

# Task S2.01. Basic SQL Notions

## Level 1

### Exercise 1:

From the attached documents (structure.data and data.enter), import the two tables. Shows the main characteristics of the created scheme and explains the different tables and variables that exist. Make sure to include a diagram that illustrates the relationship between the different tables and variables.

The image displays two screenshots of the MySQL Workbench interface, illustrating the setup of a database schema and the execution of SQL scripts.

**Top Screenshot: Schema Creation**

The left sidebar shows the 'SCHEMAS' panel with a tree view containing 'sys', 'transactions', and 'company'. The 'company' table is selected, showing its columns: id, company\_name, phone, email, country, website, credit\_card\_id, user\_id, lot, timestamp, amount, and declined. The 'transactions' table is also visible, showing its columns: id, company\_id, credit\_card\_id, user\_id, lot, timestamp, amount, and declined.

The main editor shows the SQL script for creating the database and tables:

```
1 -- Creamos la base de datos
2 CREATE DATABASE IF NOT EXISTS transactions;
3 USE transactions;
4
5 -- Creamos la tabla company
6 CREATE TABLE IF NOT EXISTS company (
7   id VARCHAR(10) PRIMARY KEY,
8   company_name VARCHAR(255),
9   phone VARCHAR(15),
10  email VARCHAR(100),
11  country VARCHAR(100),
12  website VARCHAR(255)
13 );
14
15 -- Creamos la tabla transaction
16 CREATE TABLE IF NOT EXISTS transaction (
17   id VARCHAR(10) PRIMARY KEY,
18   company_id VARCHAR(10) REFERENCES company(id),
19   credit_card_id VARCHAR(10) REFERENCES credit_card(id),
20   user_id INT REFERENCES user(id),
21   lot FLOAT,
22   timestamp TIMESTAMP,
23   amount DECIMAL(10, 2),
24   declined BOOLEAN,
25   FOREIGN KEY (company_id) REFERENCES company(id)
26 );
```

The bottom panel shows the 'Action Output' window with the results of the SQL execution, including the time taken for each statement and the number of rows affected.

**Bottom Screenshot: Data Entry**

The left sidebar shows the 'SCHEMAS' panel with a tree view containing 'sys', 'transactions', and 'company'. The 'company' table is selected, showing its columns: id, company\_name, phone, email, country, website, credit\_card\_id, user\_id, lot, timestamp, amount, and declined. The 'transactions' table is also visible, showing its columns: id, company\_id, credit\_card\_id, user\_id, lot, timestamp, amount, and declined.

The main editor shows the SQL script for inserting data into the 'company' table:

```
1 USE transactions;
2
3 -- Insertamos datos de company
4 INSERT INTO company (id, company_name, phone, email, country, website) VALUES ('b-2222', 'Ar Fermentat Incorporated', '86 85 56 52 37', 'domec.parriflor@telusyahoo...', 'b-2222', 'Magna A Neque Industries', '84 14 44 64 82', 'risus.domec@ethiccloud.org', 'b-2238', 'Fusce Corp.', '86 14 97 50 85', 'risusagratonmail.edu', 'United States', 'b-2234', 'Conallis In Incorporated', '86 66 57 29 58', 'neutis.rfbac@com', 'Germany', 'b-2238', 'Aene Zucallis Nec Foundation', '86 33 84 90 51', 'vestibulum.braininputlook.co', 'b-2242', 'Donec Ltd.', '81 25 51 37 37', 'at.aculis@hotmail.co.uk', 'Norway', 'https://b-2246', 'Sed Nunc Ltd.', '82 62 64 73 48', 'nibb@yahoo.com', 'United Kingdom', 'https://b-2258', 'Aene Nulla Donec Corporation', '87 15 25 14 74', 'neutis.integre@proton.me', 'b-2254', 'Necscor Ridiculus Mus Inc.', '86 26 87 61 84', 'suspendisse.dustycloud.net', 'b-2258', 'Vestibulum Lorem PC', '82 82 87 33 40', 'sennam.nobis.integreball.net', 'Bel', 'b-2262', 'Gravida Sagittis LLP', '83 81 26 35 97', 'turpis.vistagoogles.co', 'Sweden', 'b-2266', 'Mug Aenean Eget Foundation', '86 25 35 52 43', 'nibb@yahoo.com', 'Sweden', 'b-2278', 'Odis Parturient Institute', '85 36 29 78 74', 'purusagratonmail.org', 'Ireland', 'b-2274', 'Sed LLC', '81 62 16 26 52', 'atneutlook.com', 'Belgium', 'https://reddit.co', 'b-2278', 'Arcu LLP', '86 46 84 41 48', 'atneutlook.com', 'Germany', 'https://paph.com.club', 'b-2282', 'Pratius Neque Corp.', '87 77 48 55 28', 'atneutlook.com', 'Sweden', 'b-2286', 'Fringilla LLC', '86 29 15 93 57', 'gravidaagratonmail.co.uk', 'New Zealand', 'b-2298', 'Quisque Libero LLC', '81 45 48 71 11', 'sapien.sobaxis@icloudmail.com', 'b-2294', 'Auctor Mauris Vel LLP', '86 89 28 14 14', 'neutis@tempcloud.com', 'United', 'b-2298', 'Egit Eget Inconsect Accusantium', '87 69 14 17 45', 'atneutlook.com', 'C', 'b-2302', 'Nunc Interdum Incorporated', '85 18 15 48 13', 'nonpartook.com', 'Germany', 'b-2306', 'Augue Foundation', '86 48 43 15 83', 'neutis@paph.com', 'Germany', 'https://b-2318', 'Non Magna LLC', '86 71 73 13 17', 'nibb@yahoo.com', 'United', 'b-2314', 'A Institute', '83 34 31 66 65', 'neutis@paph.com', 'Belgium', 'https://b-2318', 'Qua 4 Pellis Industries', '86 87 16 27 18', 'neutis@paph.com', 'Italy', 'b-2322', 'Integer Nullis Corp.', '83 32 28 45 24', 'neutis@paph.com', 'Italy', 'b-2326', 'En In Conditentum Ltd', '86 55 31 66 25', 'aperdiet.non.vestibulum@yahoo.net', 'b-2338', 'Donec Fringilla PC', '81 51 58 14 44', 'ut.tincidunt@neutis.co', 'France', 'b-2334', 'Aene Institute', '86 33 40 21 33', 'nullam.laboris@neutis.co', 'Aust', 'b-2338', 'Magna Incorporated', '87 73 69 44 18', 'nonpartook.com', 'New Zealand', 'ht
```

The bottom panel shows the 'Action Output' window with the results of the SQL execution, including the time taken for each statement and the number of rows affected.

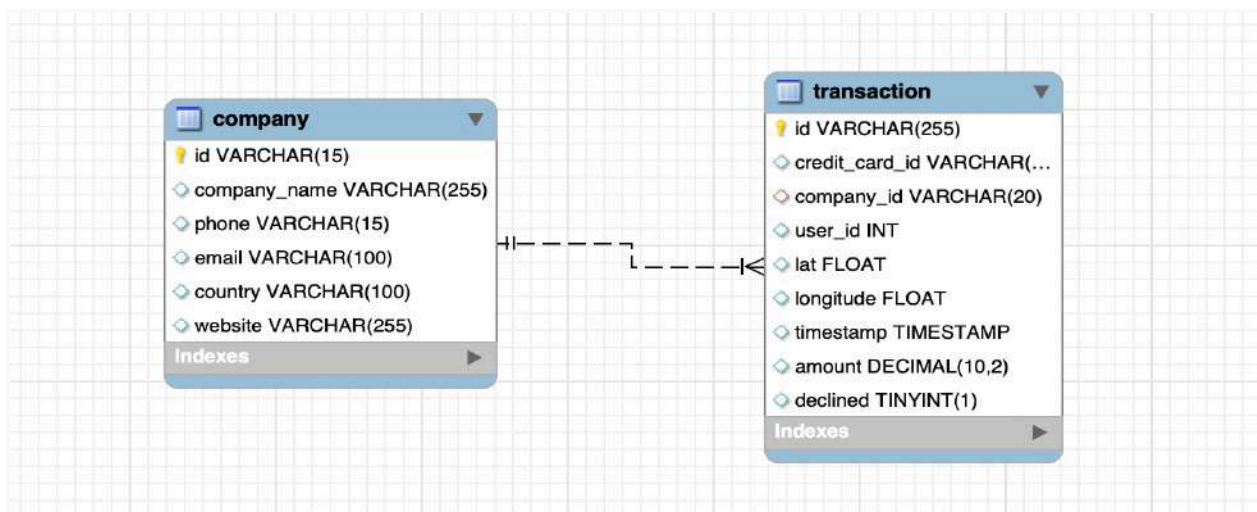
The scheme has two tables, which are the company and the transaction. The company table has 6 columns that store basic business information. The id column is the primary key for this table.

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
company_name	varchar(255)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
country	varchar(100)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
email	varchar(100)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
id	varchar(15)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
phone	varchar(15)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
website	varchar(255)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

The transaction table has 9 columns that record each transaction made by users using credit cards. The company\_id is associated with the id in the company table (foreign key).

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
amount	decimal(10,2)		YES			select,insert,update,references	
company_id	varchar(20)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
credit_card_id	varchar(15)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
declined	tinyint(1)		YES			select,insert,update,references	
id	varchar(255)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
lat	float		YES			select,insert,update,references	
longitude	float		YES			select,insert,update,references	
timestamp	timestamp		YES			select,insert,update,references	
user_id	int		YES			select,insert,update,references	

- The transaction establishes a 1-to-N relationship with the company (there can be multiple transactions in a company).
- There are no user and credit\_card tables, but there are references to them.



## Exercise 2:

Using JOIN you will make the following queries:

-List of countries that are generating sales.

The screenshot shows a database query editor interface. At the top, there are tabs for 'company', 'transaction', and 'Sprint2\*'. Below the tabs is a toolbar with various icons and a 'Limit to 1000 rows' dropdown. The main area contains a SQL query:

```
1 #Level 1
2 #Exercise 2
3
4 #List of countries that are generating sales.
5 • SELECT DISTINCT country
6 FROM company AS c
7 JOIN transaction AS t
8 ON c.id = t.company_id
9 ORDER BY country;
```

Below the query, there is a status bar showing '100%', '18:9', and '1 error found'. The 'Result Grid' section displays the results of the query, showing a list of countries. The 'Action Output' section shows the execution details of the query.

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

	Time	Action	Response
1	11:38:00	SELECT DISTINCT country FROM co...	15 row(s) returned

-From how many countries sales are generated.

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

```
11
12 #From how many countries sales are generated.
13 • SELECT COUNT(DISTINCT country) AS countries
14 FROM company AS c
15 JOIN transaction AS t
16 ON c.id = t.company_id;
17
```

The result grid shows a single row with the value 15 under the column 'countries'.

countries
15

The Action Output pane shows the execution details:

Time	Action	Response
11:43:41	SELECT COUNT(DISTINCT country)...	1 row(s) returned

-It identifies the company with the highest average sales.

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

```
19 #It identifies the company with the highest average sales.
20 • SELECT c.company_name,
21        AVG(t.amount) AS avg_sales
22 FROM company AS c
23 JOIN transaction AS t
24 ON c.id = t.company_id
25 GROUP BY t.company_id
26 ORDER BY avg_sales DESC
27 LIMIT 1;
```

The result grid shows a single row with the company name 'Ac Fermentum Incorporated' and its average sales '284.867160'.

company_name	avg_sales
Ac Fermentum Incorporated	284.867160

The Action Output pane shows the execution details:

Time	Action	Response
11:46:25	SELECT c.company_name, AVG...	1 row(s) returned

### Exercise 3:

Using only subconsults (not using JOIN):



-Displays all transactions made by companies in Germany.

company transaction Sprint2\*

Limit to 1000 rows

```
31 #Displays all transactions made by companies in Germany.
32 • SELECT *
33 FROM transaction
34 WHERE company_id IN
35     (SELECT id
36      FROM company
37      WHERE country = 'Germany');
38
```

100% 5:39 1 error found

Result Grid Filter Rows: Search Edit: Export/Import: Fetch rows:

id	credit_card...	company_id	user_id	lat	longitude	timestamp	amount	declined
00130U3D-200U-4003-94D7-03A201-0C09D4	CcS-4099	b-2222	310	41.3701	12.447	2020-03-23 10:43:43	420.30	0
0013C1B6-3B84-4D6C-8154-E2B3FEBCA8E9	CcS-5070	b-2222	489	41.3814	2.18176	2020-12-17 18:15:37	316.90	0
00201A11-2E62-44C4-941D-198FC8DB77F0	CcU-3512	b-2222	193	55.5704	-3.65129	2021-01-22 23:44:27	453.04	0
00235618-0A5C-4D49-9DCB-B3A9405D8923	CcS-8137	b-2222	3556	59.8421	18.729	2020-09-09 15:43:19	263.14	0
005A5A7B-1F1A-4B6C-9B15-1625A78C9C38	CcS-8998	b-2222	4417	41.1591	-8.63905	2024-05-15 09:10:11	442.01	0
00687139-48B2-4FFA-8E73-B20376F04AB4	CcS-4870	b-2222	289	51.1966	10.4669	2019-03-09 19:37:49	524.84	0
0074F4DD-32F1-4827-8758-55896314623A	CcS-8081	b-2222	3500	39.7016	-8.50325	2016-12-26 23:06:57	491.90	0
00AAB9CD-39D6-4DCB-8A1D-13BE73DC90A9	CcS-6797	b-2222	2216	55.7652	-3.76245	2021-04-25 03:06:59	167.15	0
00BE09D4-6920-47D8-ABE8-325E2269829D	CcS-4983	b-2222	402	38.708	-9.12993	2019-02-27 15:25:16	141.66	0
00DA0383-E048-4577-8ED1-3C56C258FF2F	CcS-9223	b-2222	4642	51.1742	10.2027	2019-03-21 11:47:34	325.62	0
00DD11DE-ED01-4BBD-93A0-174D183A59DF	CcS-7681	b-2222	3100	45.7565	4.83109	2024-01-28 18:20:49	242.53	0
01449CE0-98E9-4DE5-9810-728C6BA00E6F	CcS-5424	b-2222	843	47.0163	2.26064	2024-02-17 19:37:14	451.71	0
0175E8C7-241E-42DA-A8B9-9F246DBF4D2F	CcS-7510	b-2222	2929	52.0619	4.29464	2021-08-28 16:29:38	9.46	0
01ABDAB8-06E2-4CA0-A131-AEE6FF11B749	CcS-5053	b-2222	472	51.7738	5.17479	2020-01-28 01:15:07	368.41	0
01F1C7ED-0823-442D-AE0E-3134D5004866	CcS-6776	b-2222	2195	59.6697	18.6697	2022-12-17 09:40:14	168.79	0
01FABC61-18C8-441B-987C-459AA3F06097	CcS-5531	b-2222	950	55.3405	-3.3863	2020-04-30 08:57:27	333.45	0
023B714C-DCC1-4B03-AD8E-29B3673F631B	CcS-5103	b-2222	522	55.3362	-2.99198	2018-04-14 18:52:13	155.29	0
024BB812-89F5-4B21-B8E9-E0D51800A679	CcS-9328	b-2222	4747	42.0816	12.8326	2016-07-01 01:33:41	268.23	0
02DF083C-E622-42E0-B75E-15BA39A27594	CcS-4859	b-2222	278	60.6186	18.5278	2021-02-03 14:12:33	127.23	0
031C28DE-F9A2-448A-92EE-8700DD86327C	CcU-3750	b-2222	159	55.355	-3.44811	2020-06-05 18:32:28	68.38	0
03217043-8465-46B4-9F2A-EDA02F6FFE1	CcS-4998	b-2222	417	39.3245	-8.58552	2022-03-16 03:39:15	589.15	0
0333CE96-0EBA-40E2-8E27-506EFA41FCFB	CcS-7116	b-2222	2535	52.3282	5.45831	2024-04-06 11:50:52	161.11	0

transaction 20

Action Output

	Time	Action	Response
1	11:47:25	SELECT * FROM transaction WHERE...	1000 row(s) returned

The screenshot shows a SQL IDE interface. At the top, there are tabs for 'company', 'transaction', and 'Sprint2\*'. The main editor area contains a SQL query:

```
38
39
40
41 #List the companies that have made transactions for a higher amount than the average of all transactions.
42 • SELECT DISTINCT company_name
43 FROM company
44 WHERE id IN
45     (SELECT company_id
46      FROM transaction
47      WHERE amount > (SELECT AVG(amount)
48                      FROM transaction)
49     );
```

Below the query editor, there is a status bar showing '100%', a zoom icon, '12:43', and '1 error found'. The 'Result Grid' section displays the query results in a table with two columns: 'company\_name' and an empty column. The results are as follows:

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.	
Vestibulum Lorem PC	
Gravida Sagittis LLP	
Mus Aenean Eget Foundation	
Dis Parturient Institute	
Sed LLC	
Arcu LLP	
Pretium Neque Corp.	
Fringilla LLC	
Quisque Libero LLC	
company 22	

At the bottom, the 'Action Output' section shows the execution details:

	Time	Action	Response
1	11:49:37	SELECT DISTINCT company_name F...	100 row(s) returned

```

52
53 #They will remove from the system the companies that do not have registered transactions, deliver the list
54 • SELECT *
55 FROM company
56 WHERE id NOT IN
57     (SELECT DISTINCT company_id
58      FROM transaction
59      WHERE company_id IS NOT NULL
60      );

```

100% 7:50 1 error found.

**Result Grid** Filter Rows:  Edit: Export/Import:

id	company_name	phone	email	country	website
NULL	NULL	NULL	NULL	NULL	NULL
company 24					

**Action Output**

	Time	Action	Response
1	11:55:39	SELECT * FROM company WHERE id...	0 row(s) returned

## Level 2

### Exercise 1:

It identifies the five days that the largest amount of income was generated in the company by sales. Display the date of each transaction along with the total sales.

```
64 #It identifies the five days that the largest amount of income was generated in the company
65 #by sales.Display the date of each transaction along with the total sales.
66 • SELECT c.company_name,
67       DATE(t.timestamp) AS transaction_date,
68       SUM(t.amount) AS total_sale
69 FROM company AS c
70 JOIN transaction AS t
71 ON c.id = t.company_id
72 GROUP BY DATE (t.timestamp), c.company_name
73 ORDER BY total_sale DESC
74 LIMIT 5;
```

100% 9:74

Result Grid Filter Rows: Search Export: Fetch rows:

company_name	transaction_date	total_sale
Eget Ipsum Ltd	2024-12-02	3398.40
Ac Fermentum Incorporated	2019-03-19	3149.04
Nulla Integer Vulputate Corp.	2017-12-20	2774.04
Viverra Donec Foundation	2017-12-20	2773.35
Ac Fermentum Incorporated	2020-12-11	2717.76

Result 25

Action Output

	Time	Action	Response
1	12:06:26	SELECT c.company_name, DATE(t...	5 row(s) returned

**Exercise 2:**What is the average sales per country? It presents the results ordered from highest to lowest average.

```
79 • SELECT DISTINCT c.country,
80       AVG(t.amount) AS avg_sales
81 FROM company AS c
82 JOIN transaction AS t
83 ON c.id = t.company_id
84 GROUP BY c.country
85 ORDER BY avg_sales DESC;
86
87
```

100% 25:85

Result Grid Filter Rows: Search Export:

country	avg_sales
Australia	265.190742
United States	264.977877
Belgium	261.153042
Germany	260.841391
Ireland	260.644761
Spain	260.468125
France	259.979185
New Zealand	259.586176
Norway	259.375337

Result 27

Action Output

	Time	Action	Response
1	12:10:16	SELECT DISTINCT c.country, AV...	15 row(s) returned

### Exercise 3:

In your company, a new project is proposed to launch some advertising campaigns to make competition to the company "Non Institute". To do this, they ask you for the list of all the transactions carried out by companies that are located in the same country as this company.

-Display the list by applying JOIN and subconsults.

```
88 #They ask you for the list of all the transactions carried out by companies that are located in the same country as
89 #Display the list by applying JOIN and subconsults.
90
91 • SELECT *
92 FROM company AS c
93 JOIN transaction AS t
94 ON c.id = t.company_id
95 WHERE c.country = (
96     SELECT country
97     FROM company
98     WHERE company_name = 'Non Institute'
99 );
```

100% 7:99

Result Grid

id	company_name	phone	email	country	website	id	credit_card...	company_id	user_id
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	008629B4-C9A9-406C-A3D2-71FDA47BC546	CcS-7063	b-2246	2482
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	00B72BA4-54A3-4B8E-B13F-2D57535AA17A	CcS-8475	b-2246	3894
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	01F075B1-D7AE-4D02-AAD9-5FFD72A43F3C	CcS-8700	b-2246	4119
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	023FFCE8-E618-4938-BF56-C8DF80540ADD	CcS-7816	b-2246	3235
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	02683BEB-EF91-4564-957B-D6F1662AB7C5	CcS-9471	b-2246	4890
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	02C2F29E-CEF2-4C1E-A594-F476E8F279C0	CcS-9082	b-2246	4501
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	02F468DC-426C-47C2-8B0A-D8B25B7A81AF	CcS-6913	b-2246	2332
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	0306BE3B-817B-4A49-934E-0E439291A104	CcS-5302	b-2246	721
b-2246	Sed Nunc Ltd	02 62 64 73 48	nibh@yahoo.org	United Kingdom	https://cnn.com/one	0347BFE6-8EB5-4387-B187-0E78E8F2B8FB	CcS-7674	b-2246	3093

Result 30

Action Output

Time	Action	Response
12:15:35	SELECT * FROM company AS c JOIN...	1000 row(s) returned

-Display the list by applying only subconsults

```
101 # Display the list by applying only subconsults
102 • SELECT *
103 FROM transaction
104 WHERE company_id IN
105 (SELECT id
106  FROM company
107  WHERE country =
108      (SELECT country
109       FROM company
110       WHERE company_name = 'Non Institute'
111      )
112 );
```

100% 7:112

Result Grid

id	credit_card...	company_id	user_id	lat	longitude	timestamp	amount	declined
008629B4-C9A9-406C-A3D2-71FDA47BC546	CcS-7063	b-2246	2482	45.7666	4.83048	2015-07-30 12:12:42	486.44	0
00B72BA4-54A3-4B8E-B13F-2D57535AA17A	CcS-8475	b-2246	3894	55.6212	-3.7546	2017-10-26 22:08:26	414.06	0
01F075B1-D7AE-4D02-AAD9-5FFD72A43F3C	CcS-8700	b-2246	4119	55.856	-3.15783	2018-01-27 13:44:36	103.73	0
023FFCE8-E618-4938-BF56-C8DF80540ADD	CcS-7816	b-2246	3235	46.3568	1.82755	2016-12-19 11:53:45	219.28	0
02683BEB-EF91-4564-957B-D6F1662AB7C5	CcS-9471	b-2246	4890	42.1332	12.396	2017-01-10 21:09:29	326.87	0
02C2F29E-CEF2-4C1E-A594-F476E8F279C0	CcS-9082	b-2246	4501	39.4662	-0.373246	2020-05-24 01:17:29	155.72	0
02F468DC-426C-47C2-8B0A-D8B25B7A81AF	CcS-6913	b-2246	2332	52.175	19.3508	2023-03-17 16:36:27	305.35	0
0306BE3B-817B-4A49-934E-0E439291A104	CcS-5302	b-2246	721	51.9233	18.926	2021-12-02 23:06:02	339.58	0
0347BFE6-8EB5-4387-B187-0E78E8F2B8FB	CcS-7674	b-2246	3093	45.768	4.84271	2021-12-30 08:40:24	172.93	0

transaction 32

Action Output

Time	Action	Response
12:17:47	SELECT * FROM transaction WHERE...	1000 row(s) returned



## Level 3

### Exercise 1:

It presents the name, telephone, country, date and amount of those companies that made transactions with a value between 350 and 400 euros and on any of these dates: April 29, 2015, July 20, 2018 and March 13, 2024. Sort results from highest to lowest quantity.

```
118
119 • SELECT c.company_name,
120         c.phone,
121         c.country,
122         t.amount AS amount,
123         DATE(t.timestamp) AS transaction_date
124 FROM transaction AS t
125 JOIN company AS c
126 ON t.company_id = c.id
127 WHERE amount BETWEEN 350 AND 400
128       AND DATE(t.timestamp) IN ('2015-04-29', '2018-07-20', '2024-03-13')
129 ORDER BY t.amount DESC;
```

Result Grid

company_name	phone	country	amount	transaction_date
Aliquam PC	01 45 73 52 16	Germany	399.84	2024-03-13
Auctor Mauris Vel LLP	08 09 28 74 14	United States	399.51	2018-07-20
At Pede Corp.	06 14 48 33 15	Italy	390.69	2015-04-29
Aliquam PC	01 45 73 52 16	Germany	388.29	2024-03-13
Orci Adipiscing Limited	03 19 00 77 81	United Kingdom	373.71	2018-07-20
Fringilla LLC	08 29 15 93 57	New Zealand	367.62	2015-04-29
Pede Cum Ltd	07 62 26 48 38	Norway	356.87	2018-07-20
Auctor Mauris Vel LLP	08 09 28 74 14	United States	353.75	2024-03-13

Result 33

Action Output

Time	Action	Response
12:23:29	SELECT c.company_name, c.ph...	8 row(s) returned

### Exercise 2:

We need to optimize the allocation of resources and it will depend on the operational capacity that is required, so they ask you for information about the amount of transactions carried out by companies, but the human resources department is demanding and wants a list of companies where you specify if they have more than 400 transactions or less.

```
133
134 • SELECT c.company_name,
135         COUNT(t.id) AS transaction_count,
136         CASE
137             WHEN COUNT(t.id) > 400 THEN 'More than 400'
138             ELSE '400 or less'
139         END AS transaction_result
140 FROM company AS c
141 JOIN transaction AS t
142 ON c.id = t.company_id
143 GROUP BY c.id, c.company_name
144 ORDER BY transaction_count DESC;
```

Result Grid

company_name	transaction_count	transaction_result
Ac Fermentum Incorporated	2401	More than 400
Nunc Interdum Incorporated	1599	More than 400
Donec Fringilla PC	1593	More than 400
Mauris Institute	1586	More than 400
Rutrum Non Inc.	1585	More than 400
Aliquet Vel Vulputate Incorporated	1583	More than 400
Aliquam PC	1576	More than 400
Orci Adipiscing Limited	1567	More than 400
Etiam Bibendum Fermentum Industries	1566	More than 400

Result 34

Action Output

Time	Action	Response
12:33:35	SELECT c.company_name, COU...	100 row(s) returned