

Nivell 1

- Exercici 1

A partir dels documents adjunts (estructura_dades i dades_introduir), importa les dues taules. Mostra les característiques principals de l'esquema creat i explica les diferents taules i variables que existeixen. Assegura't d'incloure un diagrama que il·lustri la relació entre les diferents taules i variables.

Consulta:

```
-- Exercici 1

select * from company;

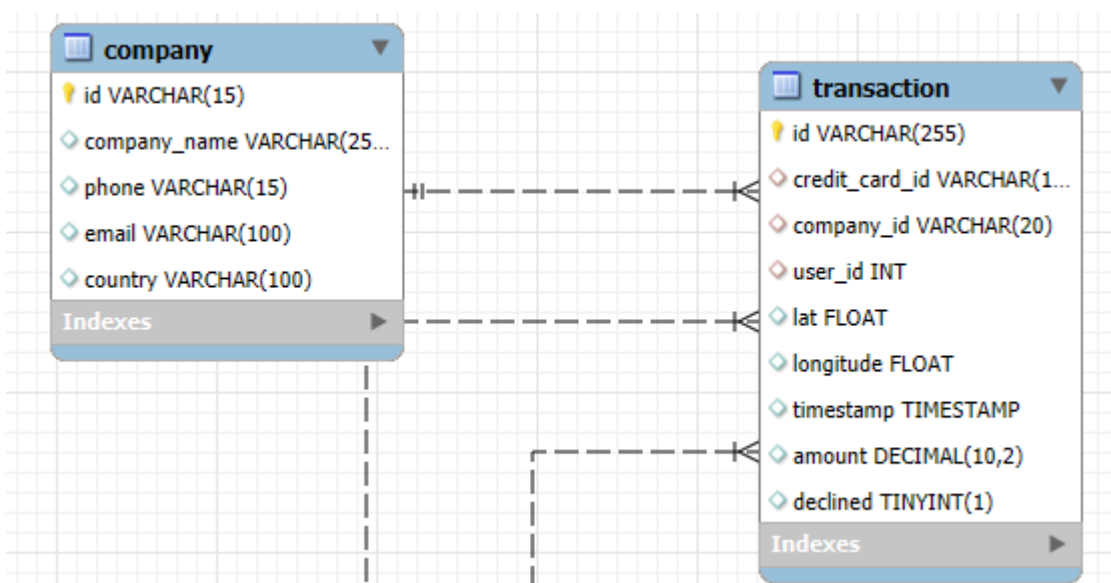
select * from transaction;
```

Resultats

Result Grid						
Filter Rows:		Edit:		Export/Import:		Wrap Cell Content:
	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.couk	Germany	https://cnn.com/user/110
	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.couk	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 Corporation	07 15 25 14 74	mattis.integer.eu@protonmail.net	Italy	https://netflix.com/sub/cars
	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/one

Result Grid									
Filter Rows:									
Edit: Export/Import: Wrap Cell Content:									
	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-CDB9-A883-76BC-2E4C44F8C8AE	CcU-3743	b-2618	265	-34.3593	-100.556	2022-01-26 02:07:14	394.18	0
	06CD9AA5-9B42-D684-DDDD-A5E394FEBA99	CcU-2959	b-2346	92	33.7381	158.298	2021-10-26 23:00:01	279.93	0
	07A46D48-31A3-7E87-65B9-0DA902AD109F	CcU-3225	b-2386	272	38.8342	92.1905	2021-06-28 21:11:42	340.87	1
	09DE92CE-6F27-2B87-13B5-9385B2B388E2	CcU-3071	b-2298	275	71.1706	10.5757	2021-05-11 20:40:06	303.05	1
	0A476ED9-0C13-1962-F87B-D3563924B539	CcU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
	08EB80B7-9D66-1707-CE4B-9DC7E71914B5	CcU-3141	b-2338	272	23.3264	-13.6037	2022-03-04 14:54:35	288.81	1
	0C7C3A33-9947-3BC1-846D-7BE3D0D17598	CcU-3309	b-2434	272	63.3615	-68.6667	2021-04-10 20:58:41	103.44	1
	0CE957A6-CCAA-2B7A-6839-8A4B1B324853	CcU-3435	b-2506	269	-69.3537	-10.26	2022-02-02 07:29:36	428.69	1
	0DD2E608-5C9E-D1B3-4999-B99F43AD735A	CcU-2959	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
	1017AA59-3D5F-7A4C-1992-D151A8D1FA0A	CcU-3701	b-2618	267	4.27645	-101.554	2021-11-01 01:02:11	447.11	0

company 3 transaction 4 x



La tabla de “company” tiene los datos de todas las compañías registradas, mientras que “transaction” tiene los datos de las transacciones, las cuales tienen también los datos de la compañía de quien ha realizado dicha transacción. El id de la compañía es el elemento clave para vincular las 2 tablas. La relación es de 1 a muchos porque una compañía puede hacer muchas transacciones.

- Exercici 2

Utilitzant JOIN realitzaràs les següents consultes:

- Llistat dels països que estan fent compres.

```

--
6  -- Exercici 2
7  • select distinct country
8    from company
9    join transaction on company.id = company_id;
10
11 • select count(distinct country)
12    from company
13    join transaction on company.id = company_id;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [↗](#)

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

Result 4 x

Output

Action Output

#	Time	Action	Message
1	09:57:49	select distinct country from company join transaction on company.id = company_id	15 row(s) returned

Devuelve 15 líneas.

- Des de quants països es realitzen les compres.

```

--
11 • select count(distinct country)
12    from company
13    join transaction on company_id = company.id;
14

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [↗](#)

count(distinct country)
15

Result 6 x

Output

Action Output

#	Time	Action	Message
1	09:58:52	select count(distinct country) from company join transaction on company_id = company.id	1 row(s) returned

15 païses diferents.

- Identifica la companyia amb la mitjana més gran de vendes.

```

15 • select company_name, avg(amount) as average
16 from company
17 join transaction on company.id = company_id
18 where declined = 0
19 group by company_name
20 order by avg(amount) desc
21 limit 1;

```

Result Grid

company_name	average
Eget Ipsum Ltd	481.860000

Result 9 x

Output

Action Output

#	Time	Action	Message
1	10:01:09	select company_name, avg(amount) as average from company join transaction on company.id = company_id where declined = 0 group by company...	1 row(s) returned

- Exercici 3

Utilitzant només subconsultes (sense utilitzar JOIN):

- Mostra totes les transaccions realitzades per empreses d'Alemanya.

```

23 -- Exercici 3
24 • select *
25 from transaction
26 where company_id IN (
27     select company_id
28     from company
29     where country="Germany");
30

```

Result Grid

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
108B1D1D-5B23-A76C-55EF-C568E49A05DD	CcU-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
EA2C3281-C9C1-A387-44F8-729FB4B51C76	CcU-2938	b-2222	275	20.2004	-116.84	2021-05-09 10:25:08	119.36	1
0DD2E608-5C9E-D1B3-4999-B99F43AD735A	CcU-2959	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
AB069F53-965E-A2A8-CE06-CA8C4FD92501	CcU-2959	b-2234	275	1.64819	-158.007	2021-04-15 13:37:18	60.99	0
0466A42E-47CF-8D24-FD01-C0B689713128	CcU-4219	b-2302	170	-43.9695	-117.525	2021-07-26 07:29:18	49.53	0
0A476ED9-0C13-1962-F87B-D3563924B539	CcU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
122DC333-E19F-D629-DCD8-9C54CF1EBB9A	CcU-4366	b-2302	221	29.6372	-166.173	2021-06-09 06:04:14	172.01	0
43E263BA-7E7D-057C-C43C-54E0A7B3ED54	CcU-4530	b-2302	210	20.6724	14.0722	2021-12-20 20:38:22	17.07	0

transaction 12 x

Output

Action Output

#	Time	Action	Message
1	10:03:41	select * from transaction where company_id IN (select company_id from company where country="Germany")	118 row(s) returned

- Llista les empreses que han realitzat transaccions per un amount superior a la mitjana de totes les transaccions.

```

30
31 • select company_name
32   from company
33  where id in (
34      select company_id
35      from transaction
36      where amount > (
37          select avg(amount)
38          from transaction));
39

```

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

company_name
Ac Fermentum Incorporated
Magna A Neque Industries
Fusce Corp.
Ante Iaculis Nec Foundation
Donec Ltd
Sed Nunc Ltd
Nascetur Ridiculus Mus Inc.
Ultricies Lorem DC

company 16 x

Output

Action Output

#	Time	Action	Message
1	10:05:03	select company_name from company where id in (select company_id from transaction where amount > (select avg(amount) from transaction))	70 row(s) returned

- Eliminaran del sistema les empreses que no tenen transaccions registrades, entrega el llistat d'aquestes empreses.

```

39
40 • select company_name
41   from company
42  where not exists(
43      select 1
44      from transaction
45      where company.id = company_id);

```

Result Grid | Filter Rows: | Export:

company_name

No existen empresas con ninguna transacción. He comprobado también cuantas líneas me devolvía la media de cada empresa y me salen 100, el número de empresas que hay.

Nivell 2

- Exercici 1

- Identifica els cinc dies que es va generar la quantitat més gran d'ingressos a l'empresa per vendes. Mostra la data de cada transacció juntament amb el total de les vendes.

```
46
47  -- NIVELL 2
48  -- Exercici 1
49  • select date(timestamp) ,sum(amount) as media
50      from transaction
51      group by date(timestamp)
52      order by sum(amount) desc
53      limit 5;
54
```

	date(timestamp)	media
▶	2021-03-29	1564.87
	2021-12-20	1532.36
	2021-06-15	1469.90
	2021-05-09	1463.73
	2021-06-21	1443.11

- Exercici 2

- Quina és la mitjana de vendes per país? Presenta els resultats ordenats de major a menor mitjà.

```

55 -- Exercici 2
56 • select country, round(avg(amount),2) as media
57 from transaction
58 join company on company.id = company_id
59 group by country
60 order by avg(amount) desc;
61

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
country	media			
United States	309.18			
Ireland	277.31			
United Kingdom	270.73			
Canada	269.65			
Sweden	260.62			
Norway	254.22			
Netherlands	253.02			
Germany	244.20			

Result 29 x

Output

Action Output

#	Time	Action	Message
1	10:10:08	select country, round(avg(amount),2) as media from transaction join company on company.id = company_id group by country order by avg(amount) d...	15 row(s) returned

- Exercici 3

- En la teva empresa, es planteja un nou projecte per a llançar algunes campanyes publicitàries per a fer competència a la companyia "Non Institute". Per a això, et demanen la llista de totes les transaccions realitzades per empreses que estan situades en el mateix país que aquesta companyia.
- Mostra el llistat aplicant JOIN i subconsultes.

```

1
2 -- Exercici 3
3 • select *
4 from (select *
5 from company
6 where country in(
7 select country
8 from company
9 where company_name="Non Institute"
10 )) as subquery
11 join transaction on company_id = subquery.id;
12

```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

1A

id	company_name	phone	email	country	id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	de
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	2B928E1C-EC14-A760-0A75-871477649D6A	CdU-2980	b-2246	275	-41.0496	161.685	2021-08-10 08:14:49	383.73	0
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	ACD2011A-A2B1-C365-41E1-2A800C65147A	CdU-2980	b-2246	275	-54.4792	-82.7974	2022-03-05 20:41:20	60.07	1
b-2310	Non Magna LLC	06 71 73 13 17	nisl.quisque.fringilla@hotmail.ca	United Kingdom	4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CdU-3092	b-2310	275	-20.4859	150.87	2021-05-03 22:37:23	458.74	0
b-2310	Non Magna LLC	06 71 73 13 17	nisl.quisque.fringilla@hotmail.ca	United Kingdom	BC2B9A38-77B4-28CD-1FE8-14DED863E773	CdU-3092	b-2310	275	-78.0295	18.5295	2021-10-18 07:27:35	477.95	1
b-2326	Enim Conditum Ltd	09 55 51 66 25	imperdiet.non.vestibulum@yahoo.net	United Kingdom	1479B3D2-B7BA-C7BB-4CE3-8D7C2DE85ABB	CdU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45	0
b-2326	Enim Conditum Ltd	09 55 51 66 25	imperdiet.non.vestibulum@yahoo.net	United Kingdom	152598C2-029D-D684-4B66-91EDF393EBFF	CdU-2994	b-2326	126	-67.0189	-141.672	2021-07-05 03:10:00	395.43	0
b-2326	Enim Conditum Ltd	09 55 51 66 25	imperdiet.non.vestibulum@yahoo.net	United Kingdom	4B23EED9-A7ED-7C6D-D0D0-CEAFEDBAE79B	CdU-2994	b-2326	124	70.7542	12.1235	2021-07-05 03:10:00	405.45	0

ult 40

x

Output

Action Output

#	Time	Action	Message
1	10:26:11	select * from (select * from company where country in(select country from company where company_name="Non Institute")) as subquery join trans...	100 row(s) returned

- Mostra el llistat aplicant solament subconsultes.

```

3 • select *
4   from transaction
5  where company_id IN (
6      select company.id
7      from company
8      where country in(
9          select country
10         from company
11        where company_name="Non Institute"
12    ))

```

sult Grid									
Filter Rows:									
Edit:									
Export/Import:									
Wrap Cell Content:									
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-C365-41E1-2A800C65147A	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	
147983D2-B7BA-C7BB-4CE3-8D7C2DE85ABB	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	
704110EE-B074-BE9B-BD7A-A0EC1BEBBEEC	CcU-2994	b-2326	126	70.1145	1.51481	2022-01-03 15:50:30	470.57	0	

Transaction 41 x

put

Action Output

#	Time	Action	Message
1	10:26:11	select * from (select * from company where country in(select country from company where company_name="Non Institute")) as subquery join trans...	100 row(s) returned
2	10:27:24	select * from transaction where company_id IN (select company.id from company where country in(select country from company w...	100 row(s) returned

Nivell 3

- Exercici 1

- Presenta el nom, telèfon, país, data i amount, d'aquelles empreses que van realitzar transaccions amb un valor comprès entre 100 i 200 euros i en alguna d'aquestes dates: 29 d'abril del 2021, 20 de juliol del 2021 i 13 de març del 2022. Ordena els resultats de major a menor quantitat.


```

84 -- NIVELL 3
85 -- Exercici 1
86 • select company_name, phone, country, date(timestamp) as date, amount
87 from company
88 join transaction on company.id=transaction.company_id
89 where amount between 100 and 200 and(
90 date(transaction.timestamp) in ("2021-04-29","2021-07-20", "2022-03-13"))
91 order by amount desc;
92

```

company_name	phone	country	date	amount
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 Conditementum 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

#	Time	Action	Message
1	10:30:52	select company_name, phone, country, date(timestamp) as date, amount from company join transaction on company.id=transaction.company_id wh...	5 row(s) returned

- Exercici 2

- **Necessitem optimitzar l'assignació dels recursos i dependrà de la capacitat operativa que es requereixi, per la qual cosa et demanen la informació sobre la quantitat de transaccions que realitzen les empreses, però el departament de recursos humans és exigent i vol un llistat de les empreses on especifiquis si tenen més de 4 transaccions o menys.**

```

-- Exercici 2
• select company_name, count(company_id),
case
when count(company_id) < 4 then "Tiene menos de 4"
else "Tiene más de 4"
end as cantidad_transacciones
from company
join transaction on company.id = company_id
group by company_id
order by count(company_id) desc;

```

company_name	count(company_id)	cantidad_transacciones
Nunc Interdum Incorporated	105	Tiene más de 4
It Semper Foundation	59	Tiene más de 4
Enim Conditementum Ltd	57	Tiene más de 4
Ardu LLP	56	Tiene más de 4
Lorem Eu Incorporated	54	Tiene más de 4
Malesuada PC	52	Tiene más de 4
Non Institute	30	Tiene más de 4
Ipsum Corp	2	Tiene menos de 4

#	Time	Action	Message
1	10:32:03	select company_name, count(company_id), case when count(company_id) < 4 then "Tiene menos de 4" else "Tiene más de 4" end as cantidad...	100 row(s) returned