SPRINT 3

- Level 1 Exercise 1

First I created the table User and imported the data, then I created the table credit_card with the following query.

```
1    -- LEVEL 1
2    -- EXERCISE 1
3
4
5    CREATE TABLE IF NOT EXISTS credit_card (
6        id varchar(15) PRIMARY KEY, -- <- same data type as transaction.credit_card_id
7        iban VARCHAR(40), -- <- IBAN max num character 34. created it with 40 for some margin
8        pan VARCHAR(40),
9        pin CHAR(4),
10       cvv CHAR(3),
11       expiring_date VARCHAR(10) -- <- I would create it with DATA type but would have to change
         all the inserts.
12   );
```

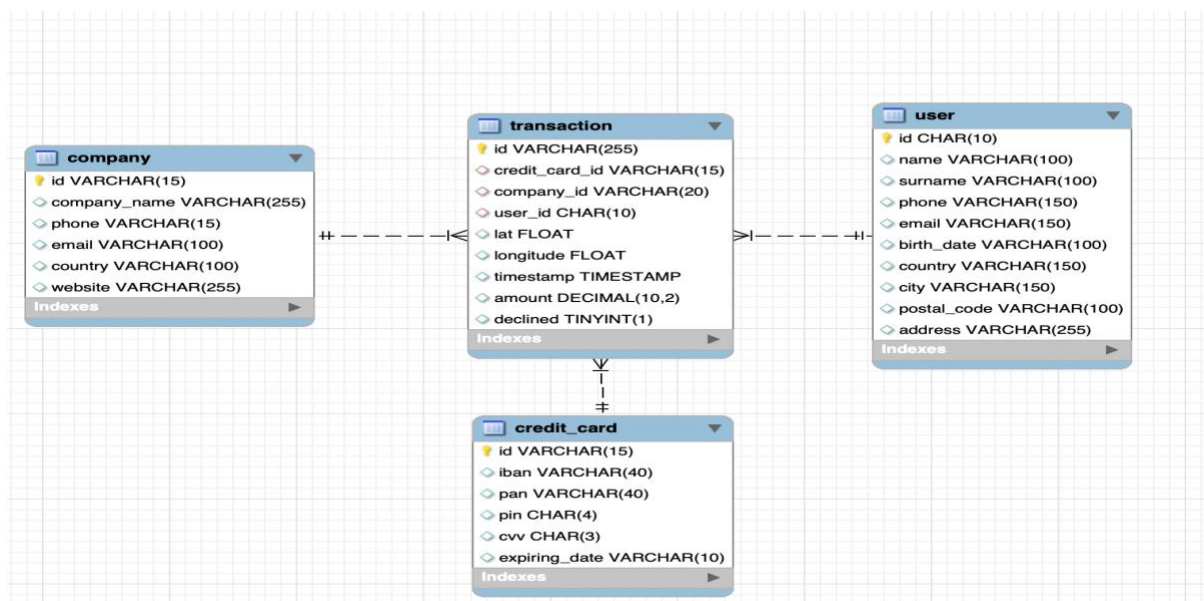And then I imported the data copying it from the given file.
After that I made some changes in the transaction table creating the relation with the two new created tables.

```
ALTER TABLE transaction -- <- ALTER the data type so it can be reference with new create table
MODIFY COLUMN  user_id CHAR(10);

ALTER TABLE transaction
ADD FOREIGN KEY (user_id) REFERENCES user(id);

ALTER TABLE transaction
ADD FOREIGN KEY (credit_card_id) REFERENCES credit_card(id);
```

And at the end my diagram as like the following picture.

- **Level 1 Exercise 2**

```
1 •   USE transactions;
2
3 •   UPDATE credit_card
4     SET iban = 'TR32345631221357681769999'
5     WHERE id = 'CcU-2938';
```

100%   23:5

Action Output

		Time	Action	Response	Duration / Fetch Time
❌	10...	11:17:27	ALTER TABLE transaction ADD FOREIGN KEY (credit_card_id) RE...	Error Code: 1452. Cannot add or update a child row: a...	0.024 sec
✅	10...	11:21:08	USE transactions	0 row(s) affected	0.00037 sec
✅	10...	11:21:08	ALTER TABLE credit_card MODIFY COLUMN id varchar(15)	5000 row(s) affected Records: 5000 Duplicates: 0...	0.073 sec
✅	10...	11:21:26	USE transactions	0 row(s) affected	0.00041 sec
✅	10...	11:21:26	ALTER TABLE transaction ADD FOREIGN KEY (credit_card_id) RE...	100000 row(s) affected Records: 100000 Duplicates:...	3.242 sec
✅	10...	11:35:02	USE transactions	0 row(s) affected	0.00076 sec
✅	10...	11:35:02	SELECT * FROM credit_card WHERE id = 'CcU-2938'	1 row(s) returned	0.0038 sec / 0.00001...
✅	10...	11:37:41	USE transactions	0 row(s) affected	0.00037 sec
✅	10...	11:37:41	UPDATE credit_card SET iban = 'TR32345631221357681769999...	1 row(s) affected Rows matched: 1 Changed: 1 Warni...	0.0063 sec

⚡ Query 1

```
1 •   USE transactions;
2
3 •   SELECT *
4     FROM credit_card
5     WHERE id = 'CcU-2938';
6
7
```

100%   23:5

Result Grid | Filter Rows: Q Search   Edit: 🖋 ➕ ➕   Export/Import: 🗃 🗃   □   Result Grid

id	iban	pin	cvv	expiring_date
CcU-2938	TR32345631221357681769999	3257	984	10/30/22
NULL	NULL	NULL	NULL	NULL

credit_card 24   Apply   Revert

Action Output

		Time	Action	Response	Duration / Fetch Time
✅	10...	12:50:54	USE transactions	0 row(s) affected	0.00023 sec
✅	10...	12:50:54	SELECT t.id AS transaction_id, u.name AS user_name, u.surnam...	99999 row(s) returned	0.0024 sec / 1.266 sec
✅	10...	12:54:15	USE transactions	0 row(s) affected	0.00026 sec
✅	10...	12:54:15	CREATE VIEW TechnicalReport AS SELECT t.id AS transaction_i...	0 row(s) affected	0.019 sec
✅	10...	12:55:36	USE transactions	0 row(s) affected	0.00084 sec
✅	10...	12:55:36	SELECT * FROM TechnicalReport	99999 row(s) returned	0.0047 sec / 1.230 sec
✅	10...	12:56:20	USE transactions	0 row(s) affected	0.00029 sec
✅	10...	12:56:20	SELECT * FROM TechnicalReport ORDER BY transaction_id DESC	99999 row(s) returned	0.0028 sec / 1.143 sec
✅	10...	13:15:05	SELECT * FROM credit_card WHERE id = 'CcU-2938'	1 row(s) returned	0.0020 sec / 0.00003...

- **Level 1 Exercise 3**

To complete this exercise first I had to insert data into the dimension tables and then I was able to run the query and insert the given data into the table transactions.

```
-- LEVEL 1
-- EXERCICE 3

INSERT INTO credit_card(id) VALUES("CcU-9999");

INSERT INTO company (id) VALUES ("b-9999");

INSERT INTO user (id) VALUES ("9999")
```

```
1 •  USE Transactions;
2
3 •  INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, amount, declined)
4    VALUES ('  108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999','b-9999', '9999', '829.999', '-117.999', '111.1
```

100%   1:4

Action Output

	Time	Action	Response	Duration / Fetch Time
1	11:03:35	USE Transactions	0 row(s) affected	0.00035 sec
2	11:03:35	INSERT INTO transaction (id, credit_card_id, company_id, user_i...	1 row(s) affected	0.0092 sec

- **Level 1 Exercise 4**

```
1 •  USE transactions;
2
3 •  ALTER TABLE credit_card
4    DROP COLUMN pan;
```

100%   17:4

Action Output

	Time	Action	Response	Duration / Fetch Time
	10...	11:46:15	SELECT * FROM user WHERE id = 9999	0 row(s) returned	0.0071 sec / 0.0001...
	10...	11:47:09	USE transactions	0 row(s) affected	0.00030 sec
	10...	11:47:09	INSERT INTO transaction (id, credit_card_id, company_id, user_i...	Error Code: 1366. Incorrect FLOAT value: '829,999' fo...	0.0080 sec
	10...	11:47:34	USE transactions	0 row(s) affected	0.00045 sec
	10...	11:47:34	INSERT INTO transaction (id, credit_card_id, company_id, user_i...	Error Code: 1452. Cannot add or update a child row: a...	0.013 sec
	10...	11:52:28	USE transactions	0 row(s) affected	0.00024 sec
	10...	11:52:28	select * FROM credit_card where id = 'CcU-9999'	0 row(s) returned	0.00084 sec / 0.000...
	10...	11:56:18	USE transactions	0 row(s) affected	0.0013 sec
	10...	11:56:18	ALTER TABLE credit_card DROP COLUMN pan	0 row(s) affected Records: 0 Duplicates: 0 Warnings...	0.040 sec

- Level 2 Exercise 1

- Level 2 Exercise 2

```
CREATE view VistaMarketing AS
    SELECT c.company_name, c.phone, c.country, CAST(AVG(t.amount) as DECIMAL (10,2)) as Average_purchase
        FROM company as c
        LEFT JOIN transaction as t
        ON c.id = t.company_id
        GROUP BY c.company_name, c.phone,  c.country
        ORDER BY Average_purchase DESC;
```

Execute the selected portion of the script or everything, if there is no selection

Action Output

	Time	Action	Response	Duration / Fetch Time
✕	10... 12:21:26	SELECT c.company_name, c.phone, CAST(AVG(t.amount) as DE...	Error Code: 1055. Expression #1 of SELECT list is not i...	0.00053 sec
✓	10... 12:22:06	USE transactions	0 row(s) affected	0.00027 sec
✓	10... 12:22:06	SELECT c.phone, CAST(AVG(t.amount) as DECIMAL (10,2)) as...	100 row(s) returned	0.554 sec / 0.000020...
✓	10... 12:24:37	USE transactions	0 row(s) affected	0.00026 sec
✓	10... 12:24:37	SELECT c.company_name, c.phone, CAST(AVG(t.amount) as DE...	100 row(s) returned	0.592 sec / 0.000025...
✓	10... 12:25:22	USE transactions	0 row(s) affected	0.00038 sec
✓	10... 12:25:22	SELECT c.company_name, c.phone, c.country, CAST(AVG(t.amo...	100 row(s) returned	0.590 sec / 0.000024...
✓	10... 12:28:29	USE transactions	0 row(s) affected	0.0014 sec
✓	10... 12:28:29	CREATE view VistaMarketing AS SELECT c.company_name, c.p...	0 row(s) affected	0.033 sec

```
USE transactions;


SELECT *
FROM VistaMarketing
```

Result Grid — Filter Rows: Search — Export:

company_name	phone	country	Average_purchase
Ac Fermentum Incorporated	06 85 56 52 33	Germany	284.87
Pretium Neque Corp.	07 77 48 55 28	Australia	276.16
Urna Convallis Associates	06 01 24 77 04	United States	274.24
At Associates	09 56 61 10 65	New Zealand	272.21
Metus Vitae Associates	08 25 44 40 66	Australia	270.08
Aliquet Diam Limited	02 76 61 47 46	United States	269.60

VistaMarketing 17   Read Only

Action Output

	Time	Action	Response	Duration / Fetch Time
✓	10... 12:22:06	SELECT c.phone, CAST(AVG(t.amount) as DECIMAL (10,2)) as...	100 row(s) returned	0.554 sec / 0.000020...
✓	10... 12:24:37	USE transactions	0 row(s) affected	0.00026 sec
✓	10... 12:24:37	SELECT c.company_name, c.phone, CAST(AVG(t.amount) as DE...	100 row(s) returned	0.592 sec / 0.000025...
✓	10... 12:25:22	USE transactions	0 row(s) affected	0.00038 sec
✓	10... 12:25:22	SELECT c.company_name, c.phone, c.country, CAST(AVG(t.amo...	100 row(s) returned	0.590 sec / 0.000024...
✓	10... 12:28:29	USE transactions	0 row(s) affected	0.0014 sec
✓	10... 12:28:29	CREATE view VistaMarketing AS SELECT c.company_name, c.p...	0 row(s) affected	0.033 sec
✓	10... 12:30:38	USE transactions	0 row(s) affected	0.00094 sec
✓	10... 12:30:38	SELECT * FROM VistaMarketing	100 row(s) returned	0.635 sec / 0.000027...

- **Level 2 Exercise 3**

```
USE transactions;


SELECT *
FROM VistaMarketing
WHERE country = 'Germany'
```

Result Grid — Filter Rows: Search — Export:

company_name	phone	country	Average_purchase
Ac Fermentum Incorporated	06 85 56 52 33	Germany	284.87
Nunc Interdum Incorporated	05 18 15 48 13	Germany	259.32
Convallis In Incorporated	06 66 57 29 50	Germany	257.75
Ac Industries	09 34 65 40 60	Germany	255.15
Rutrum Non Inc.	02 66 31 61 09	Germany	255.14
Auctor Mauris Corp.	05 62 87 14 41	Germany	254.77

VistaMarketing 18   Read Only

Action Output

	Time	Action	Response	Duration / Fetch Time
✓	10... 12:24:37	SELECT c.company_name, c.phone, CAST(AVG(t.amount) as DE...	100 row(s) returned	0.592 sec / 0.000025...
✓	10... 12:25:22	USE transactions	0 row(s) affected	0.00038 sec
✓	10... 12:25:22	SELECT c.company_name, c.phone, c.country, CAST(AVG(t.amo...	100 row(s) returned	0.590 sec / 0.000024...
✓	10... 12:28:29	USE transactions	0 row(s) affected	0.0014 sec
✓	10... 12:28:29	CREATE view VistaMarketing AS SELECT c.company_name, c.p...	0 row(s) affected	0.033 sec
✓	10... 12:30:38	USE transactions	0 row(s) affected	0.00094 sec
✓	10... 12:30:38	SELECT * FROM VistaMarketing	100 row(s) returned	0.635 sec / 0.000027...
✓	10... 12:32:00	USE transactions	0 row(s) affected	0.00074 sec
✓	10... 12:32:00	SELECT * FROM VistaMarketing WHERE country = 'Germany'	8 row(s) returned	0.152 sec / 0.000015...

- Level 3 Exercise 1

The colleague had changed some datatypes, dropped some columns, add a column and change the name of a table. To get the same diagram like him I used the following queries.

```
-- LEVEL 3
-- EXERCISE 1|

ALTER TABLE credit_card
MODIFY COLUMN id VARCHAR(20);

ALTER TABLE credit_card
MODIFY COLUMN iban VARCHAR(50);

ALTER TABLE credit_card
DROP COLUMN pan;

ALTER TABLE credit_card
MODIFY COLUMN pin VARCHAR(4);

ALTER TABLE credit_card
MODIFY COLUMN cvv INT;

ALTER TABLE credit_card
MODIFY COLUMN expiring_date VARCHAR(20);

ALTER TABLE credit_card
ADD COLUMN fecha_atual DATE;

UPDATE credit_card
SET fecha_atual = NOW() -- <- It is not necessary, just for testing propouse.

ALTER TABLE company
DROP COLUMN website;

-- This step was fun. I wanted to change the datatype of user.id but to do it before I had to
DROP the FK in the table transaction. To do it I used the two following queries and then  I
changed the datatype in both tables, user.id and transaction.user_id. With both columns being
the same datatype I add the reference again to make it FK.

SHOW CREATE TABLE transaction;

ALTER TABLE transaction
DROP FOREIGN KEY transaction_ibfk_2

ALTER TABLE user
MODIFY COLUMN id INT;

ALTER TABLE transaction
MODIFY COLUMN user_id INT;

ALTER TABLE transaction
ADD FOREIGN KEY (user_id) REFERENCES user(id);


ALTER TABLE user
RENAME COLUMN email to personal_email;

ALTER TABLE user
RENAME to data_user;

ALTER TABLE transaction
MODIFY COLUMN credit_card_id VARCHAR(20);
```
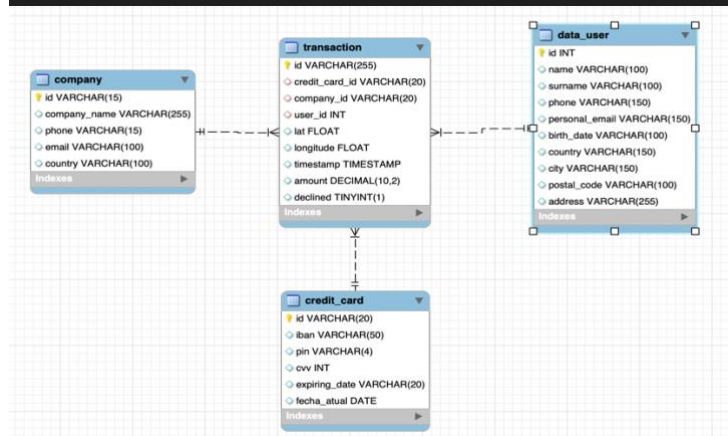
- Level 3 Exercise 2

```
3  • CREATE VIEW TechnicalReport AS
4      SELECT t.id AS transaction_id,
5          u.name AS user_name,
6          u.surname AS user_surname,
7          cc.iban,
8          c.company_name
9      FROM transaction AS t
10     LEFT JOIN user AS u ON t.user_id = u.id
11     LEFT JOIN credit_card AS cc ON t.credit_card_id = cc.id
12     LEFT JOIN company AS c ON t.company_id = c.id
13
14
15
16
17
18
19
20
```

100%   ↕   17:12

Action Output   ↕

		Time	Action	Response	Duration / Fetch Time
✓	10...	12:48:21	SELECT t.id, u.name, u.surname FROM transaction AS t LEFT JO...	99999 row(s) returned	0.015 sec / 1.075 sec
✓	10...	12:49:28	USE transactions	0 row(s) affected	0.00029 sec
✗	10...	12:49:28	SELECT t.id, u.name, u.surname, cc.iban, c.compnay_name FRO...	Error Code: 1054. Unknown column 'c.compnay_nam...	0.00051 sec
✓	10...	12:49:49	USE transactions	0 row(s) affected	0.00045 sec
✓	10...	12:49:49	SELECT t.id, u.name, u.surname, cc.iban, c.company_name FRO...	99999 row(s) returned	0.0027 sec / 1.193 sec
✓	10...	12:50:54	USE transactions	0 row(s) affected	0.00023 sec
✓	10...	12:50:54	SELECT t.id AS transaction_id, u.name AS user_name, u.surnam...	99999 row(s) returned	0.0024 sec / 1.266 sec
✓	10...	12:54:15	USE transactions	0 row(s) affected	0.00026 sec
✓	10...	12:54:15	CREATE VIEW TechnicalReport AS SELECT t.id AS transaction_i...	0 row(s) affected	0.019 sec

⚡ Query 1

```
1  • USE transactions;
2
3  • SELECT *
4    FROM TechnicalReport
5    ORDER BY transaction_id DESC;
6
7
```

100%   ↕   30:5

Result Grid | Filter Rows: Search | Export: | Fetch rows: | | Result Grid / Form Editor

transaction_id	user_name	user_surname	iban	company_name
FFFD31D6-9495-47CE-B54A-7DB8E1CC274B	Bmrgli	Tprvvmrc	XX794814451211289182490922	Turpis Company
FFFCF76D-ECF0-4985-A2D0-B2A7B75998FC	Dfrled	Vilqcjdl	XX636251701647892036676034	Amet Nulla Donec Corporation
FFFC9E8D-27C7-4ADE-98F2-7533EF4DF126	Securp	Faofvqfy	XX162677143304223631437567	Nunc Interdum Incorporated
FFFB270D-F53A-4D5D-9666-E5307C53CC84	Ggzjpa	Uirzjulh	XX395114267082019952567052	Viverra Donec Foundation
FFF9E3CE-234E-408C-A8EF-F9CAD577224A	Yshimq	Zpsjsleed	XX884546215653757036794	Convallis In Incorporated
FFF9E178-6CD2-4DF9-99B0-49AE068809B1	Jevepx	Xwcwzwnm	XX321405515711654384711481	Mus Aenean Eget Foundation
FFF867C9-17B5-4B1F-AFD9-F8023AAA449E	Fqlngd	Lvhfqyxi	XX278446342932680979729426	Cras Vehicula Aliquet Industries
FFF7042D-18C6-4DDD-823C-4D90A4AC8F26	Njoraa	Egsqcuii	XX405009272572550080827209	Placerat LLP
FFF660D4-4244-47F6-9210-E5D1DCB99DB0	Lopzaj	Itgryfay	XX633766597366274540151255	Pede Cum Ltd

TechnicalReport 23   ℹ Read Only

Action Output   ↕

		Time	Action	Response	Duration / Fetch Time
✓	10...	12:49:49	SELECT t.id, u.name, u.surname, cc.iban, c.company_name FRO...	99999 row(s) returned	0.0027 sec / 1.193 sec
✓	10...	12:50:54	USE transactions	0 row(s) affected	0.00023 sec
✓	10...	12:50:54	SELECT t.id AS transaction_id, u.name AS user_name, u.surnam...	99999 row(s) returned	0.0024 sec / 1.266 sec
✓	10...	12:54:15	USE transactions	0 row(s) affected	0.00026 sec
✓	10...	12:54:15	CREATE VIEW TechnicalReport AS SELECT t.id AS transaction_i...	0 row(s) affected	0.019 sec
✓	10...	12:55:36	USE transactions	0 row(s) affected	0.00084 sec
✓	10...	12:55:36	SELECT * FROM TechnicalReport	99999 row(s) returned	0.0047 sec / 1.230 sec
✓	10...	12:56:20	USE transactions	0 row(s) affected	0.00029 sec
✓	10...	12:56:20	SELECT * FROM TechnicalReport ORDER BY transaction_id DESC	99999 row(s) returned	0.0028 sec / 1.143 sec