24:05	SELECT DATE(timestamp) AS Fecha, SUM(amount) AS Total_Ventas FROM transaccio...	5 row(s) returned
✓ 872	20:25:09	SELECT DATE(timestamp) AS Fecha_Transaccion, SUM(amount) AS Total_Ventas FR...	5 row(s) returned

Ejercicio 2

Query 1 estructura_dades dades_introduir sql-sales-data-analysis-s2.01*

```
-- Ejercicio 2
-- ¿Cuál es la media de ventas por país? Presenta los resultados ordenados de mayor a menor medio.
SELECT c.country AS País, AVG(amount) AS Media_Ventas
FROM company c
JOIN transaction t ON c.id = t.company_id
WHERE declined = 0
GROUP BY c.country
ORDER BY Media_Ventas DESC;
```

Result Grid

	País	Media_Ventas
▶	United States	287.531111
	Ireland	285.825357
	Sweden	276.668382
	United Kingdom	271.767527
	Canada	261.941930
	Belgium	255.217500
	Norway	251.114918
	Italy	243.342222

Result 159

Output

Action Output

#	Time	Action	Message
✓ 872	20:25:09	SELECT DATE(timestamp) AS Fecha_Transaccion, SUM(amount) AS Total_Ventas FR...	5 row(s) returned
✓ 873	20:26:59	SELECT c.country AS País, AVG(amount) AS Media_Ventas FROM company c JOIN tr...	15 row(s) returned

Ejercicio 3: Muestra el listado aplicando JOIN y subconsultas.

Query 1 estructura_dades dades_introduir sql-sales-data-analysis-s2.01*

```
/* Ejercicio 3
En tu empresa, se plantea un nuevo proyecto para lanzar algunas campañas publicitarias para hacer competencia a la compañía "Non Institute".
Para ello, te piden la lista de todas las transacciones realizadas por empresas que están ubicadas en el mismo país que esta compañía.
Muestra el listado aplicando JOIN y subconsultas.
Muestra el listado aplicando solo subconsultas.*/
-- Muestra el listado aplicando JOIN y subconsultas.
SELECT c.country, C.company_name, t.*
FROM company c
JOIN transaction t ON c.id = t.company_id
WHERE c.country = (SELECT country
FROM company
WHERE company_name = 'Non Institute');
```

Result Grid

	country	company_name	id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
▶	United Kingdom	Sed Nunc Ltd	2B928E1C-EC14-A760-0A75-871477649D6A	CdU-2980	b-2246	275	-41.0496	161.685	2021-08-10 08:14:49	383.73	0
	United Kingdom	Sed Nunc Ltd	ACD2011A-A2B1-C365-41E1-2AB00C65147A	CdU-2980	b-2246	275	-54.4792	-82.7974	2022-03-05 20:41:20	60.07	1
	United Kingdom	Non Magna LLC	4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CdU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0
	United Kingdom	Non Magna LLC	BC2B9A38-77B4-28CD-1FE8-14DED863E773	CdU-3092	b-2310	275	-78.0295	18.5295	2021-10-18 07:27:35	477.95	1
	United Kingdom	Enim Conditum Ltd	1479B3D2-B7BA-C7BB-4CE3-8D7C2DE85ABB	CdU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0
	United Kingdom	Enim Conditum Ltd	152598C2-029D-0684-4B66-91FDF393FFFF	CdU-2994	b-2326	126	-67.0189	-141.672	2021-07-05 03:10:00	395.43	0

Result 162

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 875	20:32:22	SELECT c.country, C.company_name, t.* FROM company c JOIN transaction t ON c.i...	100 row(s) returned	0.016 sec / 0.000
✓ 876	20:32:54	SELECT c.country, C.company_name, t.* FROM company c JOIN transaction t ON c.i...	100 row(s) returned	0.000 sec / 0.000

Ejercicio 3: Muestra el listado aplicando JOIN y subconsultas.

Query 1 estructura_datos dades_introduir sql-sales-data-analysis-s2.01*

```
105
106 -- Muestra el listado aplicando solo subconsultas.
107 • SELECT * FROM transaction
108 WHERE company_id IN (
109     SELECT id FROM company
110     WHERE country = (SELECT country FROM company WHERE company_name = 'Non Institute'));
111
```

Result Grid

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
2B928E1C-EC14-A760-0A75-871477649D6A	CcU-2980	b-2246	275	-41.0496	161.685	2021-08-10 08:14:49	383.73	0
ACD2011A-A2B1-C365-41E1-2AB00C65147A	CcU-2980	b-2246	275	-54.4792	-82.7974	2022-03-05 20:41:20	60.07	1
4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CcU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0
BC2B9A38-77B4-28CD-1FE8-14DED863E773	CcU-3092	b-2310	275	-78.0295	18.5295	2021-10-18 07:27:35	477.95	1
1479B3D2-B7BA-C7BB-4CE3-8D7C2DE85A8B	CcU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0
152598C2-029D-D684-4B66-91EDF393EBFF	CcU-2994	b-2326	126	-67.0189	-141.672	2021-07-05 03:10:00	395.43	0
1B636B58-A2E8-7C69-D9C9-C54535DAFD3B	CcU-2994	b-2326	131	70.2543	-13.1336	2021-07-06 08:48:46	195.06	0
20418DE5-8804-BE9B-BD7A-A95C1BFDBF5C	CcU-2994	b-2326	126	-79.1145	1.51481	2022-01-03 15:59:29	479.52	0
239B8576-6C0E-137A-C2F6-3180A188A2D3	CcU-2994	b-2326	126	23.6174	137.222	2021-08-26 06:04:05	43.90	0
267C4A86-7BA7-1C5E-0718-2824983C87DD	CcU-2994	b-2326	126	-17.5259	104.915	2021-10-01 21:08:53	122.63	0
3142C93E-83B7-49E4-EE2D-29CA834B198D	CcU-2994	b-2326	126	-67.8476	-119.978	2021-04-06 17:24:44	91.59	0

transaction 164 x

Output

Action Output

#	Time	Action	Message
877	20:38:39	SELECT * FROM transaction WHERE company_id IN (SELECT id FROM company ...	100 row(s) returned
878	20:40:20	SELECT * FROM transaction WHERE company id IN (SELECT id FROM company ...	100 row(s) returned

Nivel 3: Ejercicio 1

Query 1 estructura_datos dades_introduir sql-sales-data-analysis-s2.01*

```
111
112 /* Nivel 3: Ejercicio 1
113 Presenta el nombre, teléfono, país, fecha y amount, de aquellas empresas que realizaron transacciones con un
114 valor comprendido entre 100 y 200 euros
115 y en alguna de estas fechas: 29 de abril de 2021, 20 de julio de 2021 y 13 de marzo de 2022.
116 Ordena los resultados de mayor a menor cantidad.*/
117 • SELECT c.company_name AS Nombre, c.phone AS Teléfono, c.country AS País, DATE(t.timestamp) AS Fecha, t.amount AS Cantidad
118 FROM company c
119 JOIN transaction t ON c.id = t.company_id
120 WHERE t.amount BETWEEN 100 AND 200 AND DATE(t.timestamp) IN ('2021-04-29', '2021-07-20', '2022-03-13')
121 ORDER BY t.amount DESC;
122
```

Result Grid

Nombre	Teléfono	País	Fecha	Cantidad
Interdum Feugiat Sed Associates	04 88 40 32 52	United Kingdom	2021-07-20	164.86
Nunc Interdum Incorporated	05 18 15 48 13	Germany	2022-03-13	164.32
Enim Conditum Ltd	09 55 51 66 25	United Kingdom	2021-04-29	149.89
Lorem Eu Incorporated	01 83 66 62 07	Canada	2021-07-20	133.39
Nunc Interdum Incorporated	05 18 15 48 13	Germany	2021-04-29	111.51

Result 169 x

Output

Action Output

#	Time	Action	Message
882	20:46:23	SELECT c.company_name AS Nombre, c.phone AS Teléfono, c.country AS País, DAT...	5 row(s) returned
883	20:46:39	SELECT c.company name AS Nombre, c.phone AS Teléfono, c.country AS País, DAT...	5 row(s) returned

Nivel 3: Ejercicio 2

Query 1estructura_dadesdades_introduirsql-sales-data-analysis-s2.01*

Don't Limit

```
123  /* Ejercicio 2: Necesitamos optimizar la asignación de los recursos y dependerá de la capacidad operativa que se requiera,
124  por lo que te piden la información sobre la cantidad de transacciones que realizan las empresas,
125  pero el departamento de recursos humanos es exigente y quiere
126  un listado de las empresas en las que especifiques si tienen más de 4 transacciones o menos.*/
127  • SELECT c.company_name AS Empresa, COUNT(t.id) AS Cant_Transacción,
128  CASE WHEN COUNT(t.id) > 4 THEN 'Más de 4 Transacciones'
129  WHEN COUNT(t.id) = 4 THEN '4 Transacciones'
130  ELSE 'Tiene menos de 4 Transacciones'
131  END AS Clasificación
132  FROM company c
133  JOIN transaction t ON c.id = t.company_id
134  GROUP BY Empresa
135  ORDER BY Cant_Transacción DESC;
```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Empresa	Cant_Transacción	Clasificación
	Lorem Eu Incorporated	54	Más de 4 Transacciones
	Malesuada PC	52	Más de 4 Transacciones
	Non Institute	30	Más de 4 Transacciones
	Fusce Corp.	2	Tiene menos de 4 Transacciones
	Convallis In Incorporated	2	Tiene menos de 4 Transacciones

Result 171

Output

Action Output

#	Time	Action	Message
✓ 884	20:49:26	SELECT c.company_name AS Empresa, COUNT(t.id) AS Cant_Transacción, CASE W...	100 row(s) returned
✓ 885	20:50:17	SELECT c.company_name AS Empresa, COUNT(t.id) AS Cant_Transacción, CASE W...	100 row(s) returned