

## **TP 02**

# **How to use commit , savepoint and Rollback**

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The process is a set of modifications that take place in the database according to a logical sequence, and it results in some changes in the rule such as deleting a record, modifying data or creating a new record, and these changes become a permanent part of the database if it is completely implemented without errors, but in the event that any Error, we have to go back to the previous version .

There are three process control commands:

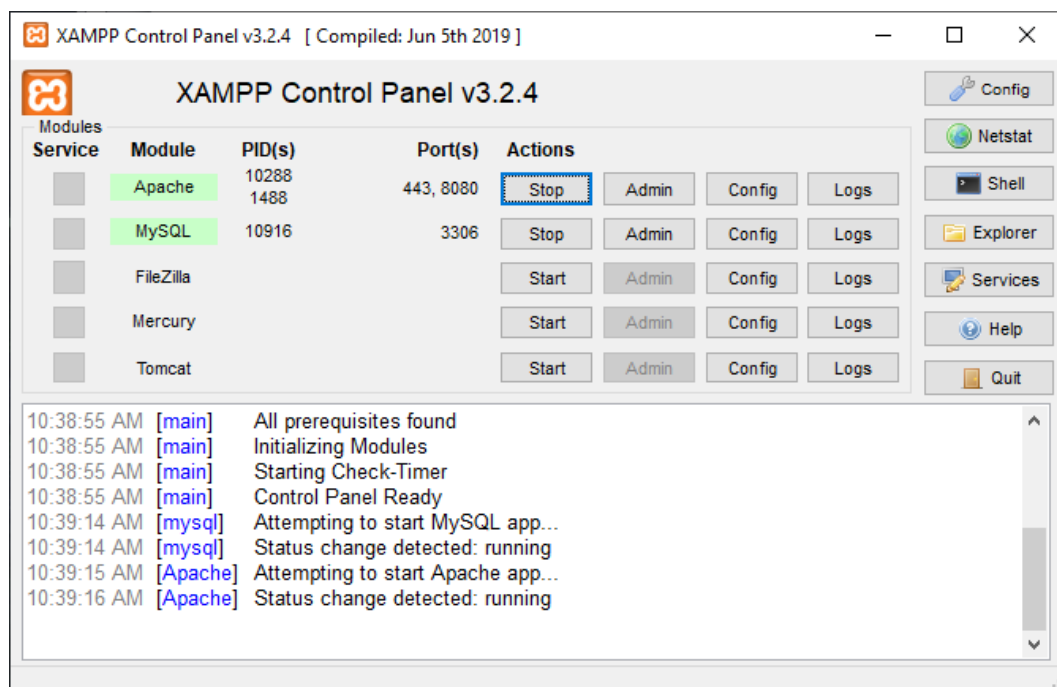
COMMIT : Save changes .

ROLLBACK : To return and restore the previous data in its old state .

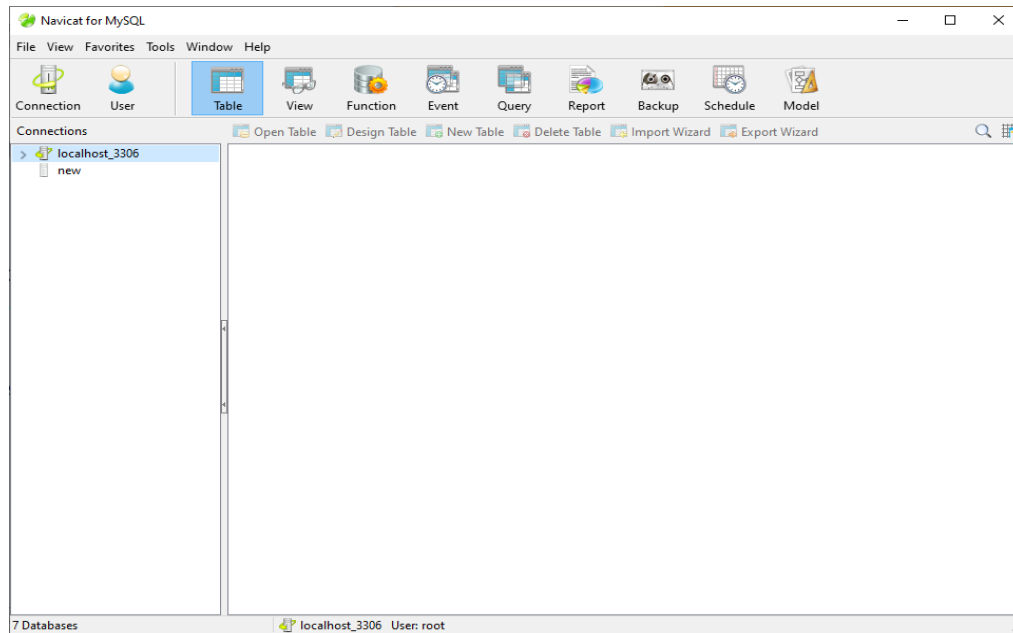
SAVEPOINT : Make backup copies on groups in order to restore data .

We will see how to use those commands in mysql

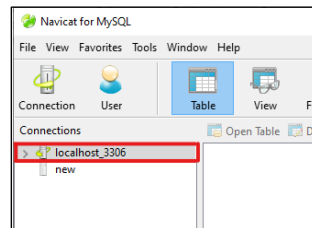
- First thing first run XAMPP and then start the mysql



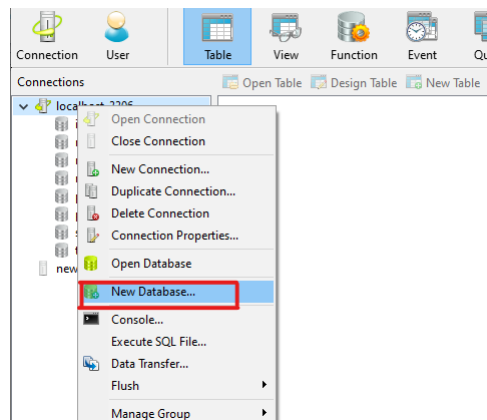
- Open navicat for Mysql



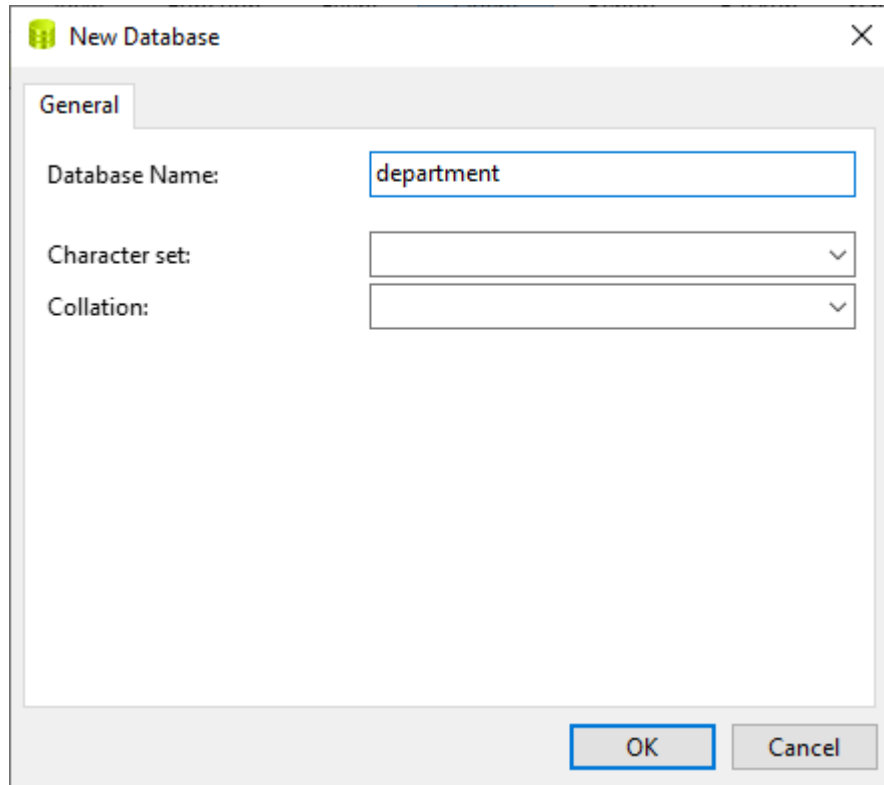
- Double click on « Localhost\_3306 »



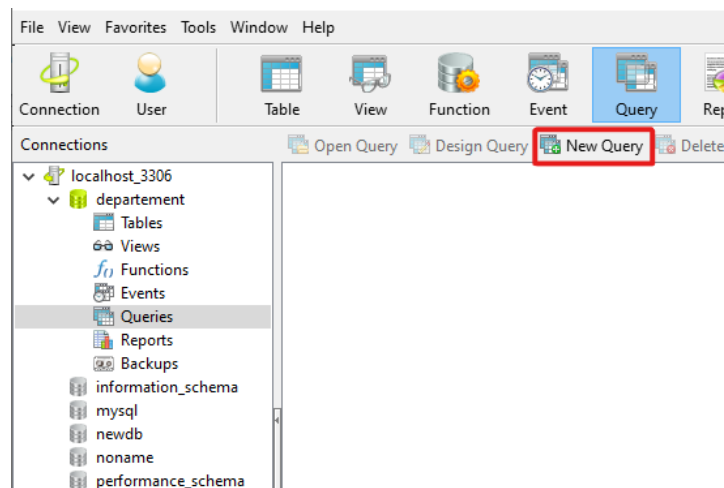
- Then right-click on "localhost\_3306" and select the option new Database...



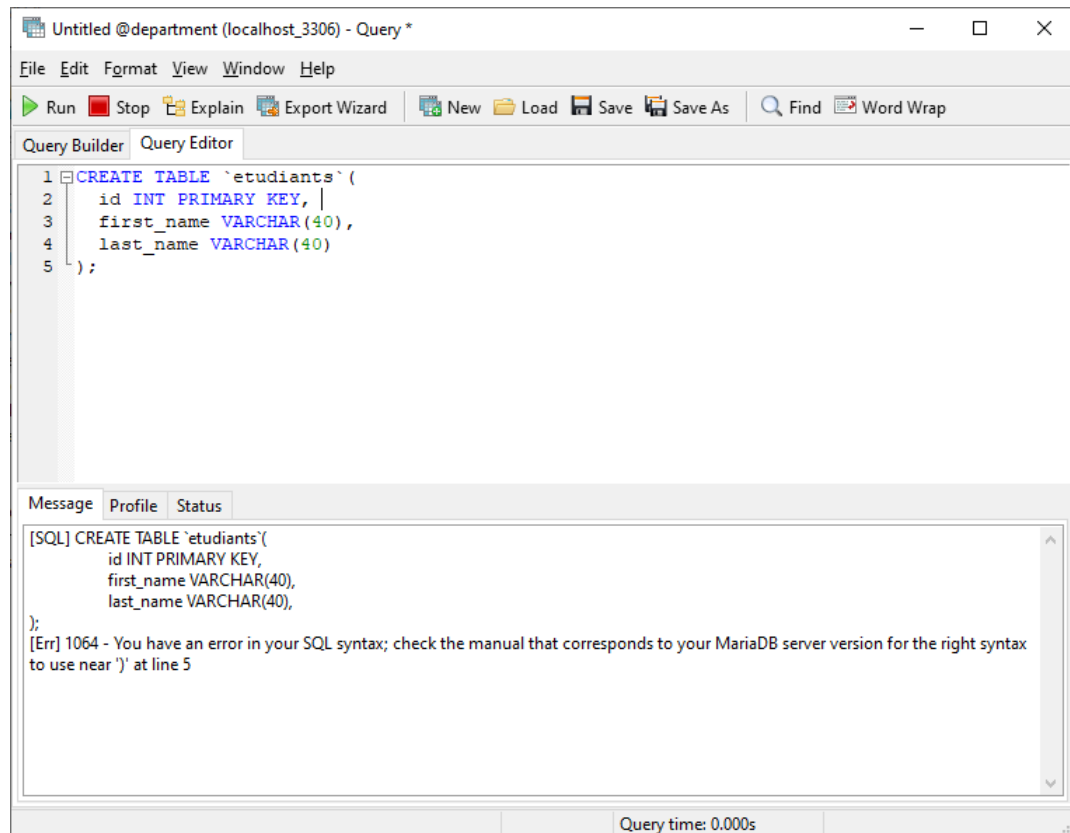
- Pick a name for this database



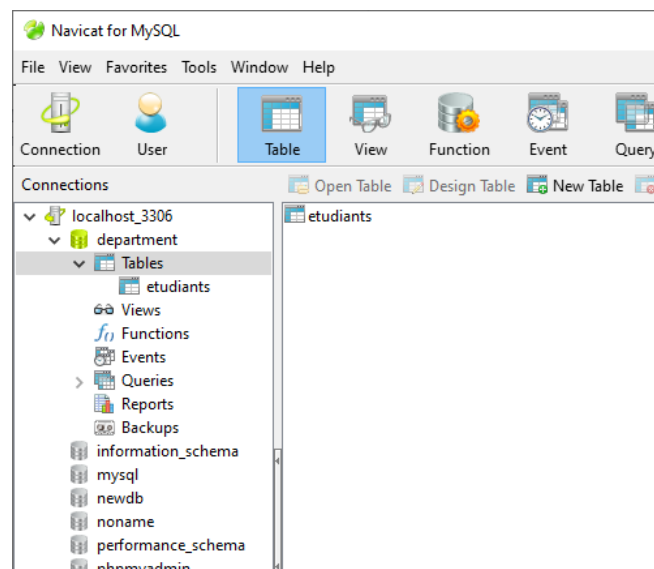
- The select the database “Department” and select query and click on new query



- Create a table using the sql language , and run the code



- The table is created successfully



- Now we will use the control commands

The screenshot shows a MySQL Query Editor window titled "myquery @department (localhost\_3306) - Query". The script contains the following SQL statements:

```

1 SET autocommit = 0 ;
2 INSERT INTO etudiants VALUES(1,'ali' , 'chelfi');
3 SAVEPOINT sp1;
4
5 INSERT INTO etudiants VALUES(2,'khaled' , 'bouzid');
6 SAVEPOINT sp2;
7
8 INSERT INTO etudiants VALUES(3,'ayoub' , 'bouseta');
9 SAVEPOINT sp3;
10
11 INSERT INTO etudiants VALUES(4,'ahmed' , 'nasri');
12 SAVEPOINT sp4;
13
14 INSERT INTO etudiants VALUES(5,'amine' , 'mokrani');
15 SAVEPOINT sp5;
16
17 INSERT INTO etudiants VALUES(6,'islem' , 'taibi');
18 INSERT INTO etudiants VALUES(7,'abdou' , 'belkacem');
19
20 SELECT * FROM etudiants;

```

Below the script, the "Result1" tab shows the output of the last query, displaying a table with 7 rows of student data:

id	first_name	last_name
1	ali	chelfi
2	khaled	bouzid
3	ayoub	bouseta
4	ahmed	nasri
5	amine	mokrani
6	islem	taibi
7	abdou	belkacem

The status bar at the bottom indicates "Query time: 0.095s" and "Record 1 of 7".

In the last picture we have seen how to use “commit and savepoint” , now we will see how can we use the savepoint with rollback .

- Lets rollback to sp5 , the savepoint we have created .

The screenshot shows a MySQL Query Editor window titled "myquery @department (localhost\_3306) - Query". The script contains the following SQL statements:

```

1 ROLLBACK to sp5;
2 SELECT * FROM etudiants;

```

Below the script, the "Result1" tab shows the output of the last query, displaying a table with 5 rows of student data:

id	first_name	last_name
1	ali	chelfi
2	khaled	bouzid
3	ayoub	bouseta
4	ahmed	nasri
5	amine	mokrani

The status bar at the bottom indicates "Query time: 0.095s" and "Record 1 of 7".

- And now try to go back to sp4 .

The screenshot shows a MySQL Query Editor window titled "myquery @department (localhost\_3306) - Query \*". The window has a menu bar (File, Edit, Format, View, Window, Help) and a toolbar with icons for Run, Stop, Explain, Export Wizard, and a plus sign. Below the toolbar are tabs for "Query Builder" and "Query Editor". The "Query Editor" tab is active, displaying the following SQL query:

```
1 ROLLBACK to sp4;  
2 SELECT * FROM etudiants;
```

Below the query editor, there are tabs for "Message", "Result1", "Profile", and "Status". The "Result1" tab is active, showing a table with the following data:

id	first_name	last_name
1	ali	chelfi
2	khaled	bouzid
3	ayoub	bouseta
4	ahmed	nasri

- Then try to rollback to sp2 .

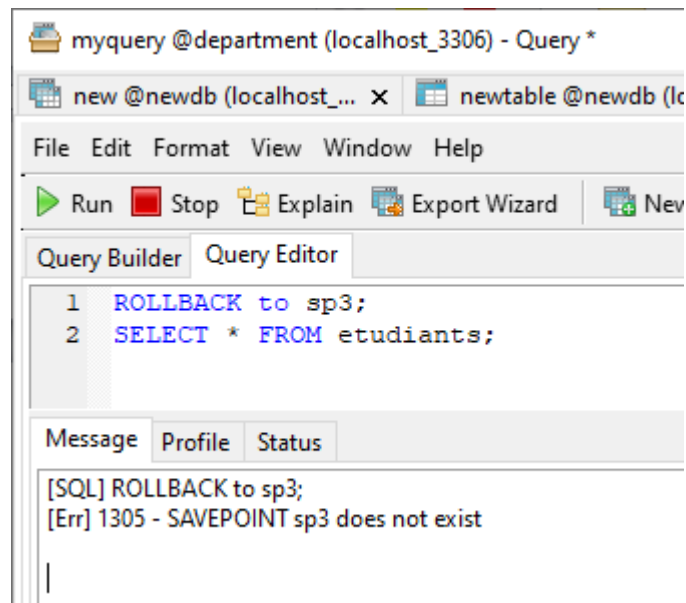
The screenshot shows a MySQL Query Editor window titled "myquery @department (localhost\_3306) - Query \*". The window has a menu bar (File, Edit, Format, View, Window, Help) and a toolbar with icons for Run, Stop, Explain, Export Wizard, and a plus sign. Below the toolbar are tabs for "Query Builder" and "Query Editor". The "Query Editor" tab is active, displaying the following SQL query:

```
1 ROLLBACK to sp2;  
2 SELECT * FROM etudiants;
```

Below the query editor, there are tabs for "Message", "Result1", "Profile", and "Status". The "Result1" tab is active, showing a table with the following data:

id	first_name	last_name
1	ali	chelfi
2	khaled	bouzid

- Then try to rollback to sp3 .



When we tried to switch to sp3 after we moved to sp2, the result was "savepoint sp3 does not exist" because it was deleted when we wrote "ROLLBACK to sp2".

- When we write "ROLLBACK;", the table will be empty because we get back to the start point .

