

Nivell 1

- Exercici 1

Mostra totes les transaccions realitzades per empreses d'Alemanya.

```
1  -- Nivell_1
2  -- Exercici_1
3  • SELECT company_name, country, t.*
4  FROM transaction t
5  JOIN company c ON t.company_id = c.id
6  WHERE c.country = 'Germany';
```

company_name	country	id	credit_card...	company_id	user_id	lat	longitude	timestamp	amount	de
Ac Fermentum Incor...	Germany	108B1D1D-5B23-A76C-55EF-C568E49A05DD	CcU-2938	b-2222	275	83.7839	-178.86	2021-07-07 17:43:16	293.57	0
Ac Fermentum Incor...	Germany	EA2C3281-C9C1-A387-44F8-729FB4B51C76	CcU-2938	b-2222	275	20.2004	-116.84	2021-05-09 10:25:08	119.36	1
Convallis In Incorporated	Germany	0DD2E608-5C9E-D1B3-4999-B99F43AD735A	CcU-2959	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
Convallis In Incorporated	Germany	AB069F53-965E-A2A8-CE06-CA8C4FD92501	CcU-2959	b-2234	275	1.64819	-158.007	2021-04-15 13:37:18	60.99	0
Nunc Interdum Incor...	Germany	0466A42E-47CF-8D24-FD01-C0B689713128	CcU-4219	b-2302	170	-43.9695	-117.525	2021-07-26 07:29:18	49.53	0
Nunc Interdum Incor...	Germany	0A476ED9-0C13-1962-F87B-D3563924B539	CcU-4359	b-2302	221	-56.4901	114.801	2022-02-26 20:33:54	430.49	0
Nunc Interdum Incor...	Germany	122DC333-E19F-D629-DCD8-9C54CF1EBB9A	CcU-4366	b-2302	221	29.6372	-166.173	2021-06-09 06:04:14	172.01	0
Nunc Interdum Incor...	Germany	135267BA-2E7D-957C-C42C-6450A2B3ED54	CcU-4520	b-2302	210	20.6724	14.9732	2021-12-29 20:38:23	17.97	0
Nunc Interdum Incor...	Germany	14CAE5B5-8FB1-3E4A-4C85-0EA4167534F4	CcU-4849	b-2302	189	-53.6202	93.0533	2021-12-31 00:29:42	388.04	0
Nunc Interdum Incor...	Germany	158A3ACB-541C-DBCC-65BD-6373C067BF1C	CcU-4849	b-2302	183	42.5424	-170.347	2022-03-08 05:02:19	240.29	0
Nunc Interdum Incor...	Germany	162C7E78-2B6B-7971-A1E4-D2124E732451	CcU-4527	b-2302	210	-69.1381	58.0017	2021-04-11 05:59:18	231.26	0
Nunc Interdum Incor...	Germany	1717FD6B-ADAD-7082-A748-9112BE892CCC	CcU-4219	b-2302	172	69.4892	-138.411	2021-12-29 16:18:54	249.91	0
Nunc Interdum Incor...	Germany	1753A288-9FC1-52E6-5C39-A1FFB97B0D3A	CcU-4345	b-2302	222	57.9422	-114.729	2021-08-17 05:32:08	497.84	0
Nunc Interdum Incor...	Germany	186F63DE-DE27-B1FE-B82F-15B61CEB7726	CcU-4310	b-2302	225	-72.7448	36.6211	2021-12-20 13:13:45	238.16	0
Nunc Interdum Incor...	Germany	18C4E2DD-1E4C-F35E-2198-C660BD81DC25	CcU-4849	b-2302	177	68.0133	91.4839	2021-09-24 18:55:25	237.04	0
Nunc Interdum Incor...	Germany	18CCBA7C-AB01-813D-FAF3-4BA897429368	CcU-4219	b-2302	173	51.3881	-156.371	2021-06-21 03:21:34	58.16	0
Nunc Interdum Incor...	Germany	19E1EC3E-2119-1EFD-8AAE-5930D4A4E63F	CcU-4219	b-2302	154	-56.0839	116.987	2021-07-06 21:40:15	29.63	0
Nunc Interdum Incor...	Germany	1B117D49-936C-BA6C-E94B-30C3293AA239	CcU-4219	b-2302	163	-75.099	109.034	2021-05-09 23:56:04	371.35	0
Nunc Interdum Incor...	Germany	1B521826-5860-5A86-5364-6EB6A5CC21B7	CcU-4226	b-2302	231	-53.4613	49.1484	2021-08-14 02:39:50	476.33	0
Nunc Interdum Incor...	Germany	1C9B2C74-BD16-7616-A6E7-CEB97D7D95B9	CcU-4415	b-2302	217	81.1797	23.8826	2021-06-27 12:07:24	469.26	0

- Exercici 2

Màrqueting està preparant alguns informes de tancaments de gestió, et demanen que els passis un llistat de les empreses que han realitzat transaccions per una suma superior a la mitjana de totes les transaccions.

```
7  -- Exercici 2
8  • SELECT company.company_name, SUM(transaction.amount) AS total_amount
9  FROM company
10 INNER JOIN transaction ON company.id = transaction.company_id
11 GROUP BY company.company_name
12 HAVING SUM(transaction.amount) > (SELECT AVG(amount)
13 FROM transaction
14 WHERE declined != 1)
15 ORDER BY total_amount DESC;
```

company_name	total_amount
Nunc Interdum Incorporated	25622.65
Ut Semper Foundation	16150.24
Malesuada PC	15013.93
Enim Condimentum Ltd	14616.05
Lorem Eu Incorporated	14280.65
Arcu LLP	14116.04
Non Institute	8911.24
Eget Ipsum Ltd	946.15
Non Magna LLC	936.69
Sed Id Limited	922.42
Justo Eu Arcu Ltd	887.27
Eget Tincidunt Dui Institute	885.04
Viverra Donec Foundation	884.56
Vestibulum Lorem PC	868.12

- Exercici 3

El departament de comptabilitat va perdre la informació de les transaccions realitzades per una empresa, però no recorden el seu nom, només recorden que el seu nom iniciava amb la lletra c. Com els pots ajudar? Comenta-ho acompanyant-ho de la informació de les transaccions.

Només existeixen tres empreses que comencin amb la lletra 'C'.

b-2234	Convallis In Incorporated
b-2514	Cras Consulting
b-2554	Cras Vehicula Aliquet Industries

Quan cerquem informació de les transaccions que han realitzat aquestes tres empreses ens retorna sis files on podem observar que totes tres empreses tenen una transacció efectuada i una declinada.

```
36 -- Exercici_3
37 • SELECT DISTINCT company.company_name, t.*
38 FROM company
39 LEFT JOIN transaction t ON company.id = t.company_id
40 WHERE company.company_name LIKE 'C%';
41
```

company_name	id	credit_card...	company_id	user_id	lat	longitude	timestamp	amount	declined
Convallis In Incorporated	0DD2E608-5C9E-D1B3-4999-B99F43AD735A	CoU-2959	b-2234	275	9.68811	130.282	2021-04-17 05:30:17	252.47	1
Convallis In Incorporated	AB069F53-965E-A2A8-CE06-CA8C4FD92501	CoU-2959	b-2234	275	1.64819	-158.007	2021-04-15 13:37:18	60.99	0
Cras Consulting	439F4F6A-57C7-3A59-6038-AD7133887522	CoU-3449	b-2514	268	-13.9867	-104.268	2021-03-18 05:42:48	60.93	0
Cras Consulting	ED1CFB7D-E626-CE54-57A1-A036778B5E1F	CoU-3449	b-2514	268	9.75306	-134.718	2021-11-28 23:27:04	230.41	1
Cras Vehicula Aliquet Industries	5C3A8A3D-8974-40A6-A8AF-C1F7AA6B7C94	CoU-3519	b-2554	267	15.1828	165.662	2021-07-23 15:35:14	158.05	1
Cras Vehicula Aliquet Industries	8D895ADD-5501-2A9C-24DD-2EAEB7AEF1C5	CoU-3519	b-2554	267	8.58711	-34.6616	2021-10-27 19:43:57	181.87	0

- Exercici 4

Van eliminar del sistema les empreses que no tenen transaccions registrades, lliura el llistat d'aquestes empreses.

He realitzat dues consultes per trobar les empreses que no tenen transaccions registrades i en ambdós casos no apareix cap resultat:

```
21 -- Exercici_4
22 • SELECT *
23 FROM company c
24 WHERE NOT EXISTS (
25     SELECT 1
26     FROM transaction t
27     WHERE t.company_id = c.id);
28
```

id	company_name	phone	email	country	website
NULL	NULL	NULL	NULL	NULL	NULL

```

28  --
29  • SELECT company.*
30  FROM company
31  LEFT JOIN transaction ON company.id = transaction.company_id
32  WHERE transaction.company_id IS NULL;
33
34

```

100% 23:26

Result Grid Filter Rows: Search Export:

id	company_name	phone	email	country	website	

Això pot indicar que no existeix cap empresa que no hagi realitzat una transacció. D'altra banda, els valors NULL retornats en la primera consulta, apunten que totes les files de taula compay tenen una correspondència amb la taula transaction

El que sí podem trobar, són aquelles empreses amb una transacció declinada:

```

34  • SELECT DISTINCT c.*, declined
35  FROM company c
36  INNER JOIN transaction t ON c.id = t.company_id
37  WHERE t.declined = 1;
38
39

```

100% 38:32

Result Grid Filter Rows: Search Export:

id	company_name	phone	email	country	website	declined
b-2386	Lacus Quisque Associates	06 26 86 55 77	convallis@yahoo.couk	United States	https://baidu.com/group/9	1
b-2298	Elit Etiam Laoreet Associates	07 69 74 17 45	ultrices@google.couk	Canada	https://yahoo.com/fr	1
b-2338	Magna Incorporated	07 73 69 44 18	non@google.net	New Zealand	https://twitter.com/en-us	1
b-2434	Tristique Neque Venenatis Instit...	04 34 85 12 85	ullamcorper.magna@hotmail.ca	Sweden	https://ebay.com/sub	1
b-2506	Sapient Nunc Pulvinar LLP	08 37 12 58 11	sit.amet@yahoo.net	New Zealand	https://netflix.com/settings	1
b-2234	Convallis In Incorporated	06 66 57 29 50	mauris.ut@aol.couk	Germany	https://cnn.com/user/110	1
b-2346	Ut Semper Foundation	01 60 36 33 06	consectetuer@google.ca	Sweden	https://ebay.com/settings	1
b-2490	Nunc Sit Incorporated	07 28 42 63 63	pede.ultrices@icloud.net	Norway	https://naver.com/en-ca	1
b-2370	Non Justo Corp.	09 30 54 14 44	urna.ut.tincidunt@yahoo.edu	Sweden	https://baidu.com/en-us	1
b-2466	Amet Lorem LLP	05 47 44 68 02	ultrices.adipiscing@icloud.edu	Spain	https://wikipedia.org/one	1
b-2546	Lorem Ipsum Dolor Corp.	09 03 14 76 02	augue.id@icloud.net	Sweden	https://baidu.com/site	1
b-2342	Fringilla Portitor Incorporated	06 30 30 97 81	ultrices.a.auctor@protonmail.c...	Sweden	https://wikipedia.org/setti...	1
b-2474	Mauris Incorporated	06 84 33 15 97	nisi.mauris.nulla@hotmail.net	Norway	https://cnn.com/site	1
b-2294	Auctor Mauris Vel LLP	08 09 28 74 14	nec.tempus@icloud.couk	United States	https://instagram.com/fr	1
b-2470	Nec Luctus LLC	02 14 71 75 73	consectetuer.cursus@proton...	Norway	https://instagram.com/us...	1
b-2450	Turpis Company	09 69 48 65 52	cursus.integer@outlook.ca	Netherlands	https://instagram.com/sub	1
b-2282	Pretium Neque Corp.	07 77 48 55 28	eleifend.nec.malesuada@prot...	Australia	https://netflix.com/sub	1
b-2266	Mus Aenean Eget Foundation	06 25 15 52 43	mi.duis@hotmail.net	Sweden	https://instagram.com/gr...	1
b-2510	Maecenas Malesuada Fringilla I...	09 38 53 76 61	id.ante@yahoo.ca	Netherlands	https://zoom.us/en-us	1
b-2330	Donec Fringilla PC	01 51 58 14 44	ut.tincidunt@hotmail.ca	France	https://google.com/fr	1
b-2358	Ac Industries	09 34 65 40 60	ipsum@yahoo.com	Germany	https://bbc.co.uk/group/9	1
b-2334	Amet Institute	06 33 40 21 33	nullam.lobortis.quam@outlook...	Australia	https://nytimes.com/one	1

Nivell 2

Exercici 1

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.

En primer lloc cerquem a quin país està situada aquesta companyia i veiem que és Regne Unit.

```
71 -- Nivell_2
72 -- Exercici_1
73 • SELECT company_name, country
74 FROM company c
75 WHERE company_name= 'Non Institute'
76
```

100%	22:75	1 error found
Result Grid	Filter Rows: Search	Export:
company_name	country	
Non Institute	United Kingdom	

A continuació, executem una segona consulta que selecciona les transaccions de totes les empreses ubicades a Regne Unit que no siguin l'empresa Non Institute. Apareixen un total de 70 transaccions.

77 •

SELECT company_name, country, t.*

78

FROM company c

79

INNER JOIN transaction t ON c.id = t.company_id

80

WHERE country= 'United Kingdom' AND company_name != 'Non Institute'

81

ORDER BY company_name;

100%

↕

3:76

Result Grid

Filter Rows:

Search

Export:

company_name	country	id	credit_card...	company_id	user_id	lat	longitude	timestamp	amount
Ac Libero Inc.	United Kingdom	2A5A3001-104F-1D1F-7852-5BA801869B6F	CcU-3169	b-2354	272	-67.2525	-142.557	2022-02-27 18:35:15	30.76
Ac Libero Inc.	United Kingdom	9679E769-32DC-2591-B893-B4AA2D84E332	CcU-3169	b-2354	272	47.6643	130.202	2021-06-28 11:22:10	186.34
Amet Faucibus Ut Foundation	United Kingdom	6D69D98A-F18A-99BD-BA86-E43C29FC5ECE	CcU-3204	b-2374	272	-52.3724	70.1522	2021-05-26 02:33:06	144.33
Amet Faucibus Ut Foundation	United Kingdom	E5078B1B-9591-E204-CC0A-E14C4EC74EAB	CcU-3204	b-2374	272	69.5434	98.8783	2021-09-06 01:29:42	220.85
Enim Condimentum Ltd	United Kingdom	1479B3D2-B7BA-C7BB-4CE3-8D7C2DE85ABB	CcU-2994	b-2326	133	66.2672	172.399	2021-08-09 00:58:07	309.45
Enim Condimentum Ltd	United Kingdom	152598C2-029D-D684-4B66-91EDF393EBFF	CcU-2994	b-2326	126	-67.0189	-141.672	2021-07-05 03:10:00	395.43
Enim Condimentum Ltd	United Kingdom	1B636B58-A2E8-7C69-D9C9-C54535DAFD3B	CcU-2994	b-2326	131	70.2543	-13.1336	2021-07-06 08:48:46	195.06
Enim Condimentum Ltd	United Kingdom	20418DE5-B804-BE9B-BD7A-A95C1BFD8F5C	CcU-2994	b-2326	126	-79.1145	1.51481	2022-01-03 15:59:29	479.52
Enim Condimentum Ltd	United Kingdom	239B8576-6C0E-137A-C2F6-3180A188A2D3	CcU-2994	b-2326	126	23.6174	137.222	2021-08-26 06:04:05	43.90
Enim Condimentum Ltd	United Kingdom	267C4A86-7BA7-1C5E-0718-2824983C87DD	CcU-2994	b-2326	126	-17.5259	104.915	2021-10-01 21:08:53	122.63
Enim Condimentum Ltd	United Kingdom	3142C93E-B3B7-49E4-EE2D-29CA834B198D	CcU-2994	b-2326	126	-67.8476	-119.978	2021-04-06 17:24:44	91.59
Enim Condimentum Ltd	United Kingdom	3578688E-7B1D-B887-3BC7-20B8673AA31E	CcU-2994	b-2326	126	87.0665	-22.7339	2021-07-26 22:59:24	303.60
Enim Condimentum Ltd	United Kingdom	360C7814-F7AF-B43A-0946-AB38D2683C86	CcU-2994	b-2326	116	-7.93005	-79.0733	2021-08-21 10:19:58	494.82
Enim Condimentum Ltd	United Kingdom	391E1CFD-D653-E45B-A729-F2EB93247B58	CcU-2994	b-2326	118	60.5512	103.904	2021-10-09 00:50:38	271.27
Enim Condimentum Ltd	United Kingdom	3C4D7C2A-A402-B941-625A-D64CA53526E8	CcU-2994	b-2326	117	23.1627	-10.381	2021-04-25 19:11:52	441.27
Enim Condimentum Ltd	United Kingdom	3ED634C2-01CA-D6E9-2DBD-24B53A7912F7	CcU-4219	b-2326	137	69.0549	96.5033	2021-03-29 11:38:38	478.54
Enim Condimentum Ltd	United Kingdom	3FEC4131-9BED-2EA6-1776-82674C80DD8B	CcU-2994	b-2326	126	-7.28469	179.063	2021-07-25 04:59:17	393.42
Enim Condimentum Ltd	United Kingdom	41C13F08-471E-D475-3E14-760DF379B42	CcU-4219	b-2326	138	-51.7289	55.3294	2022-01-16 16:48:55	45.63
Enim Condimentum Ltd	United Kingdom	41EC591D-808E-D85C-F05F-08BC3DE7A618	CcU-2994	b-2326	126	5.38535	-78.3917	2022-01-06 07:47:39	335.54
Enim Condimentum Ltd	United Kingdom	4217E857-1D51-5D25-B645-EC24D23C8759	CcU-2994	b-2326	129	65.4733	-20.2735	2021-04-23 13:07:58	193.33
Enim Condimentum Ltd	United Kingdom	45CA3E45-6B42-CAC4-7683-EBB69D523B3E	CcU-4219	b-2326	140	85.7055	36.1497	2021-04-29 06:17:02	149.89
Enim Condimentum Ltd	United Kingdom	49CD105D-E569-3733-C8C8-3908ED7E1838	CcU-3393	b-2326	108	-47.8783	168.275	2021-12-24 23:43:59	411.81

Exercici 2

El departament de comptabilitat necessita que trobis l'empresa que ha realitzat la transacció de major suma en la base de dades.

```
82  -- Exercici_2
83  • SELECT c.company_name, t.*
84  FROM company c
85  INNER JOIN (
86      SELECT company_id, MAX(amount) AS max_amount
87      FROM transaction t
88      WHERE declined != 1
89      GROUP BY company_id
90  ) t ON c.id = t.company_id
91  ORDER BY t.max_amount DESC
92  LIMIT 1;
```

100% 48:79

Result Grid Filter Rows: Search Export: Fetch rows:

company_name	company_id	max_amount
Nunc Interdum Incorporated	b-2302	499.23

Nivell 3

Exercici 1

S'estan establint els objectius de l'empresa per al següent trimestre, per la qual cosa necessiten una base sòlida per a avaluar el rendiment i mesurar l'èxit en els diferents mercats. Per a això, necessiten el llistat dels països la mitjana de transaccions dels quals sigui superior a la mitjana general.

```
60  -- Nivell_3
61  -- Exercici_1
62  • SELECT company.country, AVG(transaction.amount) AS average_sales
63  FROM company
64  INNER JOIN transaction ON company.id = transaction.company_id
65  WHERE
66      (SELECT AVG(amount) FROM transaction WHERE declined != 1) <
67      (SELECT AVG(amount) FROM transaction t2 WHERE t2.company_id = company.id AND t2.declined != 1)
68  GROUP BY company.country
69  ORDER BY average_sales DESC;
```

100% 12:60

Result Grid Filter Rows: Search Export:

country	average_sales
United States	408.302857
Netherlands	353.301111
New Zealand	349.655000
Norway	344.588333
Australia	313.065000
Italy	296.053333
Ireland	290.520893
China	289.040000
Belgium	286.681429
Sweden	280.146522
United Kingdom	277.336989
Canada	271.810000
Germany	266.474444

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.

70

-- Exercici_2

71

• SELECT company.company_name, COUNT(transaction.id) AS total_transactions,

72

IF(COUNT(transaction.id) > 4, 'More than 4 transactions', 'Less than 4 transactions') AS transaction_count_status

73

FROM company

74

INNER JOIN transaction ON company.id = transaction.company_id

75

GROUP BY company.company_name

76

ORDER BY total_transactions DESC;

00%

29:69

Result Grid

Filter Rows: Search

Export:

company_name	total_tr...	transaction_count_sta...
Nunc Interdum Incorporated	105	More than 4 transactions
Ut Semper Foundation	59	More than 4 transactions
Enim Condimentum Ltd	57	More than 4 transactions
Arcu LLP	56	More than 4 transactions
Lorem Eu Incorporated	54	More than 4 transactions
Malesuada PC	52	More than 4 transactions
Non Institute	30	More than 4 transactions
Amet Nulla Donec Corporation	2	Less than 4 transactions
Nascetur Ridiculus Mus Inc.	2	Less than 4 transactions
Vestibulum Lorem PC	2	Less than 4 transactions
Gravida Sagittis LLP	2	Less than 4 transactions
Mus Aenean Eget Foundation	2	Less than 4 transactions
Dis Parturient Institute	2	Less than 4 transactions
Sed LLC	2	Less than 4 transactions
Sed Nunc Ltd	2	Less than 4 transactions
Pretium Neque Corp.	2	Less than 4 transactions
Fringilla LLC	2	Less than 4 transactions
Quisque Libero LLC	2	Less than 4 transactions
Auctor Mauris Vel LLP	2	Less than 4 transactions