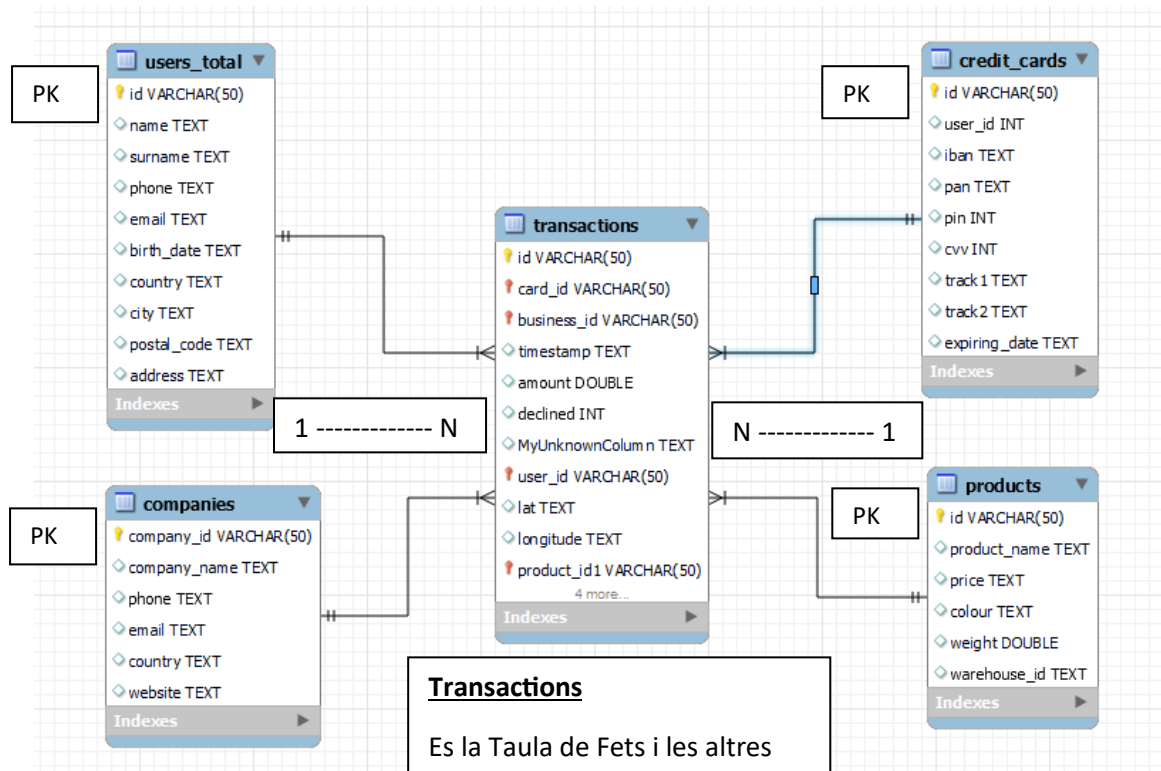


## SPRINT 4



### Transactions

Es la Taula de Fets i les altres son Taules de Dimensions

Id es **PK**

card\_id es **FK** de credit\_cards

business\_id es **FK** de companies

user\_id es **FK** de users\_total

product\_id1 es **FK** products

## NIVELL 1

### EXERCICI 1

S4\_N1\* x Ins dades Transactions users\_total transactions users\_total

Don't Limit

```
111 • SELECT users_total.id, users_total.name, users_total.surname, COUNT(users_total.id)
112 FROM users_total
113 JOIN transactions
114 ON users_total.id = transactions.user_id
115 GROUP BY users_total.id
116 HAVING COUNT(users_total.id) > 30;
117 # Como he unido las 3 tablas user en una no puedo hacerlo sin subqueries
118
```

Result Grid Filter Rows: Export: Wrap Cell Content:

|   | id  | name   | surname | COUNT(users_total.id) |
|---|-----|--------|---------|-----------------------|
| ▶ | 92  | Lynn   | Riddle  | 39                    |
|   | 267 | Ocean  | Nelson  | 52                    |
|   | 272 | Hedwig | Gilbert | 76                    |
|   | 275 | Kenyon | Hartman | 48                    |

### EXERCICI 2

S4\_N1\* x Ins dades Transactions users\_total transactions users\_total companies

Don't Limit

```
121 • SELECT company_name as Nom, iban, AVG(amount) as Mitjana
122 FROM transactions
123 JOIN credit_cards
124 ON transactions.card_id=credit_cards.id
125 JOIN companies
126 ON transactions.business_id=companies.company_id
127 WHERE company_name = 'Donec Ltd'
128 GROUP BY iban;
129
```

Result Grid Filter Rows: Export: Wrap Cell Content:

|   | Nom       | iban                      | Mitjana |
|---|-----------|---------------------------|---------|
| ▶ | Donec Ltd | PT87806228135092429456346 | 203.715 |

## NIVELL 2

Crea una nova taula que reflecteixi l'estat de les targetes de crèdit basat en si les últimes tres transaccions van ser declinades i genera la següent consulta:

### EXERCICI 1

The screenshot shows a SQL IDE with a script editor and a results grid. The script editor contains the following SQL code:

```
3  Exercici 1
4  Quantes targetes estan actives?*/
5  • CREATE TABLE estat_tarjetes (
6      id VARCHAR (50) primary key,
7      trans_ultima int,
8      trans_penultima int,
9      trans_avantpenultima int
10 );
11 • drop table estat_tarjetes;
12 • UPDATE transactions
13     SET timestamp = STR TO DATE(timestamp, '%d/%m/%Y %H:%i');

14 • ALTER TABLE transactions MODIFY COLUMN timestamp DATETIME;
15 • INSERT INTO estat_tarjetes (id, trans_ultima, trans_penultima, trans_avantpenultima)
16     SELECT card_id,
17         (SELECT declined FROM transactions as t1 WHERE t1.card_id = transactions.card_id
18          ORDER BY timestamp DESC LIMIT 1) as trans_ultima,
19         (SELECT declined FROM transactions as t2 WHERE t2.card_id = transactions.card_id
20          ORDER BY timestamp DESC LIMIT 1 OFFSET 1) as trans_penultima,
21         (SELECT declined FROM transactions as t3 WHERE t3.card_id = transactions.card_id
22          ORDER BY timestamp DESC LIMIT 1 OFFSET 2) as trans_avantpenultima
23     FROM (SELECT DISTINCT card_id FROM transactions) as transactions;

24 • SELECT COUNT(id) as tarjetes_actives
25     FROM estat_tarjetes
26     WHERE trans_ultima = 0;
27
```

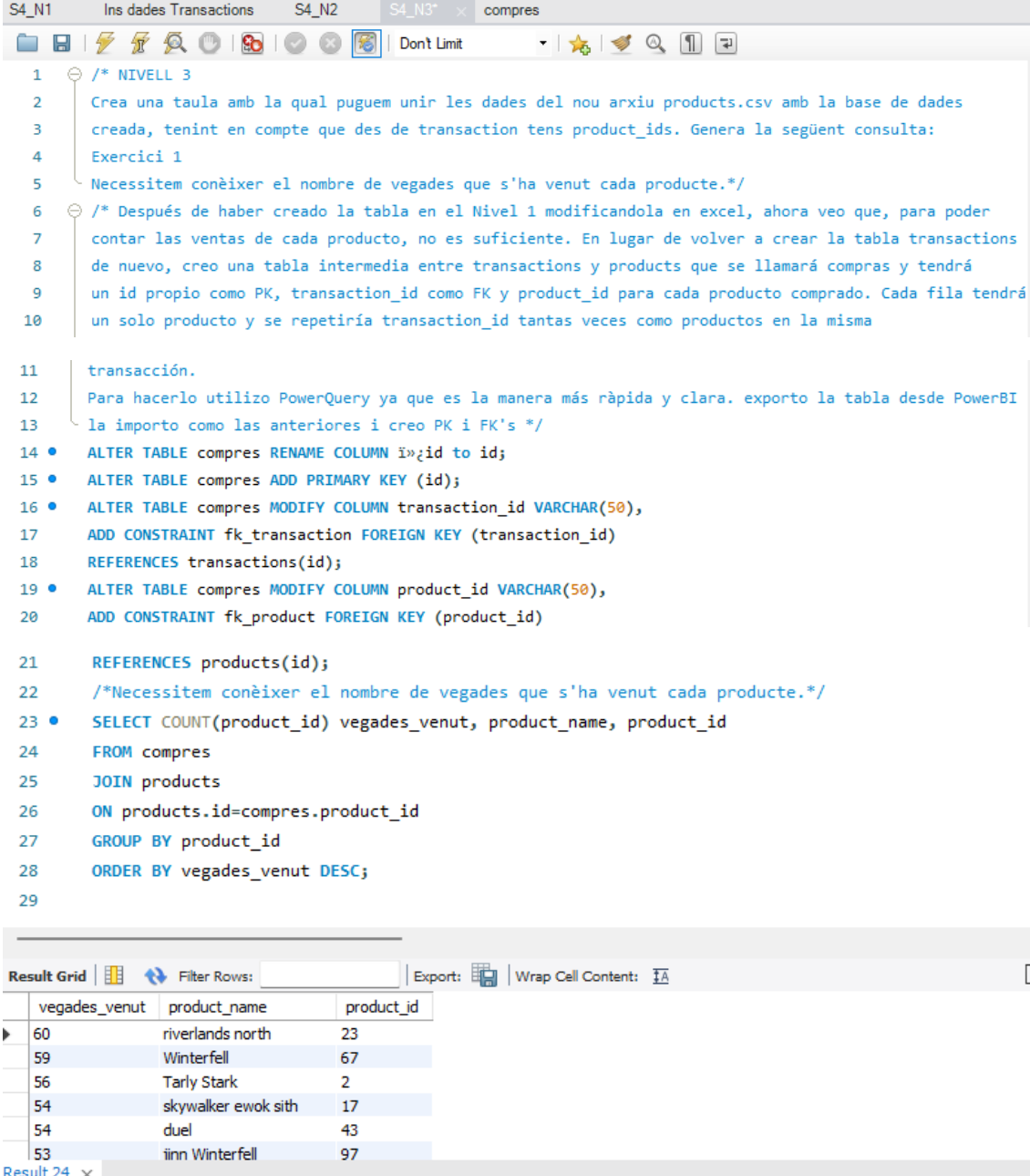
The results grid at the bottom shows the following data:

| tarjetes_actives |
|------------------|
| 235              |

## NIVELL 3

Crea una taula amb la qual puguem unir les dades del nou arxiu products.csv amb la base de dades creada, tenint en compte que des de transaction tens product\_ids. Genera la següent consulta:

### EXERCICI 1



The screenshot shows a SQL IDE with a script editor and a results grid. The script editor contains the following SQL code:

```
1  /* NIVELL 3
2  Crea una taula amb la qual puguem unir les dades del nou arxiu products.csv amb la base de dades
3  creada, tenint en compte que des de transaction tens product_ids. Genera la següent consulta:
4  Exercici 1
5  Necessitem conèixer el nombre de vegades que s'ha venut cada producte.*/
6  /* Después de haber creado la tabla en el Nivel 1 modificandola en excel, ahora veo que, para poder
7  contar las ventas de cada producto, no es suficiente. En lugar de volver a crear la tabla transactions
8  de nuevo, creo una tabla intermedia entre transactions y products que se llamará compras y tendrá
9  un id propio como PK, transaction_id como FK y product_id para cada producto comprado. Cada fila tendrá
10 un solo producto y se repetiría transaction_id tantas veces como productos en la misma
11 transacción.
12 Para hacerlo utilizo PowerQuery ya que es la manera más rápida y clara. exporto la tabla desde PowerBI
13 la importo como las anteriores i creo PK i FK's */
14 • ALTER TABLE compres RENAME COLUMN i»¿id to id;
15 • ALTER TABLE compres ADD PRIMARY KEY (id);
16 • ALTER TABLE compres MODIFY COLUMN transaction_id VARCHAR(50),
17 ADD CONSTRAINT fk_transaction FOREIGN KEY (transaction_id)
18 REFERENCES transactions(id);
19 • ALTER TABLE compres MODIFY COLUMN product_id VARCHAR(50),
20 ADD CONSTRAINT fk_product FOREIGN KEY (product_id)
21 REFERENCES products(id);
22 /*Necessitem conèixer el nombre de vegades que s'ha venut cada producte.*/
23 • SELECT COUNT(product_id) vegades_venut, product_name, product_id
24 FROM compres
25 JOIN products
26 ON products.id=compres.product_id
27 GROUP BY product_id
28 ORDER BY vegades_venut DESC;
29
```

The results grid shows the following data:

| vegades_venut | product_name        | product_id |
|---------------|---------------------|------------|
| 60            | riverlands north    | 23         |
| 59            | Winterfell          | 67         |
| 56            | Tarly Stark         | 2          |
| 54            | skywalker ewok sith | 17         |
| 54            | duel                | 43         |
| 53            | inn Winterfell      | 97         |

## MODEL FINAL

```

30      /* Retoco las FK para dar coherencia al modelo final*/
31 •    ALTER TABLE `trans_sprint4`.`transactions`
32      DROP FOREIGN KEY `fk_product1`;
33 •    ALTER TABLE `trans_sprint4`.`transactions`
34      DROP INDEX `fk_product1` ;
35
36 •    ALTER TABLE credit_cards
37      ADD CONSTRAINT fk_estat_tarjetas FOREIGN KEY (id)
38      REFERENCES estat_tarjetas(id);
39

```

