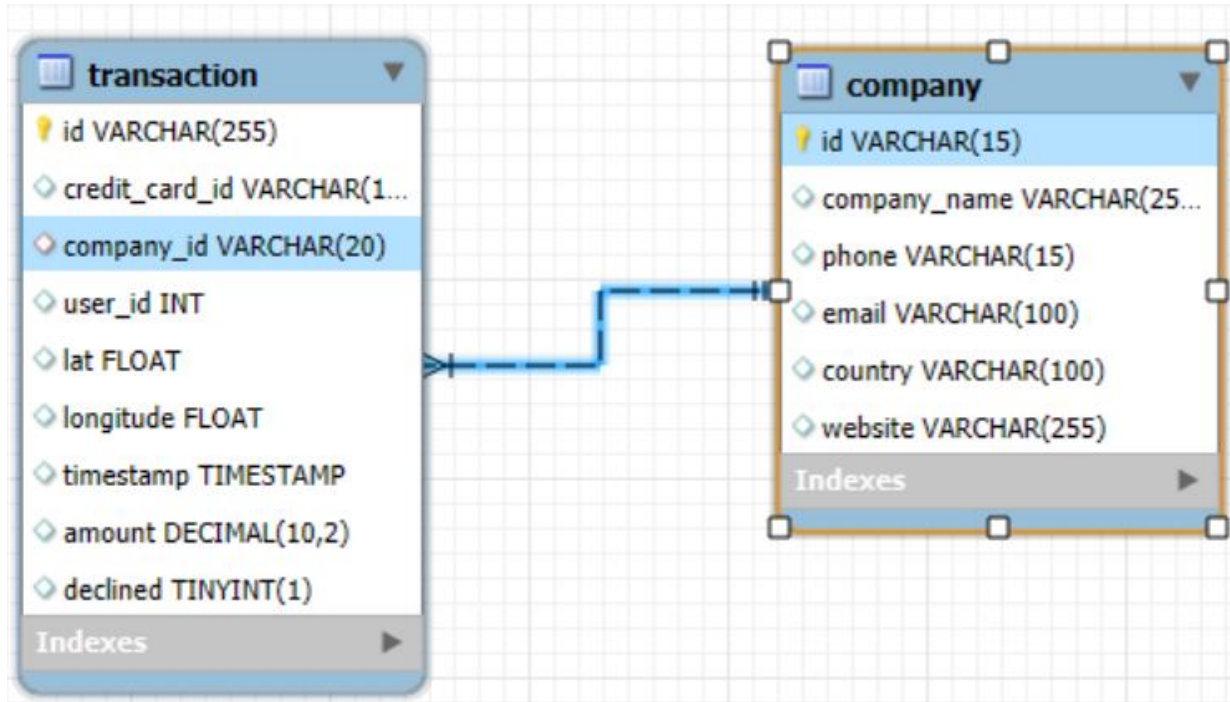


EX 1






El modelo en cuestion es de tipo relacional, donde destaca la relacion de 1 a N considerando la cardinalidad Company a Transaction.


Las dos tablas se relacionan con una PK (id) en Company a una FK (company_id) en Transaction


EX 2


```
1  # Llistat dels països que estan generant vendes.
2  • SELECT DISTINCT country
3  FROM company c
4  JOIN transaction t ON c.id = t.company_id
5  WHERE declined = 0;
```

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

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

Result 144 

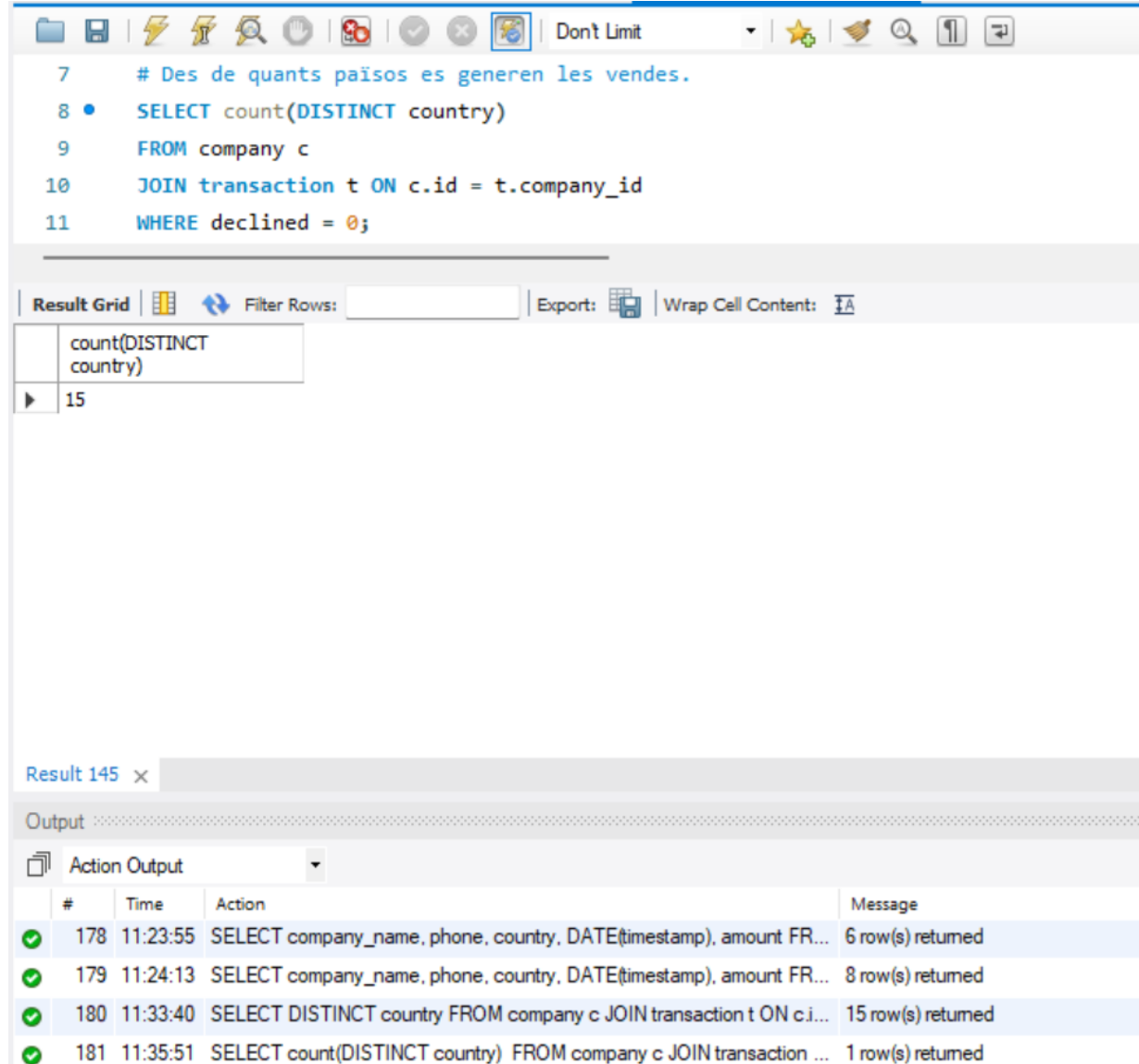
Output 

Action Output 

#	Time	Action	Message
✓ 177	11:14:58	SELECT company_name, count(t.id) as transacciones, count(t.id) > 400 a...	100 row(s) returned
✓ 178	11:23:55	SELECT company_name, phone, country, DATE(timestamp), amount FR...	6 row(s) returned
✓ 179	11:24:13	SELECT company_name, phone, country, DATE(timestamp), amount FR...	8 row(s) returned
✓ 180	11:33:40	SELECT DISTINCT country FROM company c JOIN transaction t ON c.i...	15 row(s) returned

- Llistat dels països que estan generant vendes.

EX 2 ★



The screenshot shows a database IDE interface. At the top, there's a toolbar with various icons and a 'Don't Limit' button. Below the toolbar, a SQL query is entered in a text area:

```
7 # Des de quants països es generen les vendes.  
8 • SELECT count(DISTINCT country)  
9 FROM company c  
10 JOIN transaction t ON c.id = t.company_id  
11 WHERE declined = 0;
```

Below the query editor, there's a 'Result Grid' section. It shows a single column with the header 'count(DISTINCT country)' and a single row with the value '15'.

At the bottom, there's an 'Output' section. It shows a table with columns: '#', 'Time', 'Action', and 'Message'. The table contains four rows of log entries:

#	Time	Action	Message
✓ 178	11:23:55	SELECT company_name, phone, country, DATE(timestamp), amount FR...	6 row(s) returned
✓ 179	11:24:13	SELECT company_name, phone, country, DATE(timestamp), amount FR...	8 row(s) returned
✓ 180	11:33:40	SELECT DISTINCT country FROM company c JOIN transaction t ON c.i...	15 row(s) returned
✓ 181	11:35:51	SELECT count(DISTINCT country) FROM company c JOIN transaction ...	1 row(s) returned

- Des de quants països es generen les vendes.

EX 2 ★

```
13 # Identifica la companyia amb la mitjana més gran de vendes.
14 • SELECT company_name, count(t.id) as transacions, round(avg(t.amount),2) as avg_vent
15 FROM company c
16 JOIN transaction t ON c.id = t.company_id
17 GROUP BY company_name
18 order by avg_vent DESC
19 limit 1;
20
```

Result Grid

	company_name	transacions	avg_vent
▶	Ac Fermentum Incorporated	2401	284.87

Result 147 x

Output

Action Output

#	Time	Action	Message	Dur
✓ 180	11:33:40	SELECT DISTINCT country FROM company c JOIN transaction t ON c.i...	15 row(s) returned	0.32
✓ 181	11:35:51	SELECT count(DISTINCT country) FROM company c JOIN transaction ...	1 row(s) returned	0.31
✓ 182	11:37:05	SELECT company_name, count(t.id) as transacions, round(avg(t.amount...	1 row(s) returned	0.45
✓ 183	11:37:29	SELECT company_name, count(t.id) as transacions, round(avg(t.amount...	1 row(s) returned	0.45

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

EX 3 ★

```
21      # Mostra totes les transaccions realitzades per empreses d'Alemanya.  
22 •    SELECT id  
23      FROM transaction  
24      WHERE company_id IN (SELECT id FROM company  
25      WHERE country = "Germany");
```

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

id
00138D3B-206D-4C03-94B7-63A2676EB9B4
0013C1B6-3B84-4D6C-8154-E2B3FEBCA8E9
00201A11-2E62-44C4-941D-198FC8DB77F0
00235618-0A5C-4D49-9DCB-B3A9405D8923
005A5A7B-1F1A-4B6C-9B15-1625A78C9C38
00687139-48B2-4FFA-8E73-B20376F04AB4
0074F4DD-32F1-4827-8758-55896314623A
00AAB9CD-39D6-4DCB-8A1D-13BE73DC90A9
00BE09D4-6920-47D8-ABE8-325E2269829D
00DA0383-E048-4577-8ED1-3C56C258FF2F
00DD11DE-5D01-4BBD-02A0-174D183A50DE

transaction 148 x

Output

Action Output

#	Time	Action	Message
181	11:35:51	SELECT count(DISTINCT country) FROM company c JOIN transaction ...	1 row(s) returned
182	11:37:05	SELECT company_name, count(t.id) as transaccions, round(avg(t.amount...	1 row(s) returned
183	11:37:29	SELECT company_name, count(t.id) as transaccions, round(avg(t.amount...	1 row(s) returned
184	11:38:27	SELECT id FROM transaction WHERE company_id IN (SELECT id FR...	13291 row(s) returned

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

EX 3 ★

```
16
17 # Llista les empreses que han realitzat transaccions per un amount superior a la mitjana de totes les transaccions.
18 • SELECT company_name
19 FROM company
20 WHERE id IN (SELECT company_id
21              FROM transaction
22              WHERE amount > (SELECT avg(amount)
23                             FROM transaction)
24                          );
25
```

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

company_name
Ac Fermentum Incorporated
Magna A Neque Industries
Fusce Corp.
Convallis In Incorporated
Ante Iaculis Nec Foundation
Donec Ltd
Sed Nunc Ltd
Amet Nulla Donec Corporation

Company 149 x

Output

Action Output					
#	Time	Action	Message	Duration / F	
182	11:37:05	SELECT company_name, count(t.id) as transacions, round(avg(t.amount...	1 row(s) returned	0.453 sec /	
183	11:37:29	SELECT company_name, count(t.id) as transacions, round(avg(t.amount...	1 row(s) returned	0.453 sec /	
184	11:38:27	SELECT id FROM transaction WHERE company_id IN (SELECT id FR...	13291 row(s) returned	0.000 sec /	
185	11:39:56	SELECT company_name FROM company WHERE id IN (SELECT com...	100 row(s) returned	0.125 sec /	

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

EX 3 ★

```
43 # Eliminaran del sistema les empreses que no tenen transaccions registrades, entrega el llistat d'aquestes e
44 ● SELECT id
45 FROM company
46 WHERE id NOT IN (
47     SELECT DISTINCT(company_id)
48     FROM transaction);
49
```

Result Grid

Filter Rows:

Edit: Export/Import: Wrap Cell Content:

	id
*	NULL

Result Grid

company 20 x

Apply

Revert

Context Help

Snippets

Output

Action Output

	#	Time	Action	Message	Duration / Fetch
✓	23	12:09:31	SELECT company_id FROM transaction	100000 row(s) returned	0.000 sec / 0.047 sec
✓	24	12:09:43	SELECT DISTINCT(company_id) FROM transaction	100 row(s) returned	0.047 sec / 0.000 sec
✓	25	12:09:53	SELECT id FROM company WHERE id NOT IN (SELECT DISTINCT(company_id)...	0 row(s) returned	0.062 sec / 0.000 sec

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

EX 1 ★★

```
40     SELECT DISTINCT(company_id)
41     FROM transaction);
42
43     # Identifica els cinc dies que es va generar la quantitat més gran d'ingressos a l'empresa per vendes. Mostra 1
44 •   SELECT DATE(timestamp), count(id) as ven, sum(amount) as amnt_ven
45     FROM transaction
46     GROUP BY DATE(timestamp)
47     order by amnt_ven DESC
48     LIMIT 5;
49
50     # Quina és la mitjana de vendes per país? Presenta els resultats ordenats de major a menor
```

- 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.

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

	DATE(timestamp)	ven	amnt_ven
▶	2022-12-13	46	14337.44
	2019-11-18	49	13591.32
	2023-02-20	41	13332.59
	2017-12-20	41	13318.43
	2019-03-18	42	12680.95

Result 150 x


Output

Action Output ▼

	#	Time	Action	Message	Du
✓	183	11:37:29	SELECT company_name, count(t.id) as transacions, round(avg(t.amount...	1 row(s) returned	0.4
✓	184	11:38:27	SELECT id FROM transaction WHERE company_id IN (SELECT id FR...	13291 row(s) returned	0.0
✓	185	11:39:56	SELECT company_name FROM company WHERE id IN (SELECT com...	100 row(s) returned	0.1
✓	186	11:48:50	SELECT DATE(timestamp), count(id) as ven, sum(amount) as amnt_ven ...	5 row(s) returned	0.1

EX 2 ★★


```
50 # Quina és la mitjana de vendes per país? Presenta els resultats ordenats de major a menor mitjà.
51 • SELECT country, round(avg(amount),2) as vend
52 FROM company c
53 RIGHT JOIN transaction t ON c.id = t.company_id
54 group by country
55 order by vend DESC;
```

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

country	vend
Australia	265.19
United States	264.98
Belgium	261.15
Germany	260.84
Ireland	260.64
Spain	260.47
France	259.98
New Zealand	259.59
Norway	259.38
Netherlands	258.44
Italy	258.27

result 152 x

Output

 Action Output ▼

#	Time	Action	Message
185	11:39:56	SELECT company_name FROM company WHERE id IN (SELECT com...	100 row(s) returned
186	11:48:50	SELECT DATE(timestamp), count(d) as ven, sum(amount) as amnt_ven ...	5 row(s) returned
187	11:49:56	SELECT country, round(avg(amount),2) as vend FROM company c RIG...	15 row(s) returned
188	11:50:15	SELECT country, round(avg(amount),2) as vend FROM company c RIG...	15 row(s) returned

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

EX 3 ★★

JOIN + SUBQ

```
57 # En la teva empresa, es planteja un nou projecte per a llançar algunes campanyes publicitàries per a fer competència
58 # JOIN + SUBQUERY
59 • SELECT t.id
60 FROM company c
61 RIGHT JOIN transaction t ON c.id = t.company_id
62 WHERE country = (SELECT country
63 FROM company
64 WHERE company_name = 'Non Institute');
65
```

- 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.

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

id
008629B4-C9A9-406C-A3D2-71FDA47BC546
00B72BA4-54A3-4B8E-B13F-2D57535AA17A
01F075B1-D7AE-4D02-AAD9-5FFD72A43F3C
023FFCE8-E618-4938-BF56-C8DF80540ADD
02683BEB-EF91-4564-957B-D6F1662AB7C5
02683BEB-EF91-4564-957B-D6F1662AB7C5

Result 154 x

Output

Action Output

#	Time	Action	Message	Duration /
✓ 185	11:39:56	SELECT company_name FROM company WHERE id IN (SELECT com...	100 row(s) returned	0.125 sec
✓ 186	11:48:50	SELECT DATE(timestamp), count(id) as ven, sum(amount) as amnt_ven ...	5 row(s) returned	0.125 sec
✓ 187	11:49:56	SELECT country, round(avg(amount),2) as vend FROM company c RIG...	15 row(s) returned	0.328 sec
✓ 188	11:50:15	SELECT country, round(avg(amount),2) as vend FROM company c RIG...	15 row(s) returned	0.360 sec
✓ 189	11:51:35	SELECT t.id FROM company c RIGHT JOIN transaction t ON c.id = t.co...	13776 row(s) returned	0.000 sec

EX 3 ★★

SUBQ

```

66  # ONLY SUBQUERY
67  •   SELECT id
68      FROM transaction
69      WHERE company_id IN (
70          SELECT id
71          FROM company
72          WHERE country = (SELECT country
73                          FROM company
74                          WHERE company_name = 'Non Institute')
75      );

```

- 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.

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

id
008629B4-C9A9-406C-A3D2-71FDA47BC546
00B72BA4-54A3-4B8E-B13F-2D57535AA17A
01F075B1-D7AE-4D02-AAD9-5FFD72A43F3C
023FFCE8-E618-4938-BF56-C8DF80540ADD
02683BEB-EF91-4564-957B-D6F1662AB7C5
02C2F29E-CEF2-4C1E-A594-F476E8F279C0

transaction 155 x

Output

Action Output

#	Time	Action	Message
✓ 187	11:49:56	SELECT country, round(avg(amount),2) as vend FROM company c RIG...	15 row(s) returned
✓ 188	11:50:15	SELECT country, round(avg(amount),2) as vend FROM company c RIG...	15 row(s) returned
✓ 189	11:51:35	SELECT t.id FROM company c RIGHT JOIN transaction t ON c.id = t.co...	13776 row(s) returned
✓ 190	11:52:09	SELECT t.id FROM company c RIGHT JOIN transaction t ON c.id = t.co...	13776 row(s) returned
✓ 191	11:52:49	SELECT id FROM transaction WHERE company_id IN (SELECT i...	13776 row(s) returned

EX 1 ★★

The screenshot shows a SQL IDE interface. At the top, a toolbar contains various icons for file operations, execution, and navigation. Below the toolbar, a SQL query is entered in a text area. The query is as follows:

```
78 • SELECT company_name, phone, country, DATE(timestamp), amount
79 FROM company c
80 JOIN transaction t ON c.id = t.company_id
81 WHERE amount BETWEEN 350 AND 400 AND t.declined = 0
82 AND DATE(timestamp) IN ('2015-04-29', '2018-07-20', '2024-03-13')
83 order by amount DESC;
```

Below the query editor, the 'Result Grid' is displayed, showing the results of the query. The grid has six columns: company_name, phone, country, DATE(timestamp), and amount. The results are as follows:

	company_name	phone	country	DATE(timestamp)	amount
▶	Aliquam PC	01 45 73 52 16	Germany	2024-03-13	399.84
	Auctor Mauris Vel LLP	08 09 28 74 14	United States	2018-07-20	399.51
	At Pedo Corp.	06 14 48 33 15	Italy	2015-04-29	390.69
	Aliquam PC	01 45 73 52 16	Germany	2024-03-13	388.29
	Orci Adipiscing Limited	03 18 00 77 81	United Kingdom	2018-07-20	373.71
	Fringilla LLC	08 29 15 93 57	New Zealand	2015-04-29	367.62
	Pedo Cum Ltd	07 62 26 48 38	Norway	2018-07-20	356.87
	Auctor Mauris Vel LLP	08 09 28 74 14	United States	2024-03-13	353.75

Below the result grid, the 'Output' pane is visible, showing the execution log. The log contains the following entries:

#	Time	Action	Message
✓ 188	11:50:15	SELECT country, round(avg(amount),2) as vend FROM company c RIG...	15 row(s) returned
✓ 189	11:51:35	SELECT t.id FROM company c RIGHT JOIN transaction t ON c.id = t.co...	13776 row(s) returned
✓ 190	11:52:09	SELECT t.id FROM company c RIGHT JOIN transaction t ON c.id = t.co...	13776 row(s) returned
✓ 191	11:52:49	SELECT id FROM transaction WHERE company_id IN (SELECT i...	13776 row(s) returned
✓ 192	11:55:30	SELECT company_name, phone, country, DATE(timestamp), amount FR...	8 row(s) returned

•Presenta el nom, telèfon, país, data i amount, d'aquelles empreses que van realitzar transaccions amb un valor comprès entre 350 i 400 euros i en alguna d'aquestes dates: 29 d'abril del 2015, 20 de juliol del 2018 i 13 de març del 2024. Ordena els resultats de major a menor quantitat.

EX 2 ★★

```
85 # Necessitem optimitzar l'assignació dels recursos i dependrà de la capacitat operativa que es requereixi, per la qual co:
86 • SELECT company_name, count(t.id) as transacciones, count(t.id) > 400 as target
87 FROM company c
88 RIGHT JOIN transaction t ON c.id = t.company_id
89 group by company_name;
```

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

	company_name	transacciones	target
▶	Ac Fermentum Incorporated	2401	1
	Magna A Neque Industries	410	1
	Fusce Corp.	447	1
	Convallis In Incorporated	1514	1
	Ante Iaculis Nec Foundation	472	1
	Donec Ltd	449	1
	Sed Nunc Ltd	1541	1
	Amet Nulla Donec Corporation	1511	1
	Nascetur Ridiculus Mus Inc.	424	1
	Morbi...	450	1

Result 157 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 189	11:51:35	SELECT t.id FROM company c RIGHT JOIN transaction t ON c.id = t.co...	13776 row(s) returned	0.000 sec / 0.016
✓ 190	11:52:09	SELECT t.id FROM company c RIGHT JOIN transaction t ON c.id = t.co...	13776 row(s) returned	0.000 sec / 0.016
✓ 191	11:52:49	SELECT id FROM transaction WHERE company_id IN (SELECT i...	13776 row(s) returned	0.000 sec / 0.016
✓ 192	11:55:30	SELECT company_name, phone, country, DATE(timestamp), amount FR...	8 row(s) returned	0.094 sec / 0.000
✓ 193	11:56:46	SELECT company_name, count(t.id) as transacciones, count(t.id) > 400 a...	100 row(s) returned	0.156 sec / 0.000

• 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 400 transaccions o menys.