

## Nivel 1



A diferencia del Sprint 1, en este NO tendremos en cuenta al booleano “Declined” porque trataremos el total de transacciones.

### Ejercicio 1

Todas las transacciones realizadas por empresas de Alemania son 118 en total.

El resultado de la consulta muestra el id de cada transacción.

The screenshot shows a SQL IDE interface with a query editor and a results grid. The query is as follows:

```
1 #S02.01
2 #N1.Exercici 1: Mostra totes les transaccions realitzades per empreses d'Alemanya.
3 • SELECT id AS id_transaccion
4 FROM transaction
5 WHERE company_id IN
6 (SELECT id
7 FROM company
8 WHERE country = 'Germany');
```

The results grid displays a list of transaction IDs. The first few rows are:

id_transaccion
108B1D1D-5B23-A76C-55EF-C568E49A05DD
EA2C3281-C9C1-A387-44F8-729FB4B51C76
0DD2E608-9C9E-D1B3-4999-B99F43AD735A
AB069F53-965E-A2A8-CE06-CA8C4FD92501
0466A42E-47CF-8D24-FD01-C0B689713128
0A476ED9-0C13-1962-F87B-D3563924B539
122DC333-E19F-D629-D0D8-9C54CF1EBB9A
135267BA-2E7D-957C-C42C-6450A2B3ED54
14CAE5B5-8FB1-3E4A-4C85-0EA4167534F4
158A3ACB-541C-DBCC-65BD-6373CC67BF1C
16207767-296A-7971-A1F4-07124F717451

The output section shows the execution of the query, indicating that 118 rows were returned.

#	Time	Action	Message
44	11:42:00	SELECT id AS id_transaccion FROM transaction WHERE company_id IN (SELECT i...	118 row(s) returned
45	11:42:27	SELECT id AS id_transaccion FROM transaction WHERE company_id IN (SELECT i...	118 row(s) returned

### Ejercicio 2

Las empresas que han realizado transacciones por una suma superior a la media de todas las transacciones son 83, podemos ver el inicio del listado en la siguiente imagen:

The screenshot shows a SQL query in the editor:

```

10 #N1.Exercici 2: llistat de les empreses que han realitzat transaccions per una suma superior a la mitjana de t
11 SELECT company_name
12 FROM company
13 WHERE company.id IN
14     (SELECT company_id
15      FROM transaction
16      GROUP BY company_id
17      HAVING sum(amount) >
18       (SELECT AVG(amount) FROM transaction));
19

```

The Result Grid shows the following companies:

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
Nascetur Ridiculus Mus Inc.

The Output pane shows the execution log:

#	Time	Action	Message
45	11:42:27	SELECT id AS id_transaccion FROM transaction WHERE company_id IN (SELECT i...	118 row(s) returned
46	11:44:32	SELECT company_name FROM company WHERE company.id IN (SELECT compan...	83 row(s) returned

## Ejercicio 3

Para poder obtener en los resultados los nombres de las empresas y todas las transacciones primero hacemos una JOIN. Luego, para obtener la información de las transacciones realizadas por las empresas que comienzan con la letra C podemos buscarlo con el comando LIKE 'C%'.

The screenshot shows a SQL query in the editor:

```

20
21
22 #N1.Exercici 3: nom d'empresa que inicia amb la lletra c, mostrar informació de les transaccions.
23
24 SELECT company.company_name, transaction.*
25 FROM transaction
26 JOIN company ON transaction.company_id = company.id
27 WHERE company.company_name LIKE 'C%';
28
29

```

The Result Grid shows the following results:

company_name	id	credit_card_id	company_id	user_id	lat	longitude	timestamp
Convallis In Incorporated	0DD2E608-5C9E-D1B3-4999-B99F43AD735A	CdU-2959	b-2234	275	9.68811	130.282	2021-0
Convallis In Incorporated	AB069F53-965E-A2A8-CE06-CA8C4FD92501	CdU-2959	b-2234	275	1.64819	-158.007	2021-0
Cras Consulting	439F4F6A-57C7-3A59-6038-AD7133887522	CdU-3449	b-2514	268	-13.9867	-104.268	2021-0
Cras Consulting	ED1CFB7D-E626-CE54-57A1-A03677885E1F	CdU-3449	b-2514	268	9.75306	-134.718	2021-1
Cras Vehicula Aliquet Industries	5C3A8A3D-8974-40A6-A8AF-C1F7AA6B7C94	CdU-3519	b-2554	267	15.1828	165.662	2021-0
Cras Vehicula Aliquet Industries	8D895ADD-5501-2A9C-24DD-2EAE7AEF1C5	CdU-3519	b-2554	267	8.58711	-34.6616	2021-1

The Output pane shows the execution log:

#	Time	Action	Message
139	12:51:04	SELECT company.company_name, transaction.* FROM transaction JOIN company O...	3 row(s) returned
140	12:51:18	SELECT company.company_name, transaction.* FROM transaction JOIN company O...	6 row(s) returned

Otra forma de obtener esta información podría ser con una join y una subquery:

The screenshot shows a SQL IDE window with a query editor and a result grid. The query is as follows:

```

27
28  ##alternativa con subquery
29  • SELECT company_name, transaction.*
30  FROM transaction
31  JOIN company ON transaction.company_id = company.id
32  WHERE transaction.company_id IN
33  (SELECT id
34   FROM company
35   WHERE company_name LIKE 'C%');
36
37

```

The result grid shows the following data:

company_name	id	credit_card_id	company_id	user_id	lat	longitude	timestamp
Convallis In Incorporated	0DD2E608-5C9E-D1B3-4999-899F43AD735A	CcU-2959	b-2234	275	9.68811	130.282	2021-01-01 12:00:00
Convallis In Incorporated	AB069F53-965E-A2A8-CE06-CA8C4FD92501	CcU-2959	b-2234	275	1.64819	-158.007	2021-01-01 12:00:00
Cras Consulting	439F4F6A-57C7-3A59-6038-AD7133887522	CcU-3449	b-2514	268	-13.9867	-104.268	2021-01-01 12:00:00
Cras Consulting	ED1CFB7D-E626-CE54-57A1-A036778B5E1F	CcU-3449	b-2514	268	9.75306	-134.718	2021-01-01 12:00:00
Cras Vehicula Aliquet Industries	5C3A8A3D-8974-40A6-A8AF-C1F7AA687C94	CcU-3519	b-2554	267	15.1828	165.662	2021-01-01 12:00:00
Cras Vehicula Aliquet Industries	8D895ADD-5501-2A9C-24DD-2EAE7AEF1C5	CcU-3519	b-2554	267	8.58711	-34.6616	2021-01-01 12:00:00

The output pane shows the following messages:

```

155 13:25:10 SELECT company_name FROM company WHERE id NOT IN (SELECT distinct com... 0 row(s) returned
156 13:34:11 SELECT company_name, transaction.* FROM transaction JOIN company ON transact... 6 row(s) returned

```

## Ejercicio 4

No hay empresas que no tengan transacciones registradas.

Para obtener este resultado podemos hacerlo con un JOIN:

The screenshot shows a SQL IDE window with a query editor and a result grid. The query is as follows:

```

35
36
37  #N1.Exercici 4: Van eliminar del sistema les empreses que no tenen transaccions registrades, lliura el llistat
38  • SELECT company_name
39  FROM company
40  LEFT JOIN transaction ON transaction.company_id = company.id
41  WHERE company_id IS NULL;
42

```

The result grid shows the following data:

company_name

The output pane shows the following messages:

```

150 13:17:31 SELECT COUNT(*) FROM company 1 row(s) returned
151 13:18:29 SELECT company_name FROM company LEFT JOIN transaction ON transaction.com... 0 row(s) returned

```

Alternativamente, con una subquery:

```

42
43 ##alternativa con subquery
44 • SELECT company_name
45 FROM company
46 WHERE id NOT IN
47 (SELECT distinct company_id
48 FROM transaction);
49

```

Result Grid

company_name
company 76

Output

#	Time	Action	Message
✓ 154	13:24:33	SELECT company_name FROM company WHERE id NOT IN (SELECT company_id ...	0 row(s) returned
✓ 155	13:25:10	SELECT company_name FROM company WHERE id NOT IN (SELECT distinct com...	0 row(s) returned

## Nivel 2

### Ejercicio 1

Con la siguiente consulta podemos obtener todas las transacciones hechas por las empresas que están situadas en el mismo país que la empresa 'Non Institute'. Exceptuando las transacciones realizadas por esta misma compañía (company\_name <> 'Non Institute'). Añadimos también a la consulta el nombre de las compañías que hicieron las transacciones.

```

49 #N2.Exercici 1: totes les transaccions realitzades per empreses que estan situades en el mateix país que aquest
50 • SELECT company.company_name, transaction.*
51 FROM transaction
52 LEFT JOIN company ON transaction.company_id = company.id
53 WHERE company_name <> 'Non Institute' AND country IN
54 (SELECT country
55 FROM company
56 WHERE company_name = 'Non Institute');
57

```

Result Grid

company_name	id	credit_card_id	company_id	user_id	lat	longitude	timestamp
Sed Nunc Ltd	2B928E1C-EC14-A760-0A75-871477649D6A	CcU-2980	b-2246	275	-41.0496	161.685	2021-08-10
Sed Nunc Ltd	ACD2011A-A2B1-C365-41E1-2AB00C65147A	CcU-2980	b-2246	275	-54.4792	-82.7974	2022-03-05
Non Magna LLC	4334349E-CEB0-3D68-A4D4-FEB7718A1ACE	CcU-3092	b-2310	275	-20.4859	150.87	2021-05-03
Non Magna LLC	BC2B9A38-77B4-28CD-1FE8-14DED863E773	CcU-3092	b-2310	275	-78.0295	18.5295	2021-10-18
Enim Conditum Ltd	1479B3D2-87BA-C7B8-4CE3-8D7C2DE8SAB8	CcU-2994	b-2326	133	66.2672	172.399	2021-08-09
Enim Conditum Ltd	152598C2-029D-D684-4B66-91EDF393EBFF	CcU-2994	b-2326	126	-67.0189	-141.672	2021-07-05
Enim Conditum Ltd	1B636858-A2E8-7C69-D9C9-C54535DAFD3B	CcU-2994	b-2326	131	70.2543	-13.1336	2021-07-06
Enim Conditum Ltd	20418DE5-8804-8E98-BD7A-A95C1BFD8F5C	CcU-2994	b-2326	126	-79.1145	1.51481	2022-01-03
Enim Conditum Ltd	239B8576-6C0E-137A-C2F6-3180A188A2D3	CcU-2994	b-2326	126	23.6174	137.222	2021-08-26
Enim Conditum Ltd	25374486-7B47-1C5E-0719-382483C37D0	CcU-2994	b-2326	126	17.5189	104.015	2021-10-01

Output

#	Time	Action	Message
✓ 46	11:44:32	SELECT company_name FROM company WHERE company_id IN (SELECT compan...	83 row(s) returned
✓ 47	11:46:47	SELECT company.company_name, transaction.* FROM transaction LEFT JOIN comp...	70 row(s) returned

## Ejercicio 2

La empresa que ha realizado la transacción de mayor suma es 'Nunc Interdum Incorporated'.

The screenshot shows the SQL Developer interface with a query window titled 'Giaroli: S2.01\*' and 'SQL File 4\*'. The query is as follows:

```

58 #N2.Exercici 2: trobar l'empresa que ha realitzat la transacció de major suma en la base de dades.
59 • SELECT company.company_name
60 FROM company
61 WHERE company.id IN (
62     SELECT company_id
63     FROM transaction
64     WHERE amount =
65         (SELECT max(amount)
66          FROM transaction)
67 );

```

The 'Result Grid' shows the following result:

company_name
Nunc Interdum Incorporated

The 'Output' window shows the following messages:

#	Time	Action	Message
47	11:46:47	SELECT company.company_name, transaction.* FROM transaction LEFT JOIN comp...	70 row(s) returned
48	11:48:11	SELECT company.company_name FROM company WHERE company.id IN ( SELEC...	1 row(s) returned

## Nivel 3

### Ejercicio 1

Los países donde la media de transacciones es superior a la media general son: EEUU, Reino Unido, Suecia, Irlanda y Canadá.

The screenshot shows the SQL Developer interface with a query window titled 'Giaroli: S2.01\*' and 'SQL File 4\*'. The query is as follows:

```

70 #N3.Exercici 1: necessiten el llistat dels països la mitjana de transaccions dels quals sigui superior a la mi
71
72 • SELECT country, AVG(amount) AS avg_by_country
73 FROM company
74 JOIN transaction
75 ON company.id = transaction.company_id
76 GROUP BY country
77 HAVING AVG(amount) >
78     (SELECT AVG(amount)
79      FROM transaction);

```

The 'Result Grid' shows the following results:

country	avg_by_country
United States	309.179412
United Kingdom	270.731700
Sweden	260.615063
Ireland	277.308387
Canada	269.647869

The 'Output' window shows the following messages:

#	Time	Action	Message
48	11:48:11	SELECT company.company_name FROM company WHERE company.id IN ( SELEC...	1 row(s) returned
49	11:49:12	SELECT country, AVG(amount) AS avg_by_country FROM company JOIN transaction...	5 row(s) returned

## Ejercicio 2

Con la siguiente consulta podemos obtener el recuento de operaciones por compañía. También añadimos la columna “More\_than\_4”, que mediante el comando CASE toma el valor T para las empresas que han realizado más de 4 transacciones y F en caso contrario.

The screenshot shows a SQL query in SQL Studio. The query is as follows:

```

79
80  #N3.Exercici 2: llistat de les empreses on especificuiss si tenen més de 4 transaccions o menys.
81  SELECT count(transaction.id) as number_trans, company_name,
82         CASE
83             WHEN count(transaction.id) > 4 THEN 'T'
84             ELSE 'F'
85         END AS more_than_4
86  FROM transaction
87  JOIN company
88  ON transaction.company_id = company.id
89  GROUP BY company_name;
90
91

```

The results grid shows the following data:

number_trans	company_name	more_than_4
2	Ac Fermentum Incorporated	F
2	Magna A Neque Industries	F
2	Fusce Corp.	F
2	Convallis In Incorporated	F
2	Ante Iaculis Nec Foundation	F

The output pane shows the following messages:

```

88 12:53:49 SELECT count(transaction.id) as number_trans, company_name, CASE WHEN numb... Error Code: 1054. Unknown column 'number_trans' in 'field list'
89 12:54:18 SELECT count(transaction.id) as number_trans, company_name, CASE WHEN count... 100 row(s) returned

```

Alternativamente con subquery y usando IF:

The screenshot shows an alternative SQL query in SQL Studio. The query is as follows:

```

91  ## alternativa con subqueries y usando IF
92
93  SELECT company_name, number_trans,
94         IF(number_trans > 4, 'T', 'F') AS more_than_4
95  FROM
96      (SELECT COUNT(transaction.id) AS number_trans, company.company_name
97       FROM transaction
98       JOIN company
99       ON transaction.company_id = company.id
100      GROUP BY company.company_name) AS tab_num_tran_comp;
101

```

The results grid shows the following data:

company_name	number_trans	more_than_4
Ac Fermentum Incorporated	2	F
Magna A Neque Industries	2	F
Fusce Corp.	2	F
Convallis In Incorporated	2	F
Ante Iaculis Nec Foundation	2	F
Donec Ltd	2	F
Sed Nunc Ltd	2	F

The output pane shows the following messages:

```

3 13:54:43 SELECT company_name, number_trans, IF(number_trans > 4, 'T', 'F') AS more_than... Error Code: 1248. Every derived table must have its own alias
4 13:54:58 SELECT company_name, number_trans, IF(number_trans > 4, 'T', 'F') AS more_than... 100 row(s) returned

```