

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

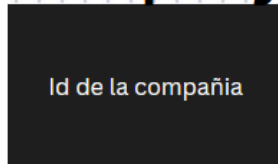
select * from company;
select * from transaction;
```

Resultats

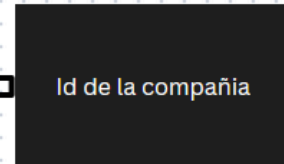
Result Grid						
Filter Rows:						
Edit:						
Export/Import:						
Wrap Cell Content:						
	id	company_name	phone	email	country	website
▶	b-2222	Ac Fermentum Incorporated	06 85 56 52 33	donec.porttitor.tellus@yahoo.net	Germany	https://instagram.com/site
	b-2226	Magna A Neque Industries	04 14 44 64 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



Transaction



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.

- Exercici 2

Utilitzant JOIN realitzaràs les següents consultes:

- Llistat dels països que estan fent compres.

```

6      -- Exercici 2
7      • select distinct country from company
8      join transaction on company.id = transaction.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			

Result 21 x

Devuelve 15 líneas.

- Des de quants països es realitzen les compres.

```

11 • select count(distinct country)
12 from company

```

Result Grid		Filter Rows:	Export:	Wra
	count(distinct country)			
▶	15			

15 païses diferents.

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

```
15
16 • select company_name, avg(amount)
17     from company
18     join transaction on company.id = transaction.company_id
19     where transaction.declined = 0
20     group by company_name
21     order by avg(amount) desc
22     limit 1;
23
```

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

	company_name	avg(amount)
▶	Eget Ipsum Ltd	481.860000

- Exercici 3

Utilitzant només subconsultes (sense utilitzar JOIN):

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

```
22 • select *
23     from transaction
24     where transaction.company_id IN (
25         select company.id
26         from company
27         where company.country="Germany");
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

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-F878-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
135267BA-2E7D-957C-C42C-6450A2B3ED54	CcU-4520	b-2302	210	20.6724	14.9732	2021-12-29 20:38:23	17.97	0
14CAE5B5-8FB1-3E4A-4C85-0EA4167534F4	CcU-4849	b-2302	189	-53.6202	93.0533	2021-12-31 00:29:42	388.04	0
158A3ACB-541C-DBCC-65BD-6373CC67BF1C	CcU-4849	b-2302	183	42.5424	-170.347	2022-03-08 05:02:19	240.29	0
162C7F78-2B6B-7971-A1F4-D2124F732451	CcU-4527	b-2302	210	-69.1381	58.0017	2021-04-11 05:59:18	231.26	0

transaction 73 x

118 línies devueltas.

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

```

34 • select company.company_name
35 from company
36 where company.id in (
37     select transaction.company_id
38     from transaction
39     where transaction.amount > (
40         select avg(amount)
41         from transaction));

```

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.
Vestibulum Lorem PC
Gravida Sagittis LLP
Mus Aenean Eget Foundation
Dis Parturient Institute

company 113 x

70 l neas devueltas

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

```

43 • select company.company_name
44 from company
45 where not exists(
46     select 1
47     from transaction
48     where company.id = transaction.company_id);
49
50 • select company.company_name
51 from company
52 where company.id not in(
53     select transaction.company_id
54     from transaction);

```

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

company_name

No existen empresas con ninguna transacci n. He comprobado tambi n cuantas l neas me devolv a la media de cada empresa y me salen 100, el n mero 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.

```
59      -- Exercici 1
60 •    select date(timestamp) ,sum(amount)
61      from transaction
62      group by date(timestamp)
63      order by sum(amount) desc
64      limit 5;
65
```

Result Grid			Filter Rows:	Export
	date(timestamp)	sum(amount)		
▶	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.

15 líneas devueltas

```
67      -- Exercici 2
68 •    select country, avg(amount)
69      from transaction
70      join company on company.id = transaction.company_id
71      group by country
72      order by avg(amount) desc;
73
```

Result Grid			Filter Rows:	Export:
	country	avg(amount)		
▶	United States	309.179412		
	Ireland	277.308387		
	United Kingdom	270.731700		
	Canada	269.647869		
	Sweden	260.615063		
	Norway	254.216324		
	Netherlands	253.017778		
	Germany	244.203220		
	Australia	232.052500		
	Belgium	228.147692		
	China	227.556667		
	New Zealand	222.277273		
	Italy	201.590000		
	France	179.198333		
	Spain	53.400000		

- 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.

```
67 -- Exercici 3
68 • select *
69   from (select *
70         from company
71        where company_name="Non Institute") as subquery
72 join transaction on transaction.company_id = subquery.id;
```

id	company_name	phone	email	country	website	id	credit_card_id	company_id	user_id	lat	longitude	tr
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	0668296C-CDB9-A883-76BC-2E4C44F8C8AE	CcU-3743	b-2618	265	-34.3593	-100.556	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	1017AA59-3D5F-7A4C-1992-D151A8D1FA0A	CcU-3701	b-2618	267	4.27645	-101.554	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	18D648AB-7D54-A3E8-2DBA-2D8D2991CA43	CcU-3771	b-2618	263	-67.118	-174.141	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	1A9B5411-64D8-DEC4-AC74-43E235AAEFC1	CcU-3687	b-2618	267	44.3314	149.168	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	1DE927AB-29A8-654F-3372-43971B6844AA	CcU-3659	b-2618	267	79.9467	90.3733	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	1FB125A8-0901-63AC-E2B7-349E5974FBAD	CcU-3722	b-2618	267	-44.4339	-82.0844	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	22C9EC22-45FC-72C8-63CE-5FA99A24E770	CcU-3645	b-2618	267	28.4439	-11.3959	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	2F499B4D-4DC7-B337-010D-8B7471812A80	CcU-3785	b-2618	262	-25.2248	72.2735	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	2F74E998-9337-7F74-5208-5DEC81A174FD	CcU-3750	b-2618	265	75.0042	-64.1653	20
b-2618	Non Institute	06 77 15 31 14	amet.metus@protonmail.couk	United Kingdom	https://guardian.co.uk/settings	3C291BE8-CA7C-39BA-76F8-7CB74937EC98	CcU-3652	b-2618	267	-18.1059	10.8415	20

- Mostra el llistat aplicant solament subconsultes.

```
74 • select *
75   from transaction
76  where transaction.company_id IN (
77      select company.id
78      from company
79      where company.company_name="Non Institute");
```

id	credit_card_id	company_id	user_id	lat	longitude	timestamp	amount	declined
0668296C-CDB9-A883-76BC-2E4C44F8C8AE	CcU-3743	b-2618	265	-34.3593	-100.556	2022-01-26 02:07:14	394.18	0
1017AA59-3D5F-7A4C-1992-D151A8D1FA0A	CcU-3701	b-2618	267	4.27645	-101.554	2021-11-01 01:02:11	447.11	0
18D648AB-7D54-A3E8-2DBA-2D8D2991CA43	CcU-3771	b-2618	263	-67.118	-174.141	2021-11-02 03:08:14	305.02	0
1A9B5411-64D8-DEC4-AC74-43E235AAEFC1	CcU-3687	b-2618	267	44.3314	149.168	2021-08-22 23:51:51	306.96	0
1DE927AB-29A8-654F-3372-43971B6844AA	CcU-3659	b-2618	267	79.9467	90.3733	2021-08-05 15:52:25	440.13	0
1FB125A8-0901-63AC-E2B7-349E5974FBAD	CcU-3722	b-2618	267	-44.4339	-82.0844	2022-02-16 14:33:25	415.11	0
22C9EC22-45FC-72C8-63CE-5FA99A24E770	CcU-3645	b-2618	267	28.4439	-11.3959	2021-06-11 16:08:49	196.71	0
2F499B4D-4DC7-B337-010D-8B7471812A80	CcU-3785	b-2618	262	-25.2248	72.2735	2021-04-10 15:14:14	363.51	0
2F74E998-9337-7F74-5208-5DEC81A174FD	CcU-3750	b-2618	265	75.0042	-64.1653	2021-06-04 16:40:30	475.06	0
3C291BE8-CA7C-39BA-76F8-7CB74937EC98	CcU-3652	b-2618	267	-18.1059	10.8415	2021-06-29 14:31:00	468.49	0
3D4B5BDD-C674-13F6-B132-09D180277BC9	CcU-3631	b-2618	267	-8.46236	88.7757	2022-02-01 06:30:48	221.78	0

30 l neas devueltas en las 2

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.

```
72 -- Exercici 1
73 • select company.company_name, company.phone, company.country, date(transaction.timestamp) as date, transaction.amount
74 from company
75 join transaction on company.id=transaction.company_id
76 where amount between 100 and 200 and(
77 date(transaction.timestamp) like "2021-04-29" or date(transaction.timestamp) like "2021-07-20" or date(transaction.timestamp) like "2022-03-13")
78 order by amount desc;
```

result Grid

Filter Rows:

Export:

Wrap Cell Content:

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 Condimentum 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

5 l neas devueltas

- Exercici 2

- Necessitem optimitzar l'assignaci  dels recursos i dependr  de la capacitat operativa que es requereixi, per la qual cosa et demanen la informaci  sobre la quantitat de transaccions que realitzen les empreses, per  el departament de recursos humans  s exigent i vol un llistat de les empreses on especifiquis si tenen m s de 4 transaccions o menys.

100 l neas devueltas.


```

80  -- Ejercicio 2
81  • select company_name, count(company_id),
82     case
83         when count(company_id) < 4 then "Tiene menos de 4"
84         else "Tiene más de 4"
85     end as cantidad_transacciones
86  from company
87  join transaction on company.id = transaction.company_id
88  group by company_name

```

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

	company_name	count(company_id)	cantidad_transacciones
▶	Nunc Interdum Incorporated	105	Tiene más de 4
	Ut Semper Foundation	59	Tiene más de 4
	Enim Condimentum Ltd	57	Tiene más de 4
	Arcu 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
	Fusce Corp.	2	Tiene menos de 4
	Convallis In Incorporated	2	Tiene menos de 4
	Ante Iaculis Nec Foundation	2	Tiene menos de 4
	Donec Ltd	2	Tiene menos de 4
	Sed Nunc Ltd	2	Tiene menos de 4
	Amet Nulla Donec Corporation	2	Tiene menos de 4
	Nascetur Ridiculus Mus Inc.	2	Tiene menos de 4
	Vestibulum Lorem PC	2	Tiene menos de 4
	Gravida Sagittis LLP	2	Tiene menos de 4
	Mus Aenean Eget Foundation	2	Tiene menos de 4