Name: Andre Mazurkiewitz

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  );
```

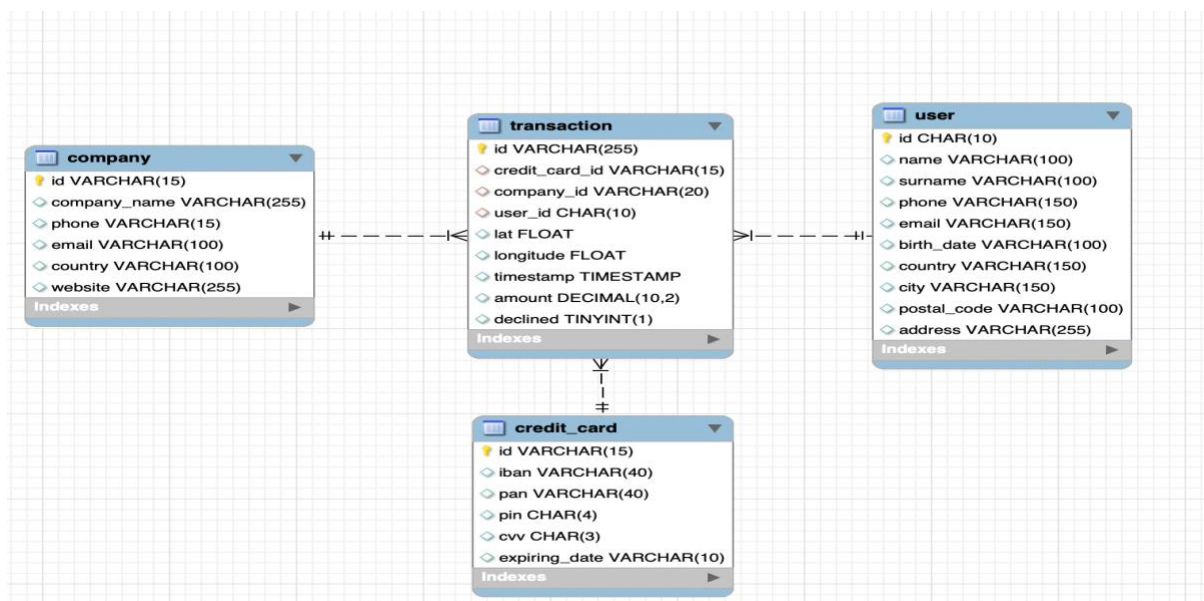And then I imported the data copying it from the given file.
After that I made some changes in the transaction table creating the relation with the two new created tables.

```
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**

```sql
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

```sql
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: |

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**

```
-- LEVEL 1
-- EXERCICE 3

INSERT INTO transaction (id, credit_card_id, company_id, user_id, lat, longitude, amount,
declined) VALUES ('  108B1D1D-5B23-A76C-55EF-C568E49A99DD', 'CcU-9999','b-9999', '9999', '829,
999', '-117,999', '111.11', '  0'); -- <- I will get an error because there is no user with
this id in the table user and because it is a FK it can not be create.
```

This would be the code to insert the given data into the column. In my case I would be able to insert the data into the table because I already created the foreign keys int the table transaction to refer to credit_card and user, so I can not create a 'child' field if the 'parent' is not created.
The code above would work fine if would have not created the references in the exercise 1.

- **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 / 0.00001...
✓	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

⚡ Query 1

```
1 • USE transactions;
2
3 • SELECT *
4   FROM credit_card;
5
6
7
```

100%   18:4

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

id	iban	pin	cvv	expiring_date
CcS-4857	XX4857591835292505850771	1819	467	09/27/25
CcS-4858	XX8581768137002436094025	3964	817	12/28/28
CcS-4859	XX7826930491423553609370	4983	277	11/26/26
CcS-4860	XX5559590368835304645299	6876	661	07/27/27
CcS-4861	XX2035182877195191627307	5710	398	04/25/26
CcS-4862	XX4774721462463645409758	4042	174	11/27/26
CcS-4863	XX1476829664245046207111	5969	449	12/27/29
CcS-4864	XX8380298893385731196159	8481	139	02/28/26
CcS-4865	XX7085078596101025280599	7847	903	11/25/28

credit_card 25   Apply   Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
✓	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...
✓	10... 13:26:14	USE transactions	0 row(s) affected	0.00037 sec
✓	10... 13:26:14	SELECT * FROM credit_card	5000 row(s) returned	0.0027 sec / 0.0063...

- **Level 2 Exercise 1**

```
1 •  USE transactions;
2
3 •  DELETE FROM transaction WHERE id = '000447FE-B650-4DCF-85DE-C7ED0EE1CAAD';
```

100% ⬦ 75:3

Action Output ⬦

	Time	Action	Response	Duration / Fetch Time
✕	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
✓	10... 11:56:59	USE transactions	0 row(s) affected	0.00035 sec
✓	10... 11:56:59	SELECT * FROM credit_card	5000 row(s) returned	0.0021 sec / 0.0036 s...
✓	10... 12:00:25	USE transactions	0 row(s) affected	0.00028 sec
✓	10... 12:00:25	DELETE FROM transaction WHERE id = '000447FE-B650-4DCF-...	1 row(s) affected	0.0056 sec

- **Level 2 Exercise 2**

```
1 •  
2
3 •  CREATE view VistaMarketing AS
4        SELECT c.company_name, c.phone, c.country,  CAST(AVG(t.amount) as DECIMAL (10,2)) as Average_purchase
5        FROM company as c
6        LEFT JOIN transaction as t
7        ON c.id = t.company_id
8        GROUP BY c.company_name, c.phone,  c.country
9        ORDER BY Average_purchase DESC;
10
11
12
13
```

100% ⬦ 1:11

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

```
1 •  USE transactions;
2
3
4 •  SELECT *
5    FROM VistaMarketing
6
7
8
```

100% ⬦ 1:2

Result Grid | Filter Rows: Q Search | Export: | Result Grid

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**

- **Level 3 Exercise 1**

The colleague has create the FK in the table transactions. The code he used was same or very similar to the following.

```
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);
```

- **Level 3 Exercise 2**

```
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

transaction_id	user_name	user_surname	iban	company_name	
FFFD31D6-9495-47CE-B54A-7DB8E1CC274B	Bmrgli	Tprvvmrc	XX7948144512112891824 90922	Turpis Company	
FFFCF76D-ECF0-4985-A2D0-B2A7B75998FC	Dfrled	Vilqcjdl	XX6362517016478920366 76034	Amet Nulla Donec Corporation	
FFFC9E8D-27C7-4ADE-98F2-7533EF4DF126	Securp	Faofvqfy	XX1626771433042236314 37567	Nunc Interdum Incorporated	
FFFB270D-F53A-4D5D-9666-E5307C53CC84	Ggzjpa	Uirzjulh	XX3951142670820199525 67052	Viverra Donec Foundation	
FFF9E3CE-234E-408C-A8EF-F9CAD577224A	Yshimq	Zpsjsleed	XX8845462156537570367 941	Convallis In Incorporated	
FFF9E178-6CD2-4DF9-99B0-49AE068809B1	Jevepx	Xwcwzwnm	XX3214055157116543847 11481	Mus Aenean Eget Foundation	
FFF867C9-17B5-4B1F-AFD9-F8023AAA449E	Fqlngd	Lvhfqyxi	XX2784463429326809797 29426	Cras Vehicula Aliquet Industries	
FFF7042D-18C6-4DDD-823C-4D90A4AC8F26	Njoraa	Egsqcuii	XX4050092725725500820 27209	Placerat LLP	
FFF660D4-4244-47F6-9210-E5D1DCB99DB0	Lopzaj	Itgryfay	XX6337665973662745401 5125	Pede Cum Ltd	

TechnicalReport 23   ⓘ 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