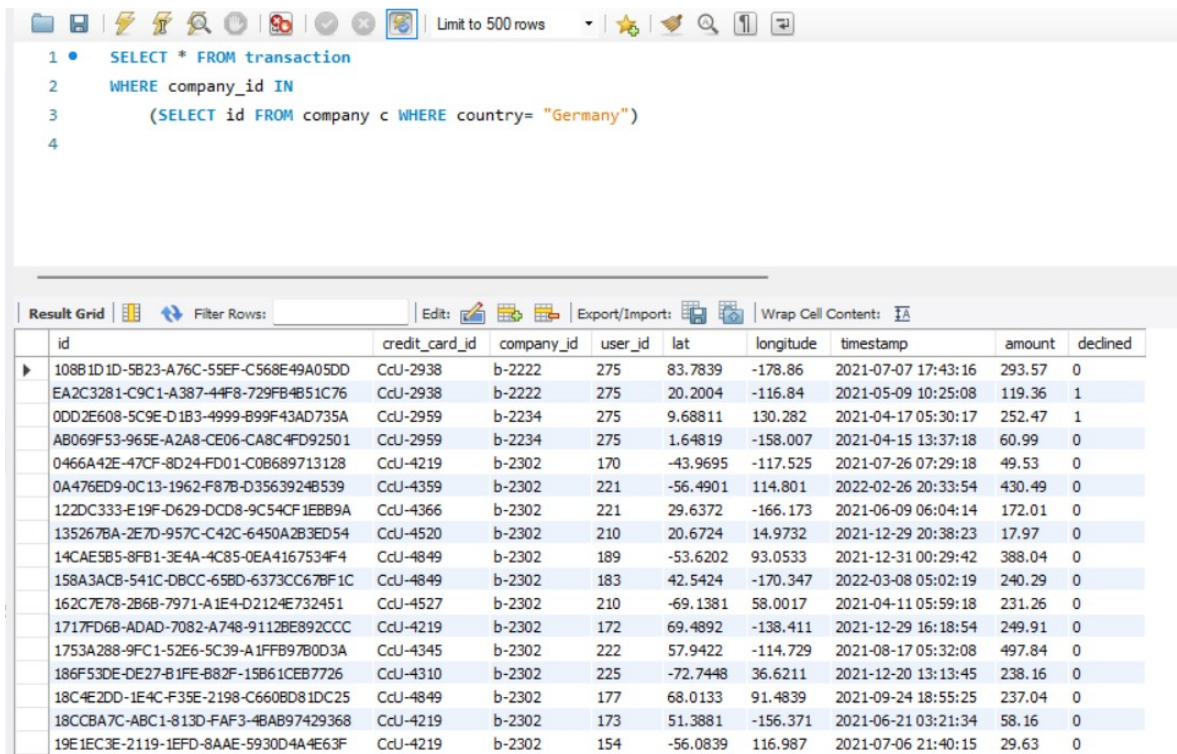


Tasca S2.01. Subconsultes - MySQL

Nivell 1

Exercici 1

Mostra totes les transaccions realitzades per empreses d'Alemanya.



The screenshot shows a MySQL query editor with a toolbar at the top. The query is as follows:

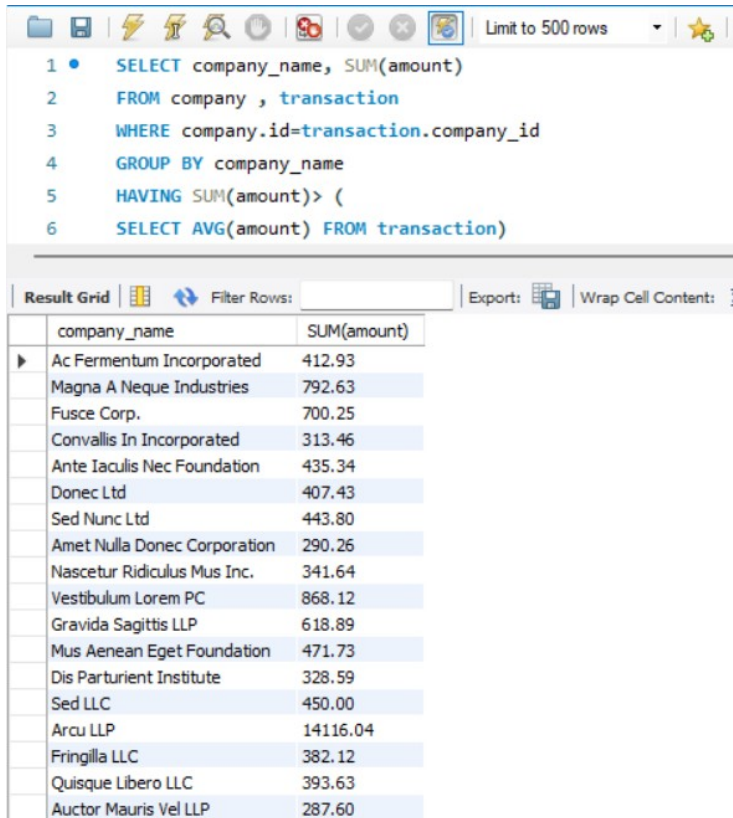
```
1 • SELECT * FROM transaction
2 WHERE company_id IN
3     (SELECT id FROM company c WHERE country= "Germany")
4
```

Below the query editor, the 'Result Grid' is displayed, showing a table with 10 columns: id, credit_card_id, company_id, user_id, lat, longitude, timestamp, amount, and declined. The table contains 20 rows of transaction data.

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
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
162C7E78-2B6B-7971-A1E4-D2124E732451	CcU-4527	b-2302	210	-69.1381	58.0017	2021-04-11 05:59:18	231.26	0
1717FD68-ADAD-7082-A748-9112BE892CCC	CcU-4219	b-2302	172	69.4892	-138.411	2021-12-29 16:18:54	249.91	0
1753A288-9FC1-52E6-5C39-A1FFB97B0D3A	CcU-4345	b-2302	222	57.9422	-114.729	2021-08-17 05:32:08	497.84	0
186F53DE-DE27-B1FE-B82F-15B61CEB7726	CcU-4310	b-2302	225	-72.7448	36.6211	2021-12-20 13:13:45	238.16	0
18C4E2DD-1E4C-F35E-2198-C660BD81DC25	CcU-4849	b-2302	177	68.0133	91.4839	2021-09-24 18:55:25	237.04	0
18CCBA7C-ABC1-813D-FAF3-4BAB97429368	CcU-4219	b-2302	173	51.3881	-156.371	2021-06-21 03:21:34	58.16	0
19E1EC3E-2119-1EFD-8AAE-5930D4A4E63F	CcU-4219	b-2302	154	-56.0839	116.987	2021-07-06 21:40:15	29.63	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.



```
1 • SELECT company_name, SUM(amount)
2 FROM company , transaction
3 WHERE company.id=transaction.company_id
4 GROUP BY company_name
5 HAVING SUM(amount)> (
6 SELECT AVG(amount) FROM transaction)
```

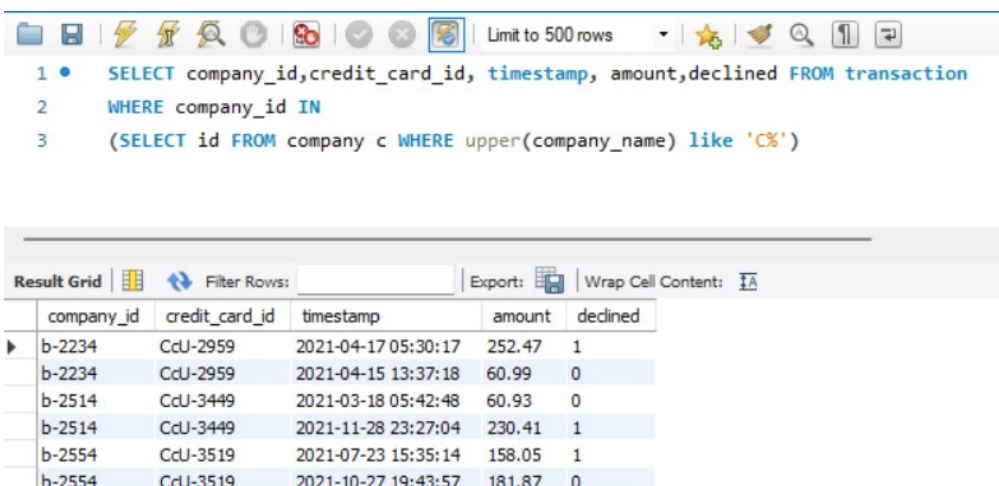
Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

company_name	SUM(amount)
Ac Fermentum Incorporated	412.93
Magna A Neque Industries	792.63
Fusce Corp.	700.25
Convallis In Incorporated	313.46
Ante Iaculis Nec Foundation	435.34
Donec Ltd	407.43
Sed Nunc Ltd	443.80
Amet Nulla Donec Corporation	290.26
Nascetur Ridiculus Mus Inc.	341.64
Vestibulum Lorem PC	868.12
Gravida Sagittis LLP	618.89
Mus Aenean Eget Foundation	471.73
Dis Parturient Institute	328.59
Sed LLC	450.00
Arcu LLP	14116.04
Fringilla LLC	382.12
Quisque Libero LLC	393.63
Auctor Mauris Vel LLP	287.60

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.

Podem recuperar la informació de les transaccions que necessiten fent la cerca de les transaccions que han fet les empreses que comencen amb C, amb les dates i la quantitat podrien trobar-les.



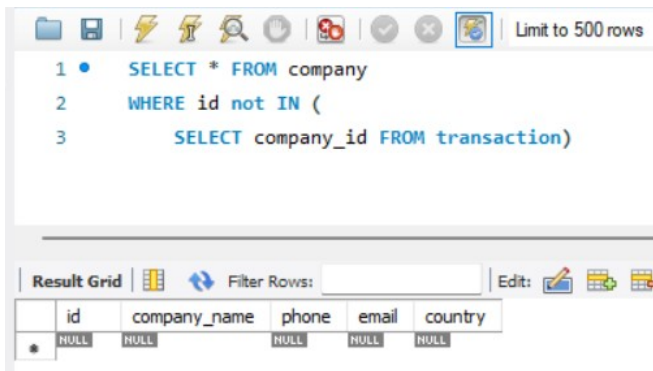
```
1 • SELECT company_id, credit_card_id, timestamp, amount, declined FROM transaction
2 WHERE company_id IN
3 (SELECT id FROM company c WHERE upper(company_name) like 'C%')
```

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

company_id	credit_card_id	timestamp	amount	declined
b-2234	CcU-2959	2021-04-17 05:30:17	252.47	1
b-2234	CcU-2959	2021-04-15 13:37:18	60.99	0
b-2514	CcU-3449	2021-03-18 05:42:48	60.93	0
b-2514	CcU-3449	2021-11-28 23:27:04	230.41	1
b-2554	CcU-3519	2021-07-23 15:35:14	158.05	1
b-2554	CcU-3519	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.



The screenshot shows a database query tool interface. At the top, there is a toolbar with various icons and a text label "Limit to 500 rows". Below the toolbar, a SQL query is displayed in a text area:

```
1 • SELECT * FROM company
2 WHERE id not IN (
3     SELECT company_id FROM transaction)
```

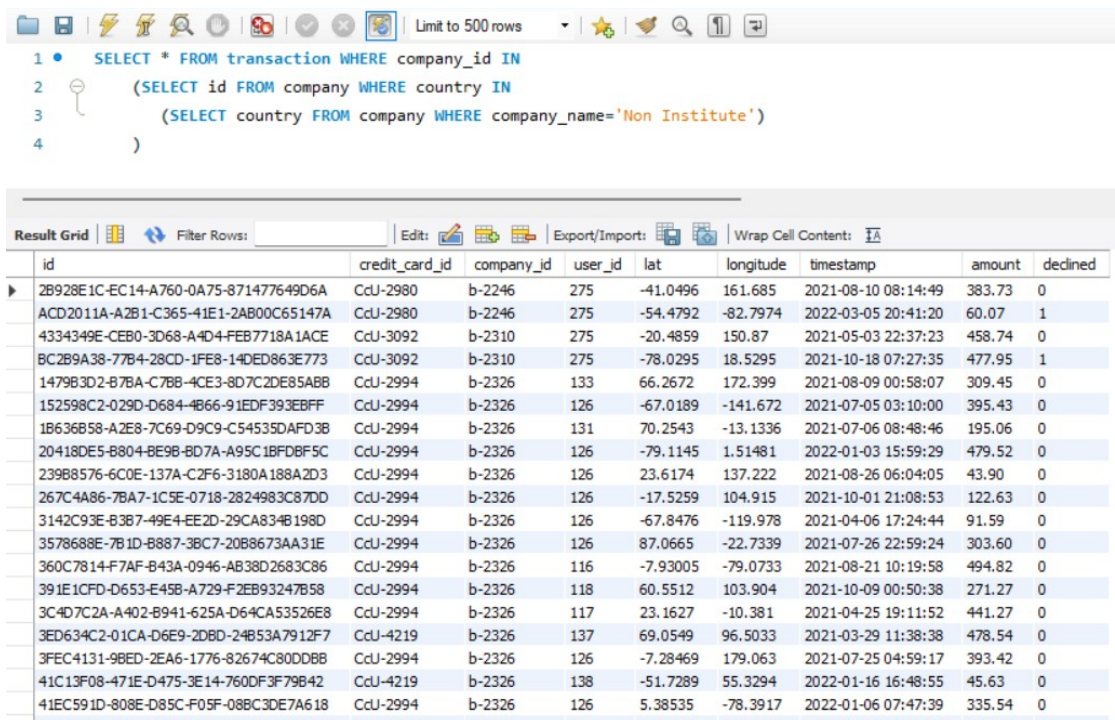
Below the query, there is a "Result Grid" section. It includes a "Filter Rows:" input field and an "Edit:" button. The result grid itself is a table with the following columns: id, company_name, phone, email, and country. The first row of data shows all five columns as "NULL".

	id	company_name	phone	email	country
*	NULL	NULL	NULL	NULL	NULL

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.

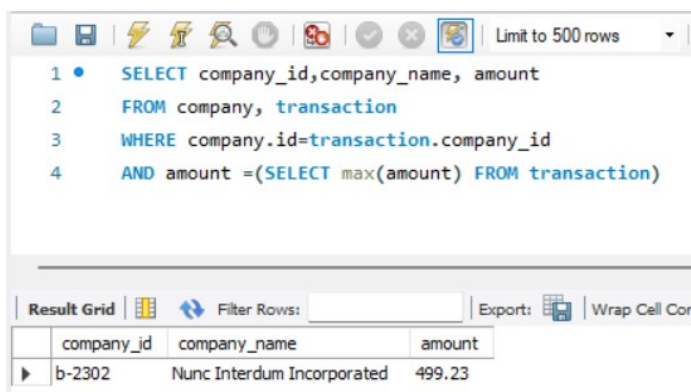


```
1 • SELECT * FROM transaction WHERE company_id IN
2   (SELECT id FROM company WHERE country IN
3     (SELECT country FROM company WHERE company_name='Non Institute'))
4   )
```

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
1479B3D2-87B8-C7B8-ACE3-8D7C2DE85ABB	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
20418DE5-B804-8E98-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
3578688E-7B1D-8887-3BC7-20B8673AA31E	CcU-2994	b-2326	126	87.0665	-22.7339	2021-07-26 22:59:24	303.60	0
360C7814-F7AF-B43A-0946-AB38D2683C86	CcU-2994	b-2326	116	-7.93005	-79.0733	2021-08-21 10:19:58	494.82	0
391E1CFD-D653-E45B-A729-F2EB93247B58	CcU-2994	b-2326	118	60.5512	103.904	2021-10-09 00:50:38	271.27	0
3C4D7C2A-A402-B941-625A-D64CA53526E8	CcU-2994	b-2326	117	23.1627	-10.381	2021-04-25 19:11:52	441.27	0
3ED634C2-01CA-D6E9-2DBD-24B53A7912F7	CcU-4219	b-2326	137	69.0549	96.5033	2021-03-29 11:38:38	478.54	0
3FEC4131-9BED-2EA6-1776-82674C80DD8B	CcU-2994	b-2326	126	-7.28469	179.063	2021-07-25 04:59:17	393.42	0
41C13F08-471E-D475-3E14-760DF3F79B42	CcU-4219	b-2326	138	-51.7289	55.3294	2022-01-16 16:48:55	45.63	0
41EC591D-808E-D85C-F05F-08BC3DE7A618	CcU-2994	b-2326	126	5.38535	-78.3917	2022-01-06 07:47:39	335.54	0

Exercici 2

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



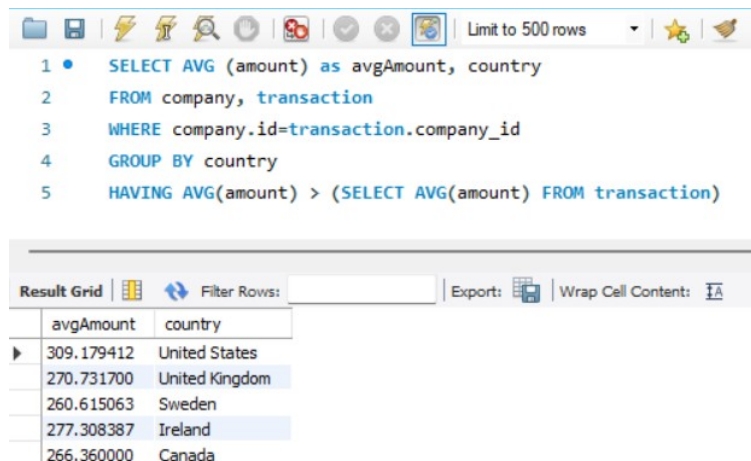
```
1 • SELECT company_id, company_name, amount
2   FROM company, transaction
3   WHERE company.id=transaction.company_id
4   AND amount =(SELECT max(amount) FROM transaction)
```

company_id	company_name	amount
b-2302	Nunc Interdum Incorporated	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.

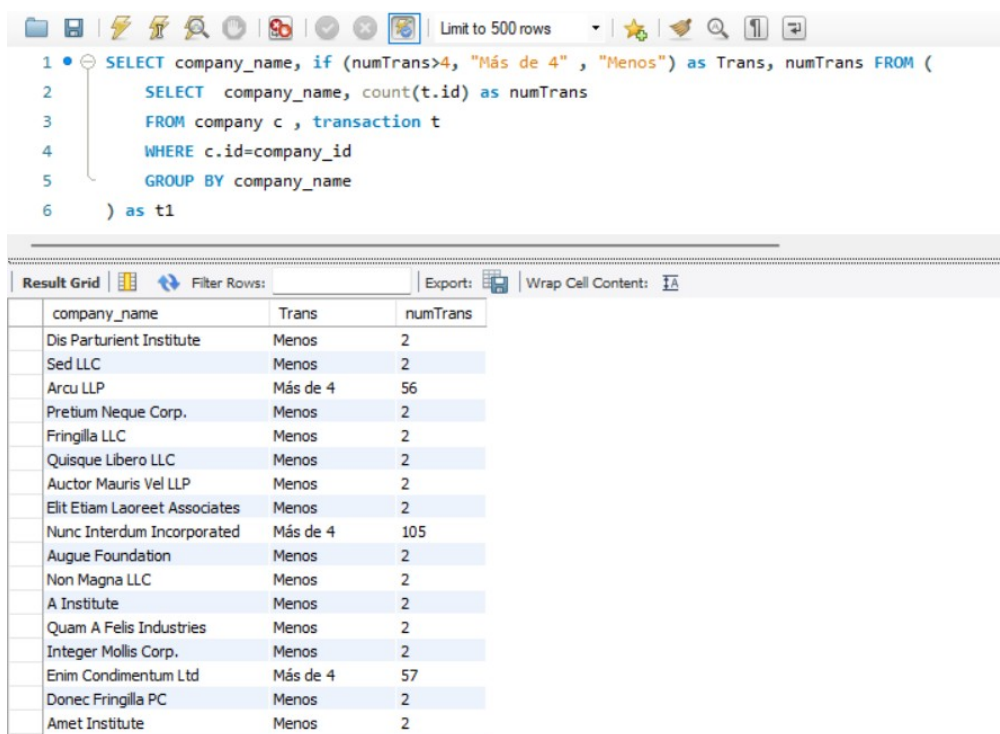


```
1 • SELECT AVG (amount) as avgAmount, country
2 FROM company, transaction
3 WHERE company.id=transaction.company_id
4 GROUP BY country
5 HAVING AVG(amount) > (SELECT AVG(amount) FROM transaction)
```

avgAmount	country
309.179412	United States
270.731700	United Kingdom
260.615063	Sweden
277.308387	Ireland
266.360000	Canada

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.



```
1 • SELECT company_name, if (numTrans>4, "Más de 4" , "Menos") as Trans, numTrans FROM (
2 SELECT company_name, count(t.id) as numTrans
3 FROM company c , transaction t
4 WHERE c.id=company_id
5 GROUP BY company_name
6 ) as t1
```

company_name	Trans	numTrans
Dis Parturient Institute	Menos	2
Sed LLC	Menos	2
Arcu LLP	Más de 4	56
Pretium Neque Corp.	Menos	2
Fringilla LLC	Menos	2
Quisque Libero LLC	Menos	2
Auctor Mauris Vel LLP	Menos	2
Elit Etiam Laoreet Associates	Menos	2
Nunc Interdum Incorporated	Más de 4	105
Augue Foundation	Menos	2
Non Magna LLC	Menos	2
A Institute	Menos	2
Quam A Felis Industries	Menos	2
Integer Mollis Corp.	Menos	2
Enim Condimentum Ltd	Más de 4	57
Donec Fringilla PC	Menos	2
Amet Institute	Menos	2