Create and Populate a Database Table with MySQL Workbench

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- Feedback? Please email feedback to mdemuynck@twu.edu

Create Initial Dababase and a Single Table

New SQL FILE button

Open and SQL FILE button

Save SQL FILE button

Execute SQL script button

Execute SQL script under cursor button

As soon as you create a new database or a new table, the schemas window is updated. You may need to use the refresh before it becomes visible.

In this window you find feedback on your code: if it worked, or if there was an error. The share table creation was successful.

Code to create a database and a table in the database in a new SQL script file.
Note the following:
- Can create a DB only once
- The USE temp statement that sets temp as the current database
- Can create a table only once
- The text in grey are comments. Ignored by SQL, but important to us
- For creating the first database and tables, please use the SQL create table statement

```
/* Create temporary database, called temp
    NOTE: a database can only be create once */
create database temp;

/* Set the database to use */
use temp;

/* Create table share
    NOTE: a table can only be create once in a database */
create table share (
    shrcode     char(3),
    shrfirm     varchar( 20 ) not null,
    shrprice    decimal( 6, 2 ),
    shrqty      decimal( 8 ),
    shrdiv      decimal( 5, 2 ),
    shrpe       decimal( 2 ),
    primary key( shrcode )
);
```

Populate a Table with Data Using INSERT

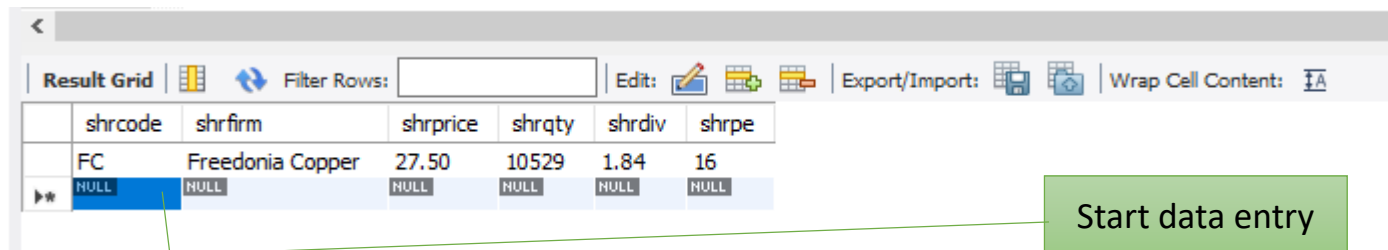**Code** to populate a table with INSERT statement.

Note the following:

- This statement creates a single record/tuple in the table.
- You need such an INSERT statement for each record you need in the table.
- If you try to insert a record with a duplicate primary key, if gives an error.

Error generated when attempting to insert a record with a duplicate primary key.

Enter Records with Grid Data Entry

- Steps:
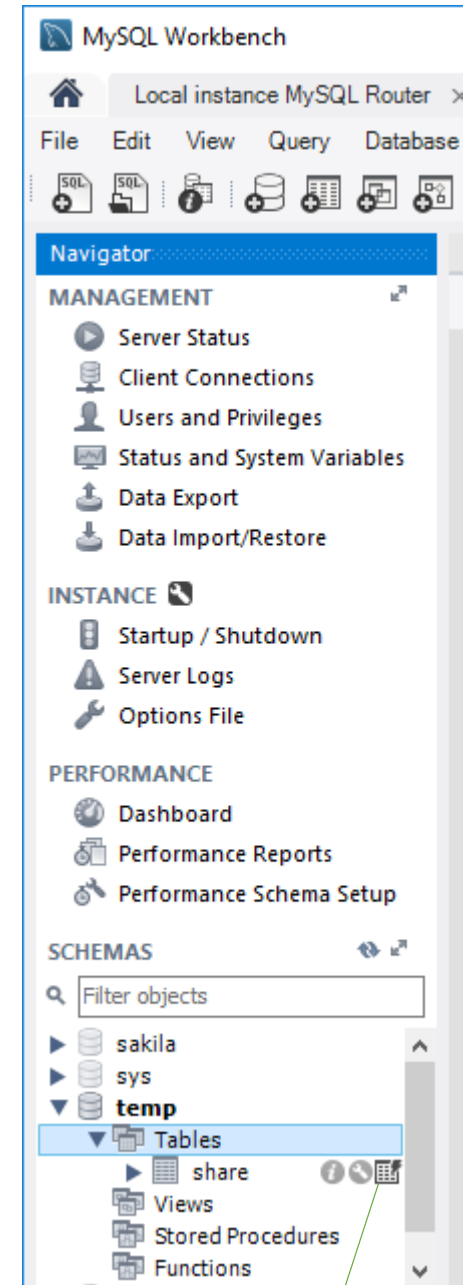 1. Hover over the table (in this case *share*), and click on table grid next to the table name. The grid view opens.
  2. Click on the null cell in the left-most column to start data entry.
  3. You can enter as many rows as you want.
  4. NOTE: IMPORTANT: typing records in the grid does NOT automatically save the data to the table: extra steps are required (next slides)

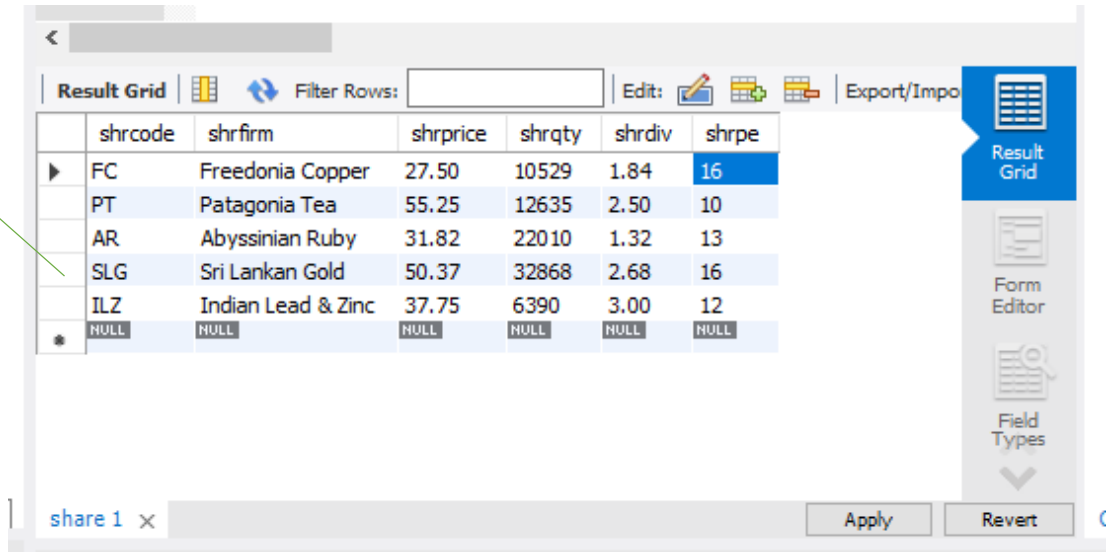

Start data entry

Table grid button
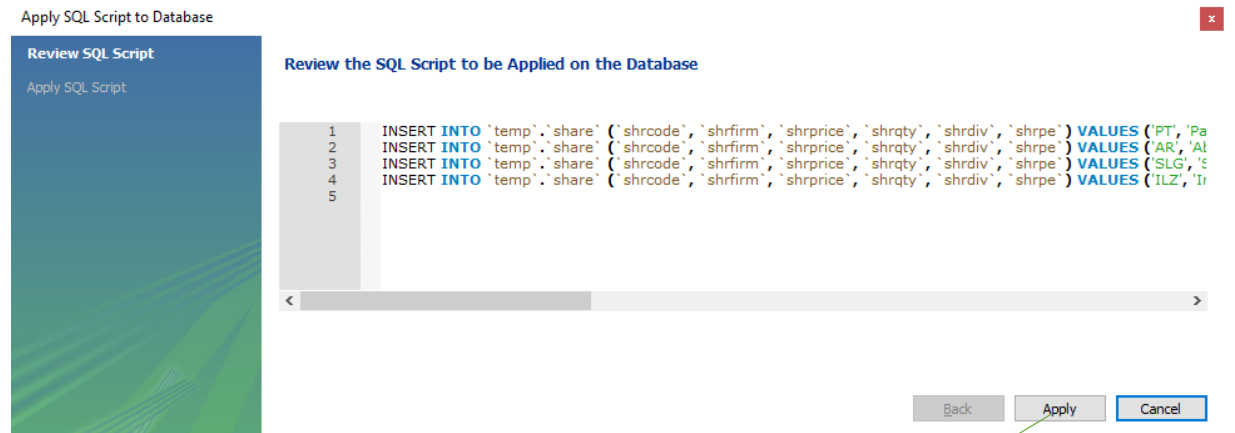
Populate Table with Data in Grid

- Steps:
    1. Four new records were entered in the grid.
    2. To save those data to the *share* table, click the *Apply* button on the bottom right of the grid.
    3. In the next pop-up window, you will see the SQL INSERT code generated for the data you typed in the grid. Click the *Apply* button to save the data to the share table.
    4. MySQL executes the code, and your data are now in the table (next slide)

Data entered in the grid, an example

	shrcode	shrfirm	shrprice	shrqty	shrdiv	shrpe
▶	FC	Freedonia Copper	27.50	10529	1.84	16
	PT	Patagonia Tea	55.25	12635	2.50	10
	AR	Abyssinian Ruby	31.82	22010	1.32	13
	SLG	Sri Lankan Gold	50.37	32868	2.68	16
	ILZ	Indian Lead & Zinc	37.75	6390	3.00	12
✳	NULL	NULL	NULL	NULL	NULL	NULL

Result Grid | Filter Rows: | Edit: | Export/Impo

Result Grid

Form Editor

Field Types

share 1 ✕   Apply   Revert

Apply SQL Script to Database

Review SQL Script

Apply SQL Script

Review the SQL Script to be Applied on the Database

```
1  INSERT INTO `temp`.`share` (`shrcode`, `shrfirm`, `shrprice`, `shrqty`, `shrdiv`, `shrpe`) VALUES ('PT', 'Pa
2  INSERT INTO `temp`.`share` (`shrcode`, `shrfirm`, `shrprice`, `shrqty`, `shrdiv`, `shrpe`) VALUES ('AR', 'Ai
3  INSERT INTO `temp`.`share` (`shrcode`, `shrfirm`, `shrprice`, `shrqty`, `shrdiv`, `shrpe`) VALUES ('SLG', 'S
4  INSERT INTO `temp`.`share` (`shrcode`, `shrfirm`, `shrprice`, `shrqty`, `shrdiv`, `shrpe`) VALUES ('ILZ', 'Ir
5
```
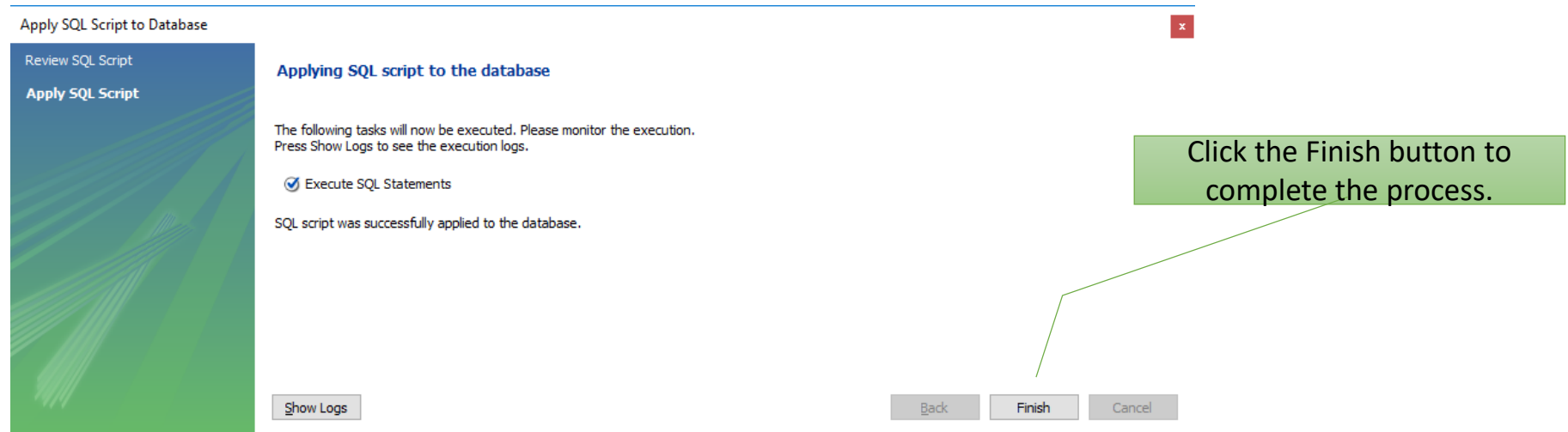
Back   Apply   Cancel

Click the Apply button to execute the generated SQL codes

Finalize It

- Steps
    1. In the next pop-up window, finalize the execution of the SQL statements: click *Finish*
    2. MySQL will automatically generate a *SELECT* statement in a new tab to show all the data in the table.
    3. You can execute the statement and verify all your tuples are present.
    4. You can repeat the process as often as needed to add more data as needed

Apply SQL Script to Database

Review SQL Script

Apply SQL Script

Applying SQL script to the database

The following tasks will now be executed. Please monitor the execution.
Press Show Logs to see the execution logs.

☑ Execute SQL Statements

SQL script was successfully applied to the database.

Click the Finish button to complete the process.

Show Logs   Back   Finish   Cancel

Check the Results …

Check out the generated SQL SELECT code, in a new tab

Check out the new data in the results grid

Check out the feedback on execution: 5 rows returned

Now you are ready to do a lot of things:
- Add more data
- Write new SELECT queries, following the examples in your book or creating your own
- Save your own SELECT queries in an SQL file and save it.
- Add your name and notes on what queries do as comments