MySQL workbench—How to create ER diagram

Last amended: 24th Oct, 2025
My folder: D:\data\OneDrive\Documents\Database systems
MySQL Workbench manual is here

Given any relational database, here is screen-by-screen help to how to draw its ER-diagram in MySQL server Workbench. We assume you already have '*employees'* database or your database of interest already loaded in MySQL server. (For Ubuntu OS: For loading '*employees'* database into mysql server, please first execute the file '*er_diagram.sh*' in your virtual machine's folder: */home/ashok/Documents/erd and normalization exercises/erd_in_workbench* in the Ubuntu_database VM.)

1. Configuration and shortcuts:

A. All SQL Editor and Workspace bench configuration changes are saved to file:

```
C:\Users\ashok\AppData\Roaming\MySQL\Workbench\wb_options.xml
```

```
(A copy saved in file at folder:
D:\OneDrive\Documents\database_systems\mysql_workbench\workbench_confi
guration)\
```

B. Useful Workbench shortcut summary:

Ctrl+T	Open Query tab
Ctrl+SHIFT+O	Open sql script file
Ctrl+SHIFT+ENTER	Execute all queries
Ctrl+ENTER	Execute query in Query Editor
Ctrl+R	Reverse Engineer diablogbox
Ctrl+G	Forward Engineering
Ctrl+SHIFT+G	Write Forward Engineer code to SQL file
Ctrl+S	Save the diagram model as *.mwb (To import it double click on this file)
Ctrl+O	Open model (ERD) file

C. ERD diagram shortcuts summary:

Hit T and click on the workspace	Create table
Ctrl+S	Save the diagram model as *.mdb (To import the model, double click on this file)

2. **In Windows use Start Menu to open MySQL Workbench (right figure). In VM, click as in left-figure**

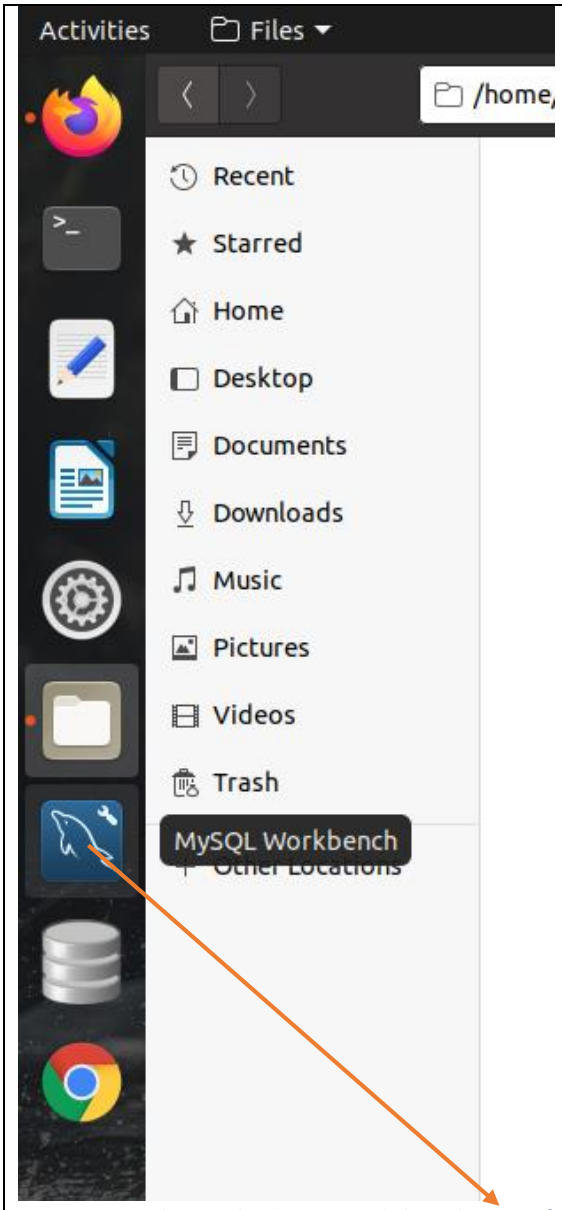

Figure 1: : In Ubuntu_database VM, click on the icon of MySQL Workbench to open it.

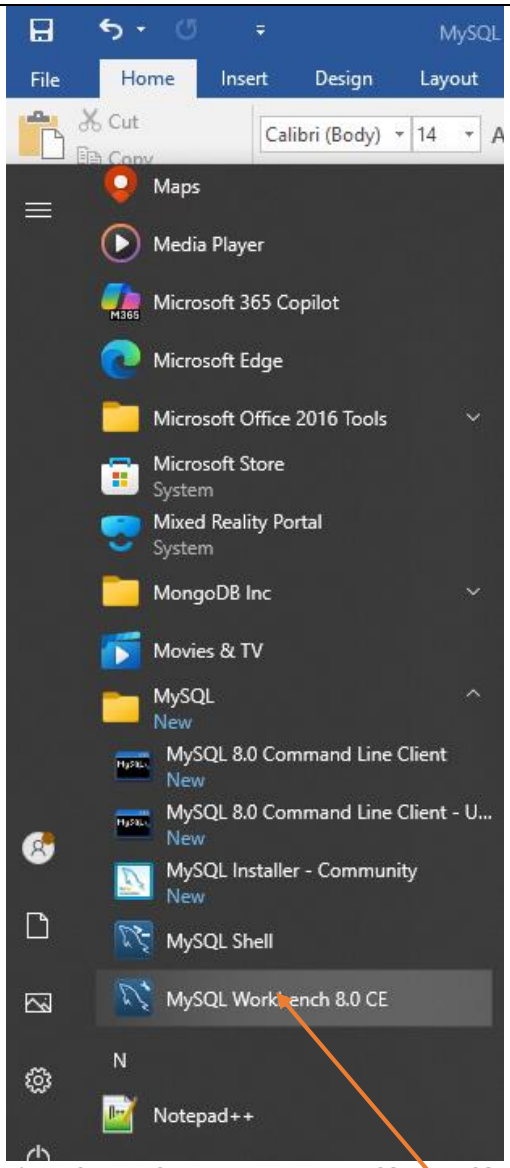

Figure 2: From Start Menu, access MySQL-->MySQL Workbench

When MySQL Workbench opens, click on Local Instance or a server created by you.

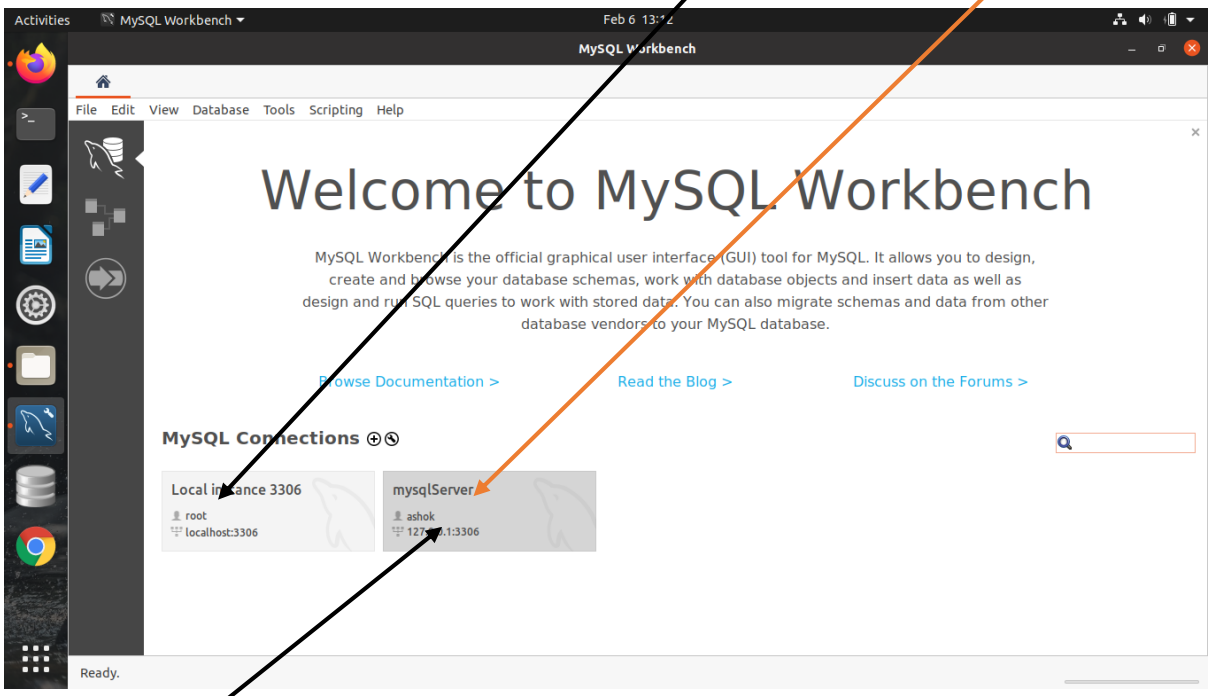

Figure 3: Click mysqlServer OR localhost link to open, as the case may be.

3. Workbench Configuration changes:

Click Edit→Preferences→Fonts and Colors. Set everything to font size of 20. Restart the Workbench.

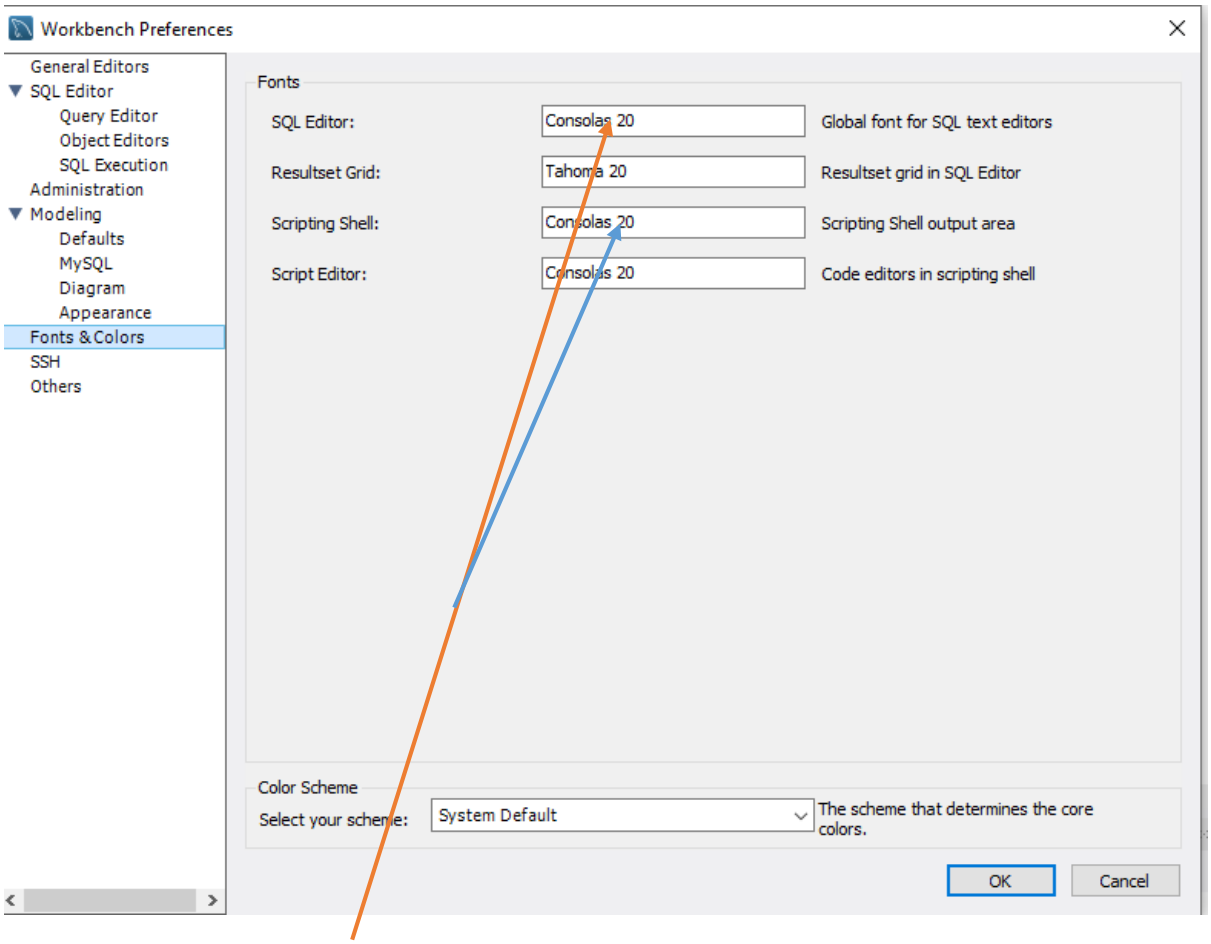

Figure 4: Change all fonts sizes to 20.. And restart Workbench.

4. Database creation

Press ctrl+T to open Query tab, if not already opened. Just create an empty database, as:

```
Create database college ;
```

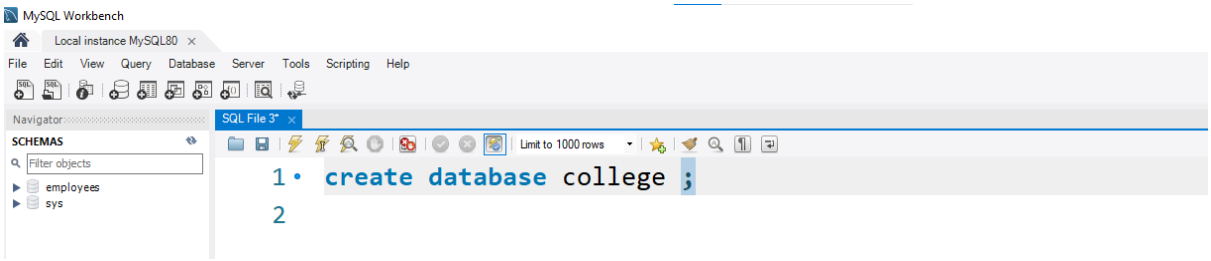

Figure 5: Press ctrl+T to open a query tab. Write create statement and press ctrl+ENTER to execute the query.

5.

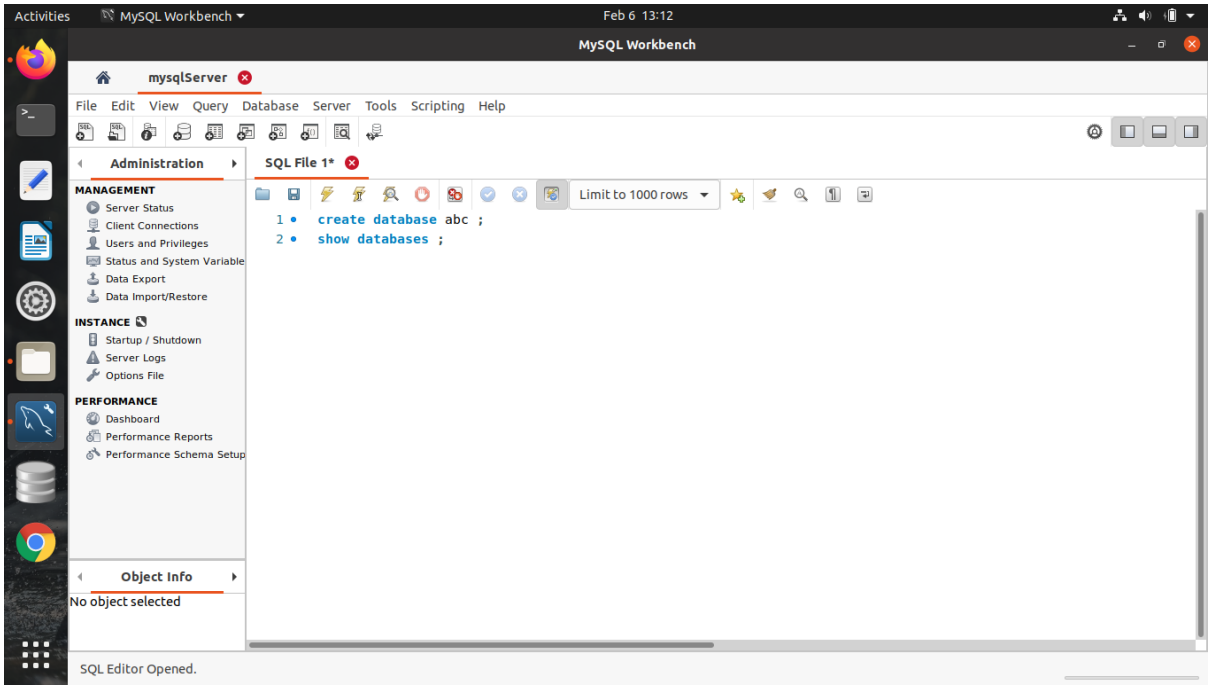

Figure 6: You will be here. Press **ctrl+R** *to open another dialog box; or in the top-menu click on* ***Database-->Reverse Engineer****.*

6. Reverse Engineering

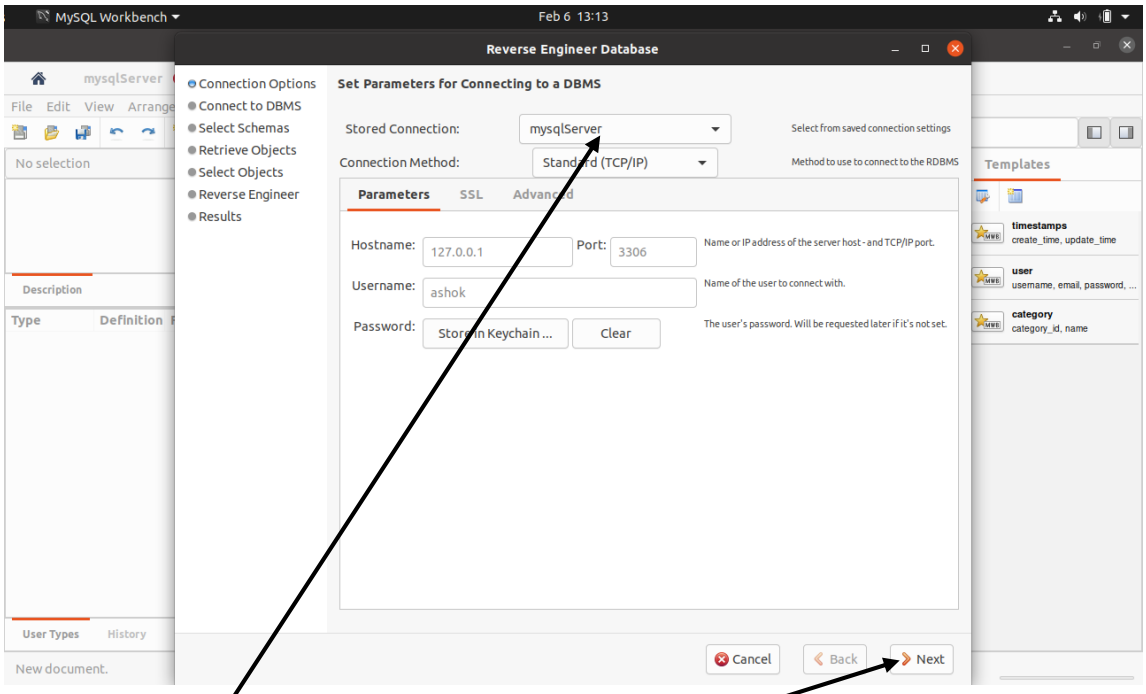

Figure 7: Select mysqlServer in the drop down, if not selected. Then click ***Next*** *button.*

7.

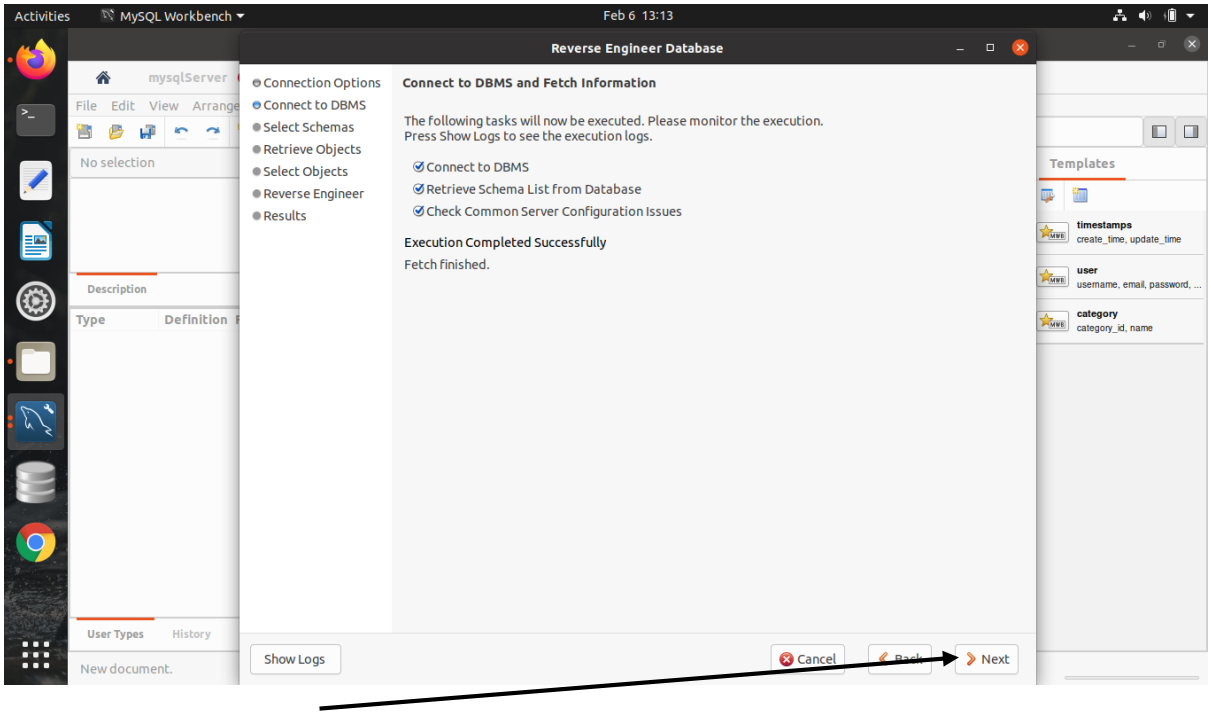

*Figure 8: Nothing to do. Click **Next** button*

8.

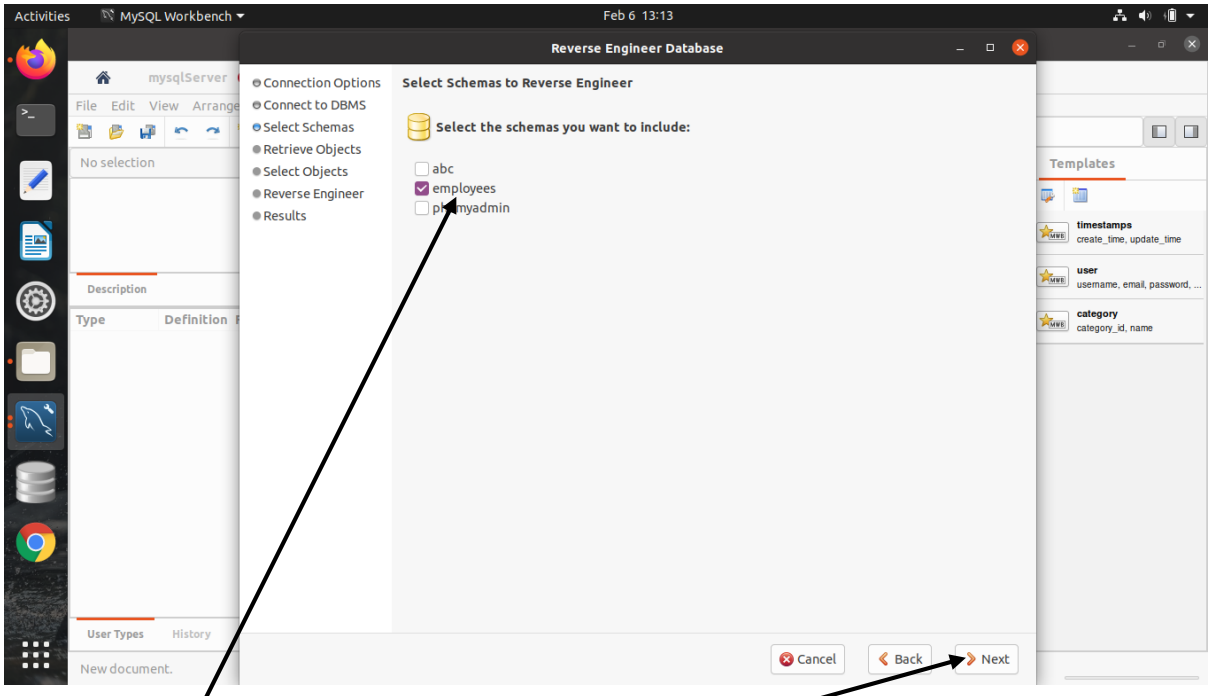

*Figure 9: Select **'employees'** or **'college'** database or your database of interest and click **Next** button.*

9.

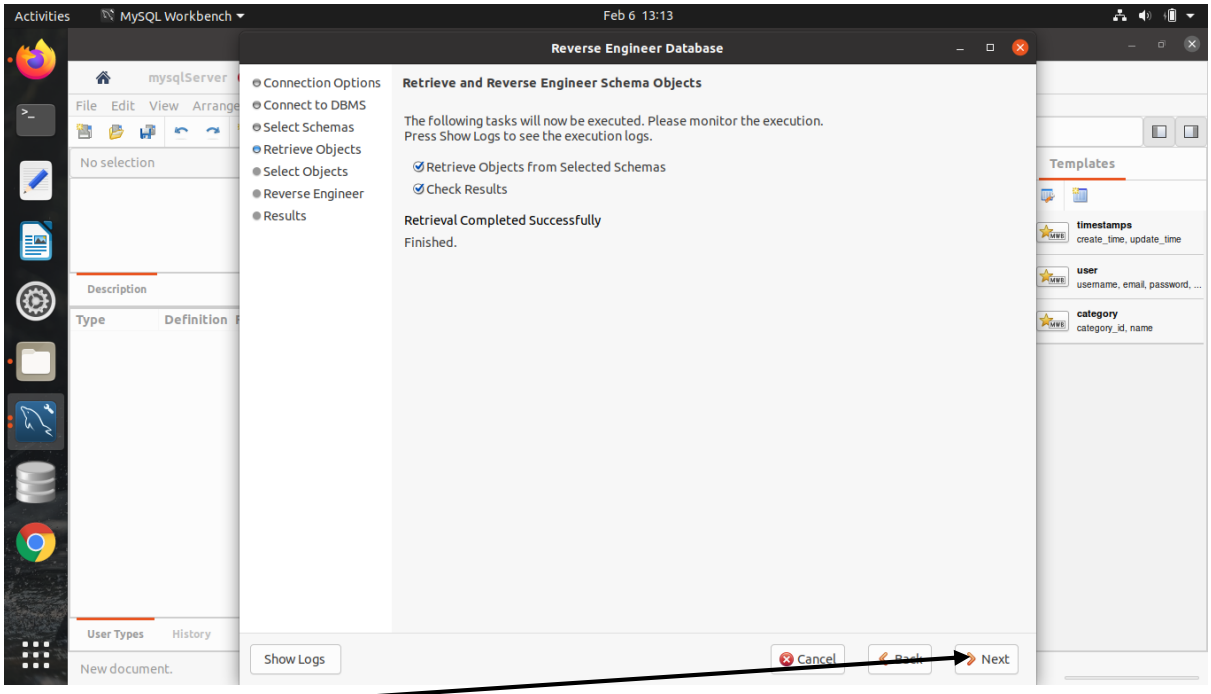

*Figure 10: Click '**Next**' button.*

10.

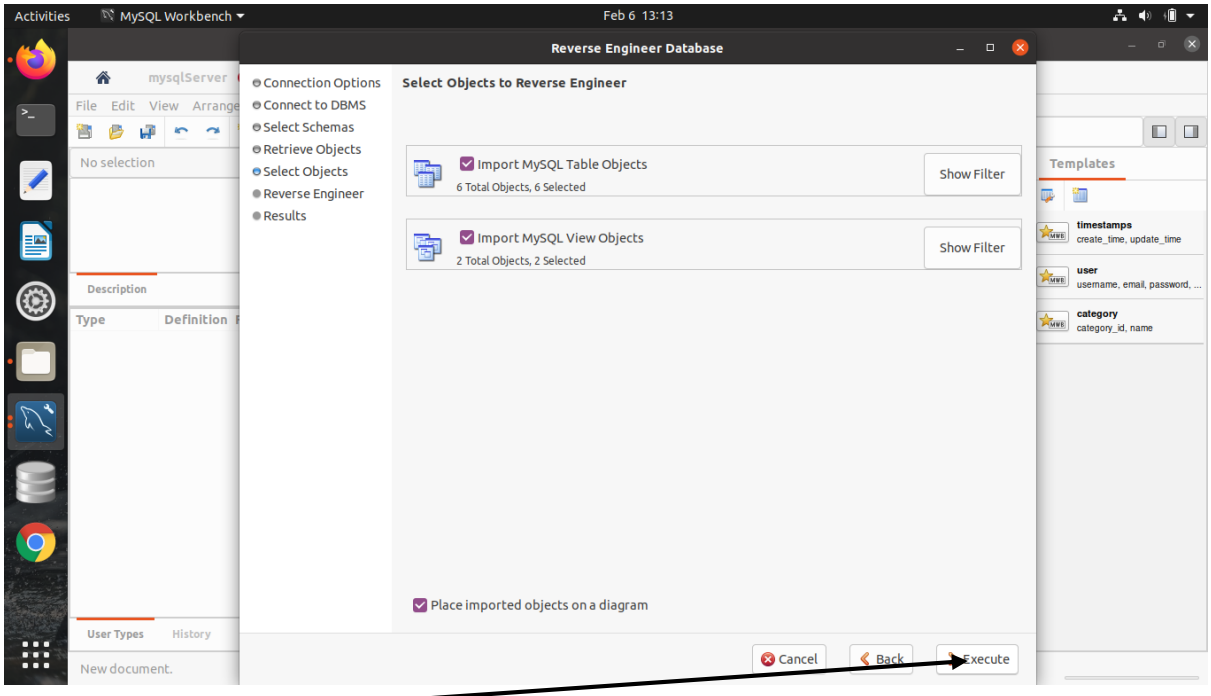

Figure 11: Click 'Execute' button

11.

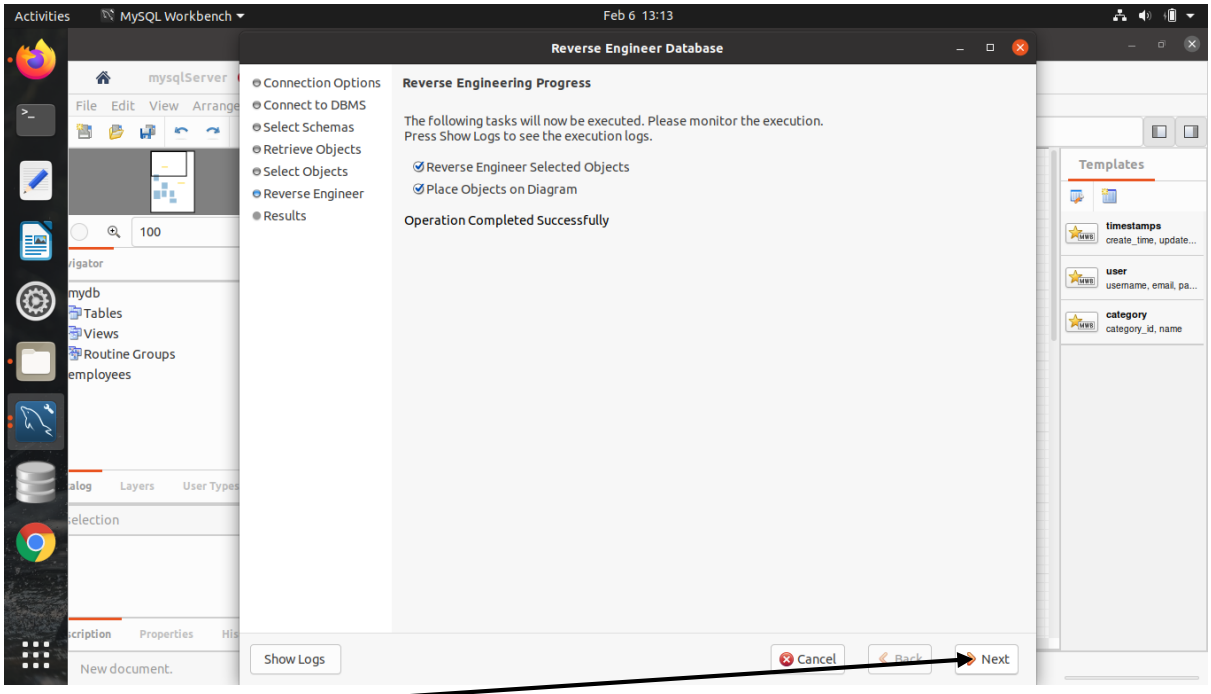

Figure 12: Click Next

12.

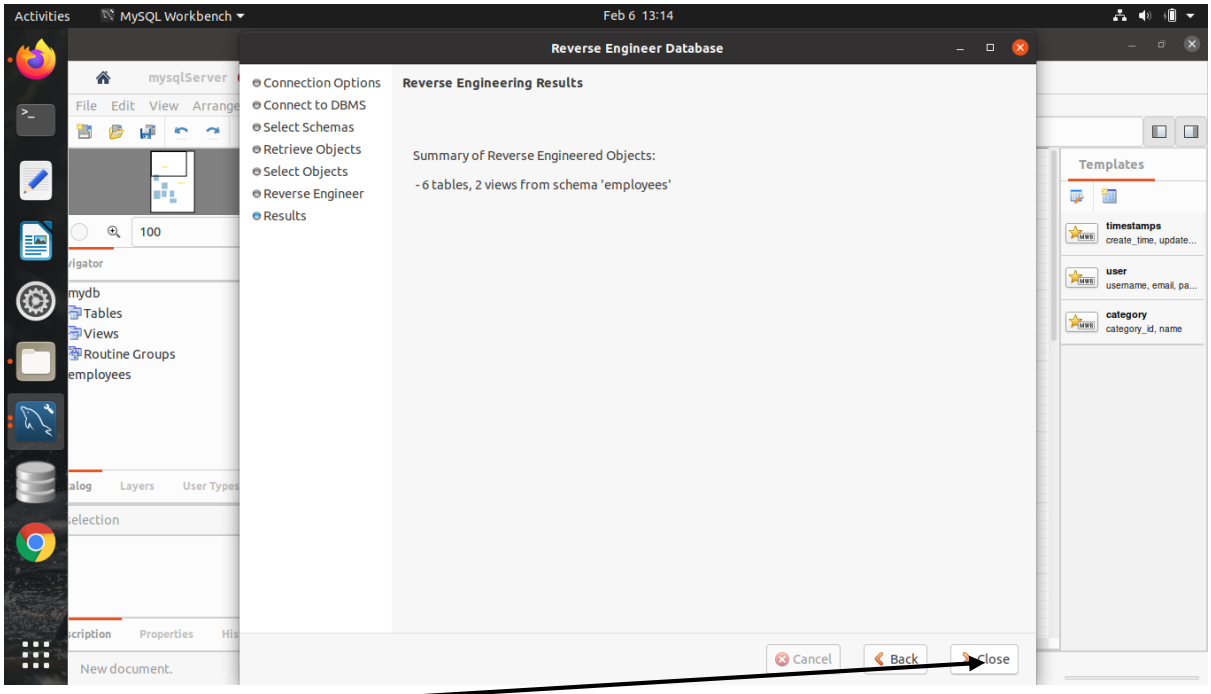

Figure 13: Click Close

13.

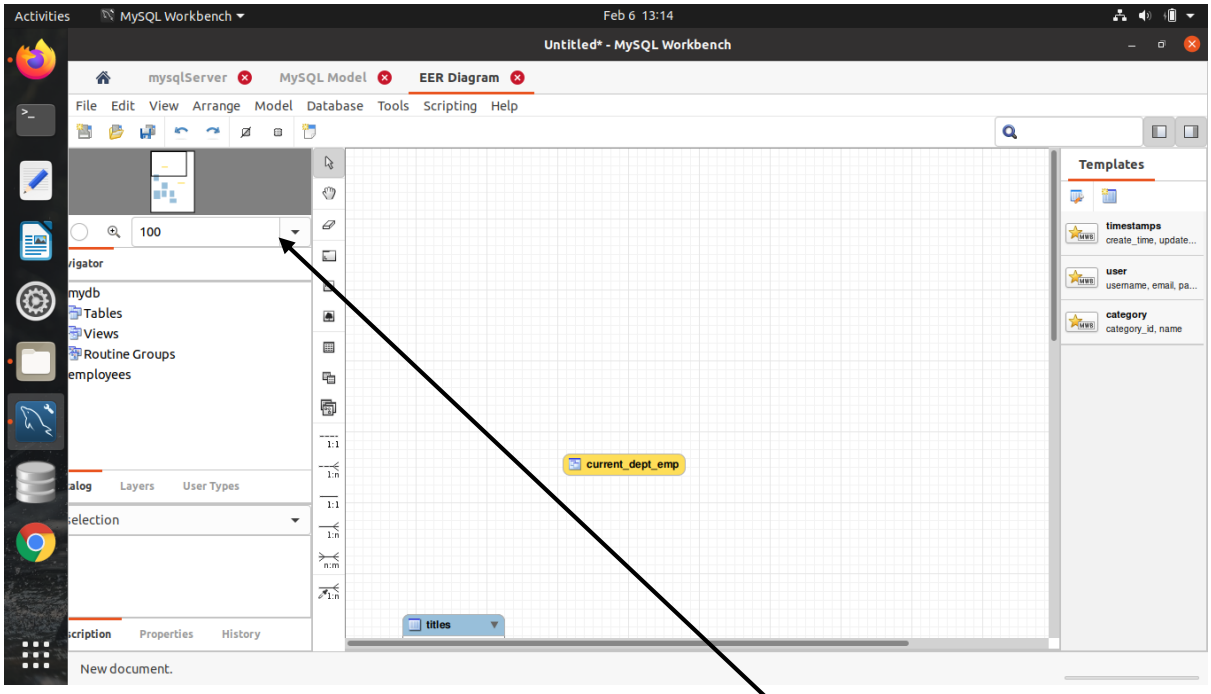

Figure 14: Change zoom level appropriately. In the drop-down, maybe change 100 to 75 to see er diagram.

14.

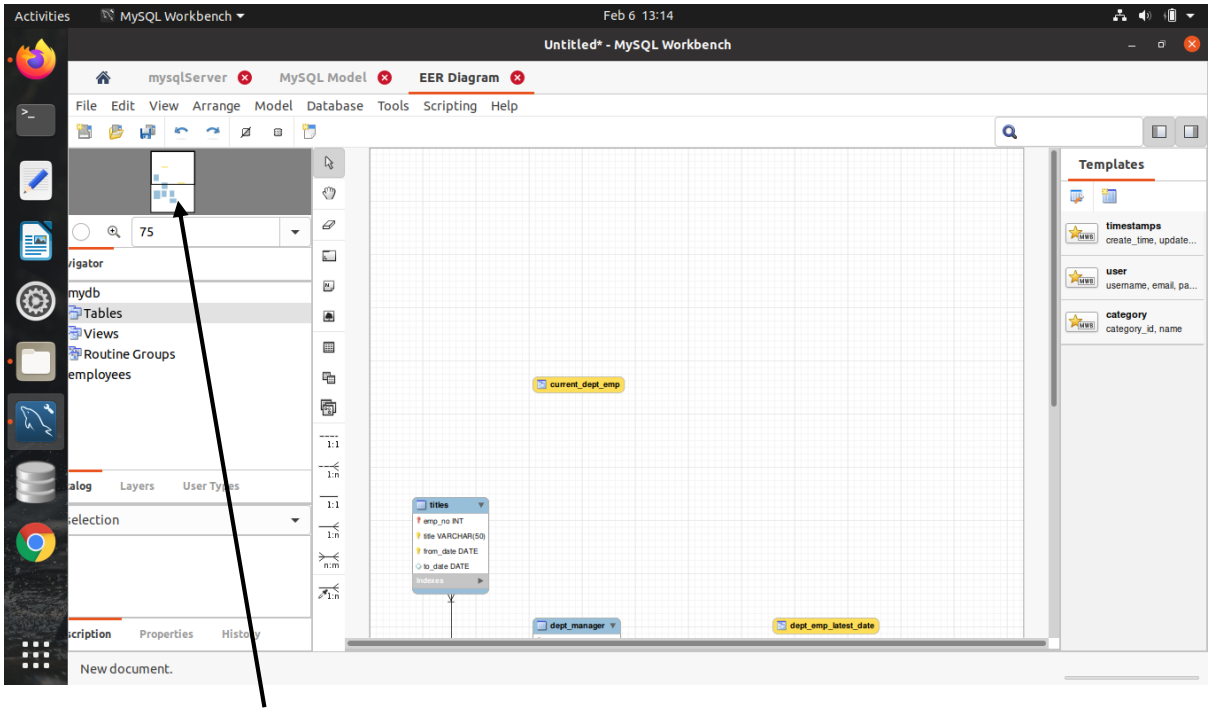

Figure 15: Drag the small rectangle down so that the blue spots are within it. It is a small pre-view of your workbench.

15.

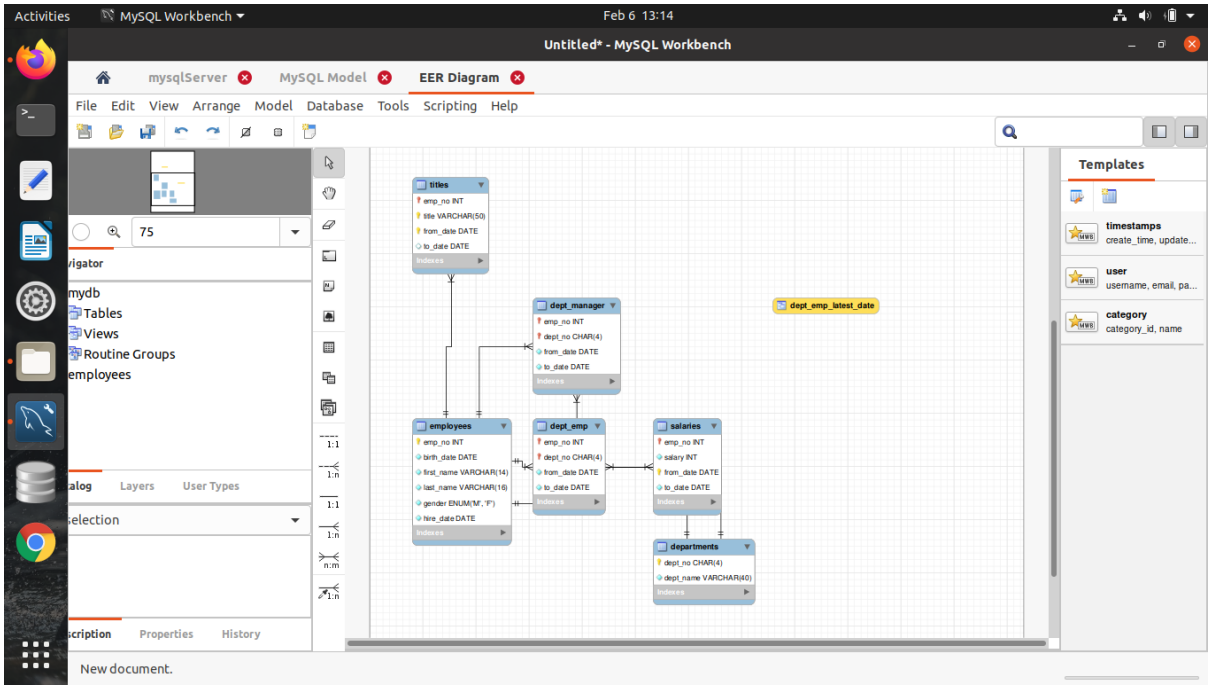

Figure 16: ER diagram. Re-arrange it so that it appears nicely and lines intersect minimum possible.

See below zoomed employees database schema

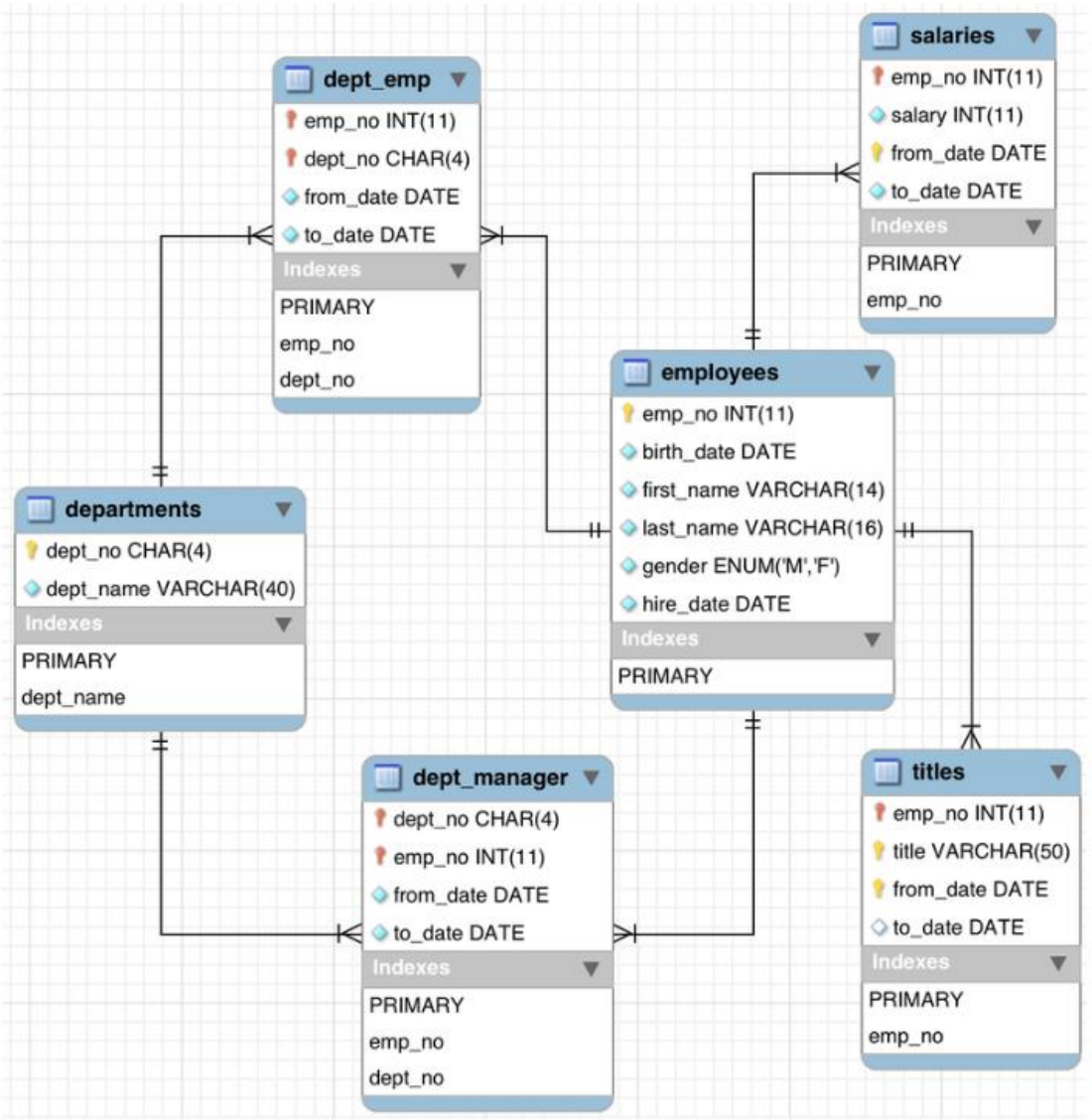

Figure 17: Employees table schema--zoomed

16. Forward Engineering

Forward Engineering: Press ctrl+G to perform Forward Engineering. And press ctrl+SHIFT+G to save forward engineered script.

17.

Restart Workbench to find the database changed.

18. Row insertion

To insert a row in any table.

under schemas,
click your database, say, college,
right click on a table, say city,
then click on **Send to SQL Editor→Insert statement**

(See figure below)

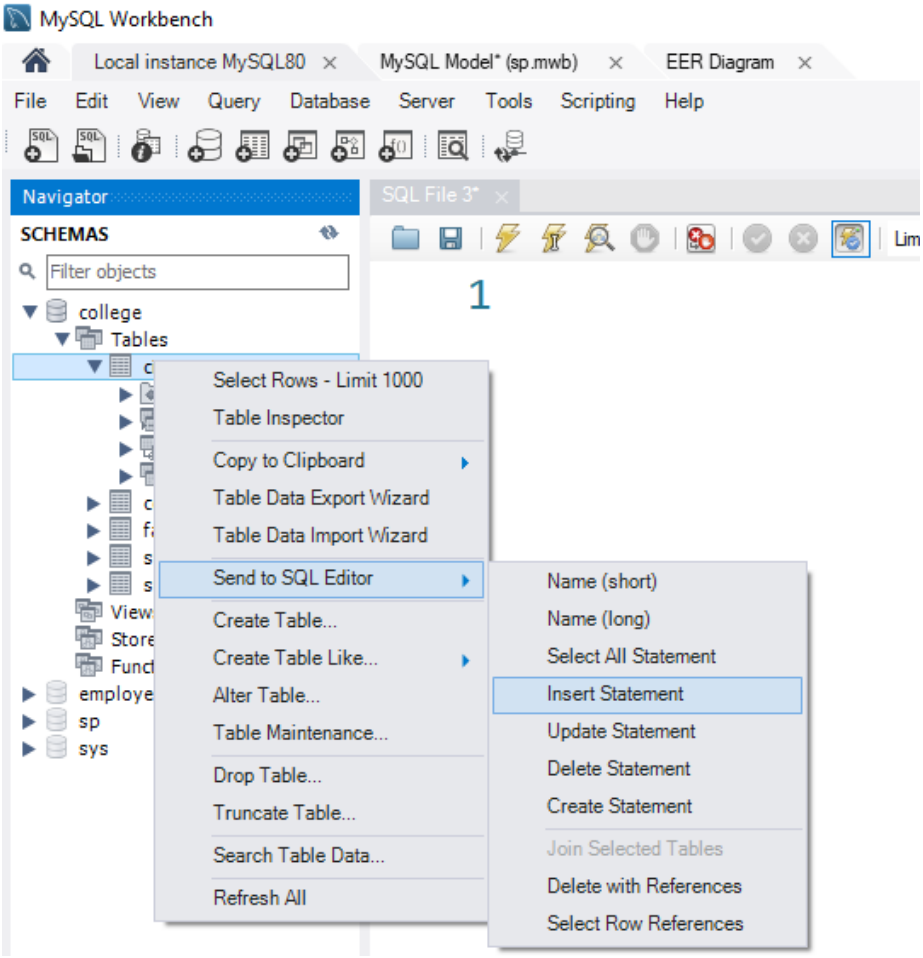

Figure 18: Generating an insert statement in SQL editor for a table

An insert statement appears, fill in values and execute:

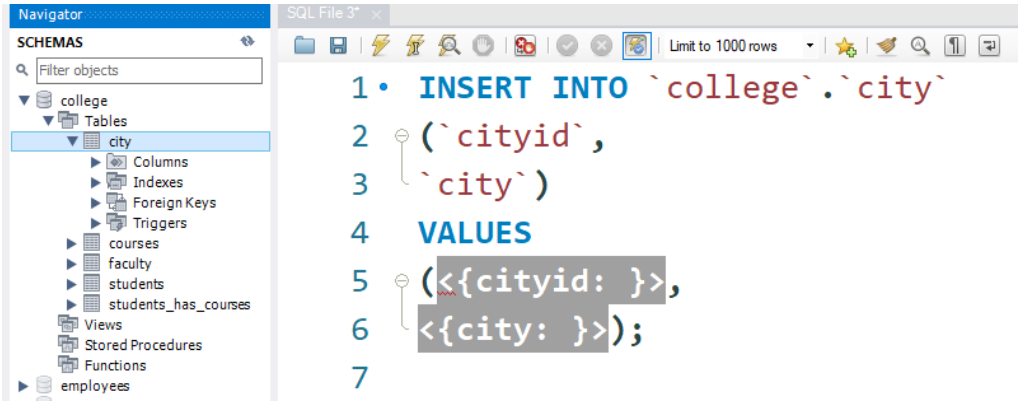

Figure 19: Fill up values in insert statement and execute

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