

SQL Database

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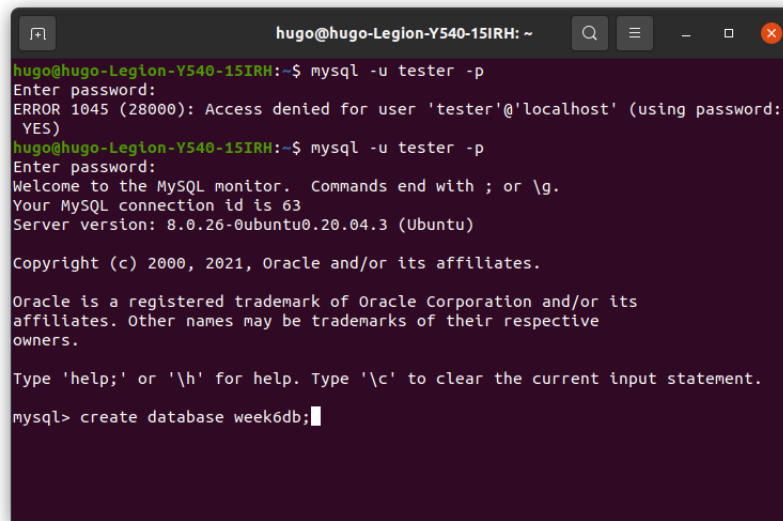
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1 Introduction

This document will describe the work done for week 7. The goal was to get started with Mysql, to do some request to manipulate a database. For this, I have first download a random database on mockaroo. The database is about bank clients and their attribute. There are 50 elements (clients). I worked on linux terminal and visualized operations in phpadmin.

2 Create database : week6db

First step was to start mysql as root and create the database "week6db".

A terminal window titled 'hugo@hugo-Legion-Y540-151RH: ~' with search, menu, and window control icons. The terminal shows a user attempting to connect to MySQL as 'tester' with a password. The first attempt fails with 'ERROR 1045 (28000): Access denied for user 'tester'@'localhost' (using password: YES)'. The second attempt succeeds, showing the MySQL monitor welcome message, connection ID 63, and server version 8.0.26-0ubuntu0.20.04.3. The user then enters the command 'create database week6db;' at the 'mysql>' prompt.

```
hugo@hugo-Legion-Y540-151RH:~$ mysql -u tester -p
Enter password:
ERROR 1045 (28000): Access denied for user 'tester'@'localhost' (using password:
YES)
hugo@hugo-Legion-Y540-151RH:~$ mysql -u tester -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 63
Server version: 8.0.26-0ubuntu0.20.04.3 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database week6db;
```

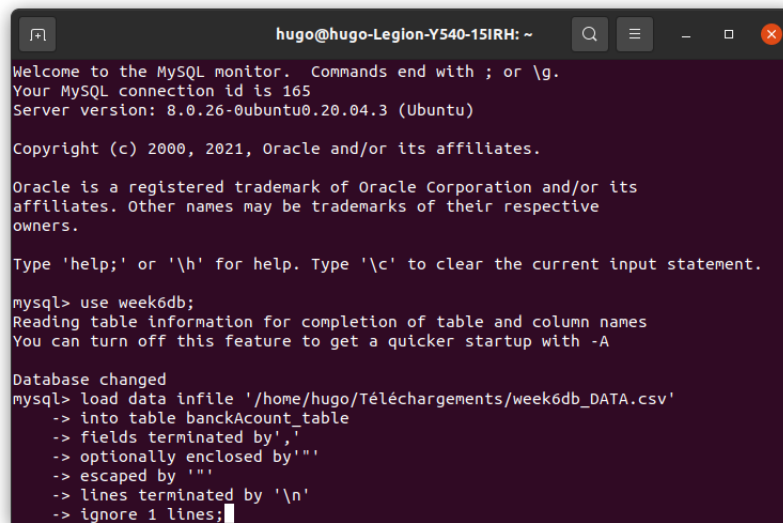
Figure 1: create week6db

Once the database was created we wanted to work on but with a non-root user. Last week we have created a non root user called "tester". In order to use

tester I have to grant him the access to the database and change permissions. Now we can log in on Mysql as "tester" user.

3 Load table : banckaccount table

Next step is to get some data in our database and create a table. I have loaded data from a csv file generated on mockaroo and created the table "banckaccount table". Our table is composed of 5 filters (5 columns) : id, Firstname, Lastname, cardnumber and money. We can visualise this table on php and in the terminal with the command 'SELECT * from banckaccount table'.



```
hugo@hugo-Legion-Y540-15IRH: ~  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 165  
Server version: 8.0.26-0ubuntu0.20.04.3 (Ubuntu)  
  
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affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> use week6db;  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
mysql> load data infile '/home/hugo/Téléchargements/week6db_DATA.csv'  
-> into table banckAccount_table  
-> fields terminated by ','  
-> optionally enclosed by '"'  
-> escaped by '\\'   
-> lines terminated by '\n'  
-> ignore 1 lines;
```

Figure 2: load data

```
mysql> select * from banckaccount_table;
```

id	first_name	last_name	card_number	money
1	Denyse	Kingzett	3543798300116370	\$403.64
2	Addy	Flisher	3573322261311442	\$139.91
3	Ingra	Gethins	3529632021401068	\$110.54
4	Karyn	Azemar	372301702901903	\$851.38
5	Gaby	Mullett	4508402680856264	\$51.10
6	Elmo	Barby	5426135040850710	\$61.18
7	Christoforo	McLachlan	560223497020730463	\$306.17
8	Maybelle	Orgel	4288925845213	\$133.94
9	Lowrance	Cordsen	3571451035928744	\$117.51
10	Rossie	Andretti	5471024498639409	\$183.14

Figure 3: terminal view

phpMyAdmin

centes | Préférences

bookstore
information_schema
week6db
Nouvelle table
banckacount_table

Parcourir Structure SQL Rechercher

SELECT * FROM banckacount_table

☐ Tout afficher | Nombre de lignes : 50 | Filtrer les lig

+ Options

id	first_name	last_name	card_number	money
1	Denyse	pires	3543798300116370	\$403.64
2	Addy	pires	3573322261311442	\$139.91
3	Ingra	pires	3529632021401068	\$110.54
4	Karyn	pires	372301702901903	\$851.38
5	Gaby	pires	4508402680856264	\$51.10
8	Maybelle	pires	4288925845213	\$133.94
9	Lowrance	pires	3571451035928744	\$117.51
11	Rog	Plumbe	3565919714406453	\$821.34
13	Florencia	Ciccarello	201515325233843	\$307.53
16	Jandy	Beaves	201837427785318	\$311.00
17	Demetra	Lightfoot	3562499327675417	\$182.55
18	Angie	Shevlan	3548996696136326	\$600.56
20	Elisabeth	Fermor	3551109628830560	\$980.51
21	Brittni	Merwe	201716483889083	\$483.57
22	Nathalia	Taplow	374288213384034	\$952.59
23	Nichole	Marshfield	4508667914719286	\$974.41
24	Zane	Seeks	3531594910673064	\$570.86
25	Lavinia	Pound	3531085936654295	\$345.45
26	Missy	Gusney	3584750701225813	\$274.59
27	Mag	Gerardot	3582483459976419	\$355.92
28	Orbadiah	Shew	3552650329225450	\$9.59
29	Addy	Golthorpp	3552249624588249	\$414.06
30	Mort	Beedle	3563427884338318	\$276.99
31	Quentin	Spoerl	3548257151358966	\$567.91
32	Barbee	Jollie	3551913188528906	\$302.61
36	Trever	Bartholomew	201466684952393	\$697.00
38	Eadie	Ciabatteri	3574545865292506	\$842.90
39	Harmony	Ebourne	3562123929775058	\$925.59
41	Sally	Haxbie	3569210117875734	\$811.71
42	Alysa	Casaccia	3582854567392923	\$191.14
43	Markos	Leehane	4041371028762	\$413.39
46	Fiann	McAline	3564456775851005	\$704.85
47	Tony	Mulqueeney	3574774499637072	\$173.13
50	Rois	McMonies	3556623676855381	\$562.77

Figure 4: php view

4 Update 10 records

With the command 'UPDATE bankaccount table SET lastname = pires WHERE id ≤ 10', I changed the 10 firsts last names records and turned them into "pires".

```
mysql> select * from bankaccount_table;
```

id	first_name	last_name	card_number	money
1	Denyse	Kingzett	3543798300116370	\$403.64
2	Addy	Flisher	3573322261311442	\$139.91
3	Ingra	Gethins	3529632021401068	\$110.54
4	Karyn	Azemar	372301702901903	\$851.38
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7	Christoforo	McLachlan	560223497020730463	\$306.17
8	Maybelle	Orgel	4288925845213	\$133.94
9	Lowrance	Cordsen	3571451035928744	\$117.51
10	Rossie	Andretti	5471024498639409	\$183.14

Figure 5: before update

```
mysql> UPDATE bankaccount_table SET last_name='pires' WHERE id≤10;
Query OK, 10 rows affected (0,95 sec)
Rows matched: 10  Changed: 10  Warnings: 0

mysql> select * from bankaccount_table;
```

id	first_name	last_name	card_number	money
1	Denyse	pires	3543798300116370	\$403.64
2	Addy	pires	3573322261311442	\$139.91
3	Ingra	pires	3529632021401068	\$110.54
4	Karyn	pires	372301702901903	\$851.38
5	Gaby	pires	4508402680856264	\$51.10
6	Elmo	pires	5426135040850710	\$61.18
7	Christoforo	pires	560223497020730463	\$306.17
8	Maybelle	pires	4288925845213	\$133.94
9	Lowrance	pires	3571451035928744	\$117.51
10	Rossie	pires	5471024498639409	\$183.14

Figure 6: after update

5 Delete 5 records

With the command 'DELETE FROM bankaccount table WHERE cardnumber = '5';' I have deleted all the rows whith card number begining by 5. We can see there are now just 34 rows instead of 50.

```
mysql> delete from banckaccount_table where card_number like '5%';
Query OK, 16 rows affected (1,01 sec)

mysql> select * from banckaccount_table;
```

id	first_name	last_name	card_number	money
1	Denyse	pires	3543798300116370	\$403.64
2	Addy	pires	3573322261311442	\$139.91
3	Ingra	pires	3529632021401068	\$110.54
4	Karyn	pires	372301702901903	\$851.38
5	Gaby	pires	4508402680856264	\$51.10
8	Maybelle	pires	4288925845213	\$133.94
9	Lowrance	pires	3571451035928744	\$117.51
11	Rog	Plumbe	3565919714406453	\$821.34
13	Florencia	Ciccarello	201515325233843	\$307.53
16	Jandy	Beaves	201837427785318	\$311.00
17	Demetra	Lightfoot	3562499327675417	\$182.55
18	Angie	Shevlan	3548996696136326	\$600.56
20	Elisabeth	Fermor	3551109628830560	\$980.51
21	Britttni	Merwe	201716483889083	\$483.57
22	Nathalia	Taplow	374288213384034	\$952.59
23	Nichole	Marshfield	4508667914719286	\$974.41
24	Zane	Seeks	3531594910673064	\$570.86
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32	Barbee	Jollie	3551913188528906	\$302.61
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42	Alysa	Casaccia	3582854567392923	\$191.14
43	Markos	Leehane	4041371028762	\$413.39
46	Fiann	McAline	3564456775851005	\$704.85
47	Tony	Mulqueeny	3574774499637072	\$173.13
50	Rois	McMonies	3556623676855381	\$562.77

```
34 rows in set (0,00 sec)
```

Figure 7: delete records

6 Conclusion

In this homework we saw basics commands for manipulation of databases on Mysql. It's interesting to see how it's easy to manage a database and how it could be implemented in bigger project. Next level of command could be to do some group by or joins.