

3. MySQL WorkBench

i. Reverse Engineering

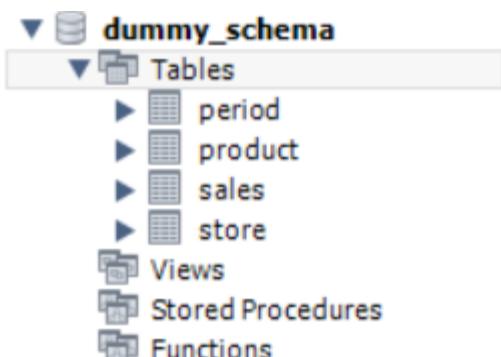
- I. Create a new schema(database) and execute the sample code for that database so that all tables are created in that database.

The screenshot shows the MySQL WorkBench interface with a query editor window. The query editor contains three CREATE TABLE statements:

```
1 • Ⓜ CREATE TABLE `Product` (
2     `Product_Code` VARCHAR(10) PRIMARY KEY,
3     `Description` VARCHAR(100),
4     `Color` VARCHAR(30),
5     `Size` INT
6 );
7
8 • Ⓜ CREATE TABLE `Period` (
9     `Period_Code` VARCHAR(10) PRIMARY KEY,
10    `Year` INT,
11    `Quarter` INT,
12    `Month` INT,
13    `Day` INT
14 );
15
16 • Ⓜ CREATE TABLE `Store` (
17     `Store_Code` Varchar(10) PRIMARY KEY,
18     `Store_Name` Varchar(50),
19     `City` Varchar(50),
20     `Telephone` TNT
```

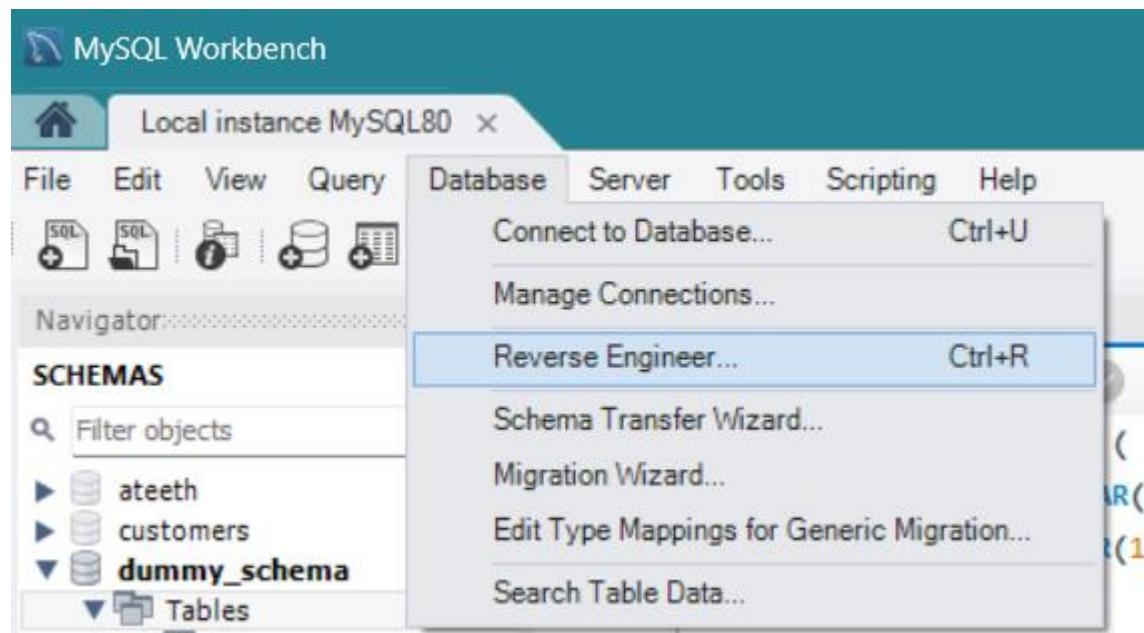
The output pane shows a single action:

#	Time	Action	Message
1	18:43:43	Apply changes to dummy_schema	Changes applied

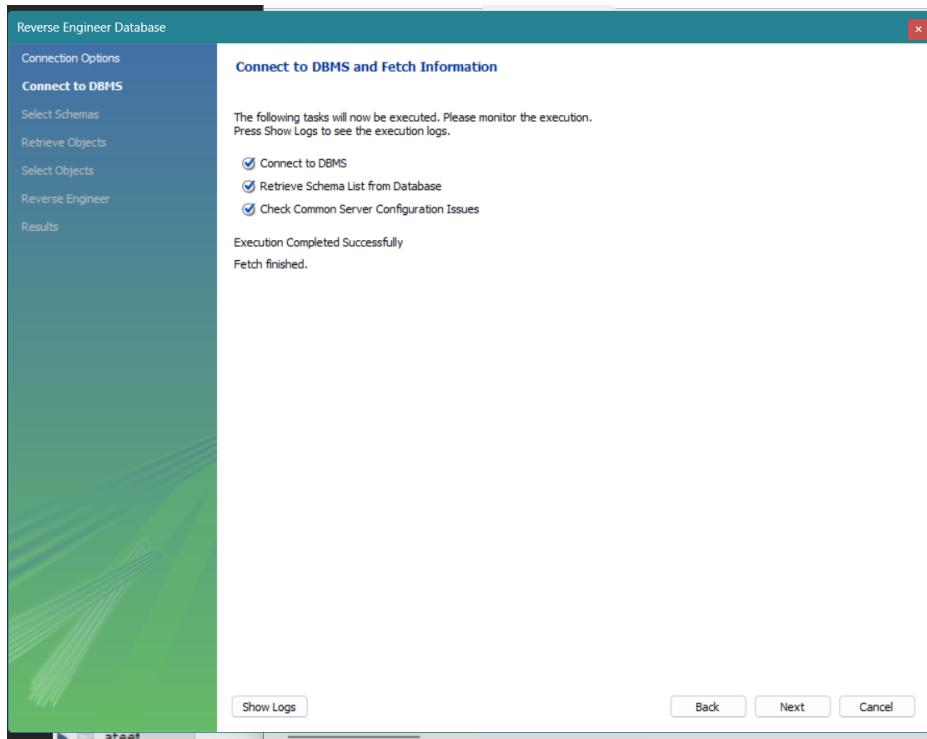


ii. In the top bar click on Database and in the dropdown

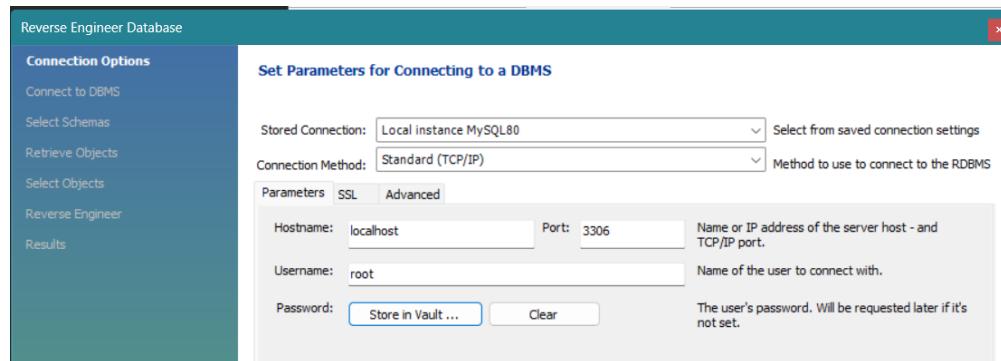
II. click on Reverse Engineer



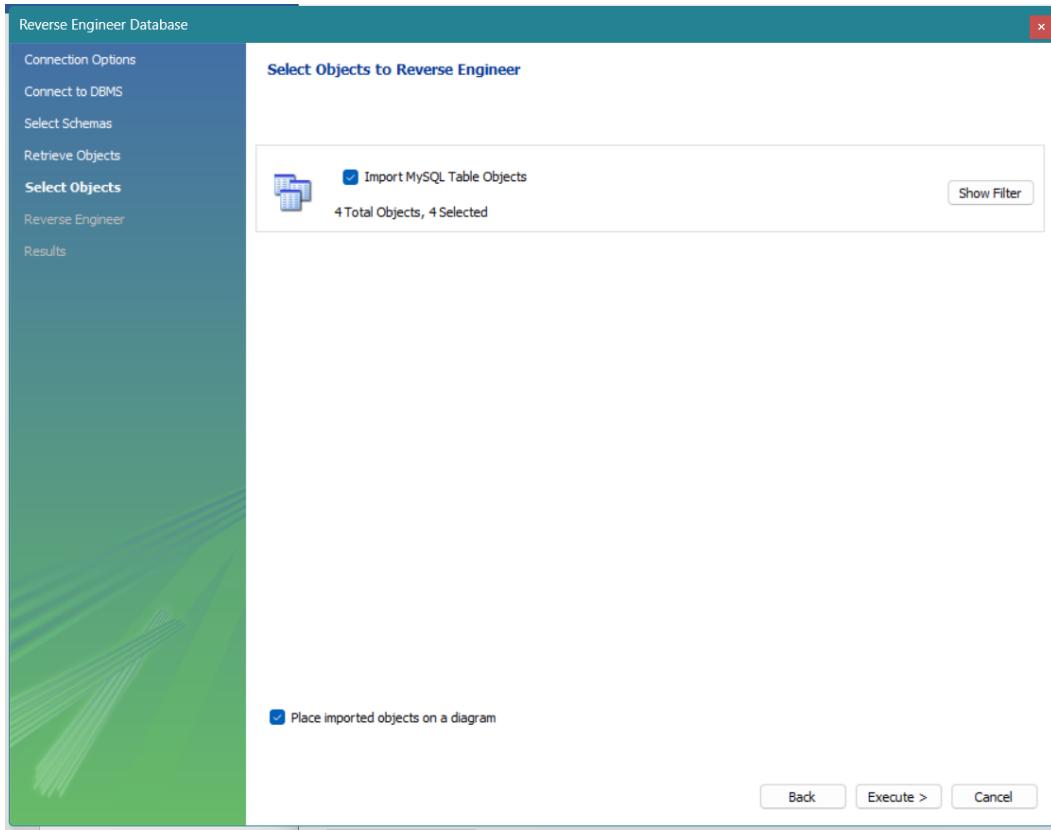
III. Fill in the following details regarding the database



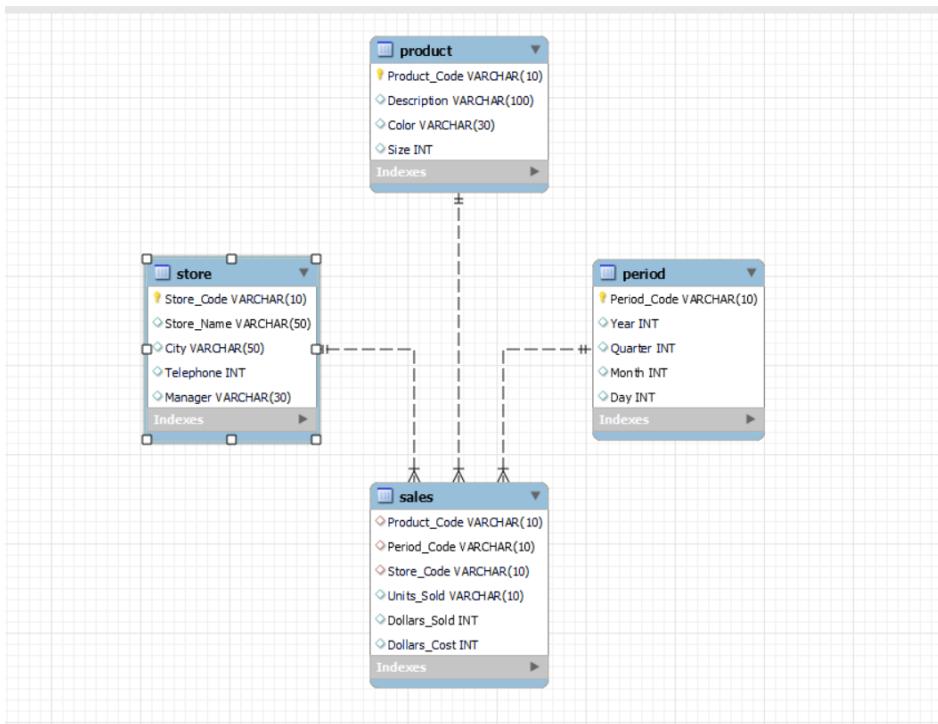
IV. The following message will be visible



V. Select the schema to import and the tables that are to be imported then execute



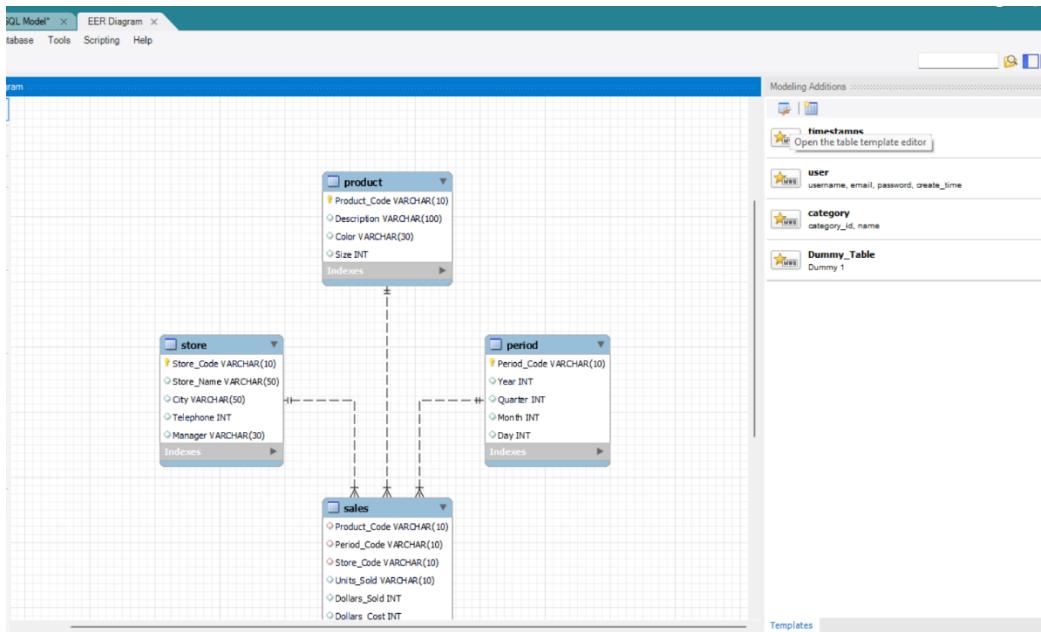
VI. The ER Diagram will be visible when Execute is clicked



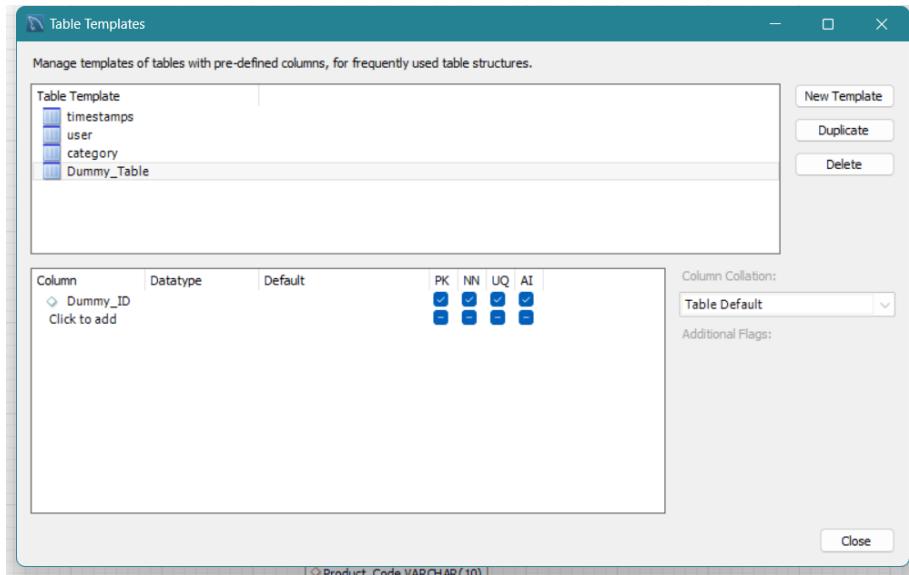
ii. Add a new table in the ER Diagram

Notice on the right side Modeling Additions

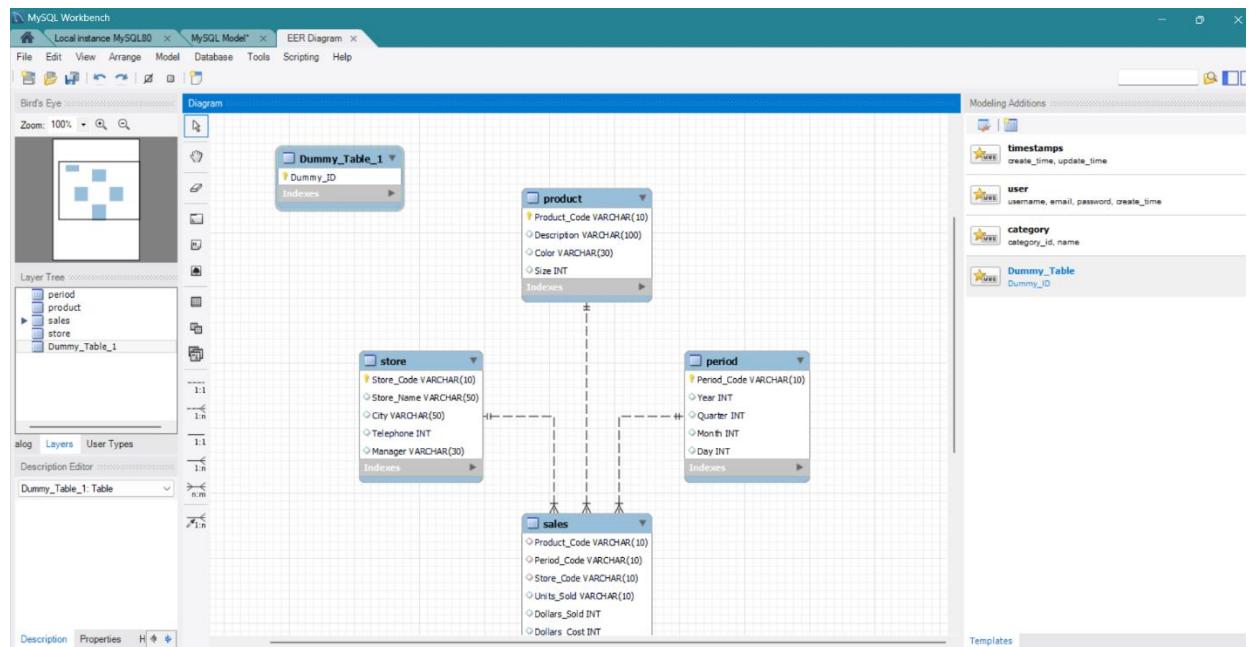
- I. Click the first icon that is Open the table editor



- II. Click new template rename it by double clicking the row it appears and in the bottom part of the pop up all attributes needed can be added



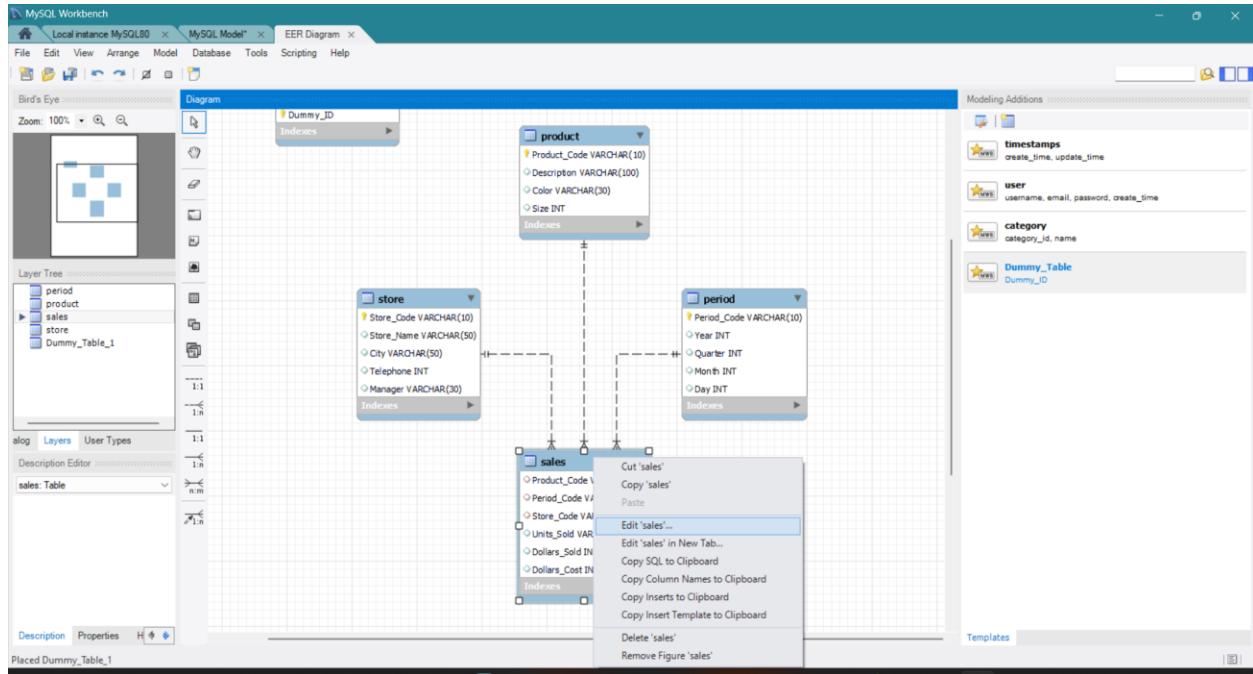
- III. To add the table to the Schema on the right side modeling Additions just select the table name to be added it will be added in this case Dummy_Table is selected



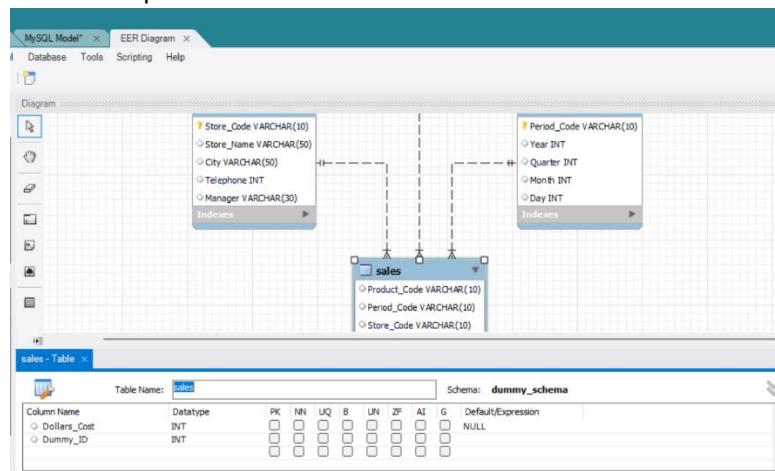
iii. Edit the tables i.e Add or Delete attributes

Note :- Sales table will be edited to add the attribute Dummy_ID as a foreign key referring to Dummy_Table

- I. Right click on table to be edited , click on Edit {Table_Name} / Edit {Table_Name} in new tab. Else even the table can just be double clicked .

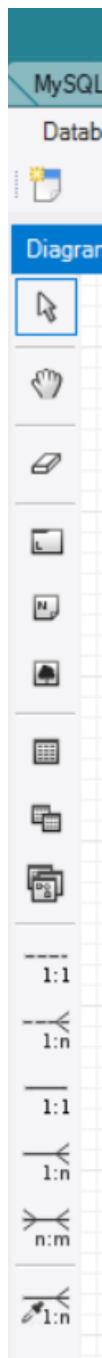


- II. A tab will open at bottom of editor and the new attribute can be added from there

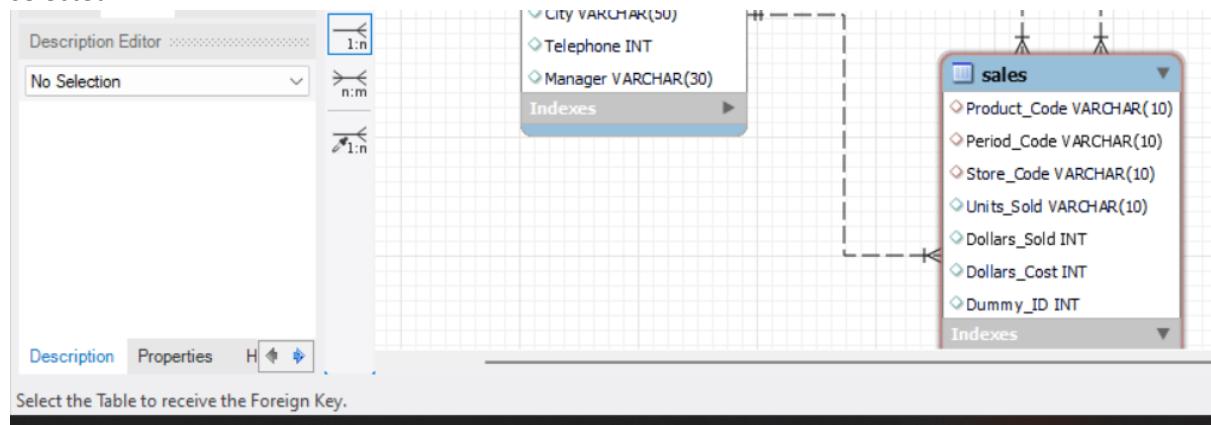


iv. Add a foreign key

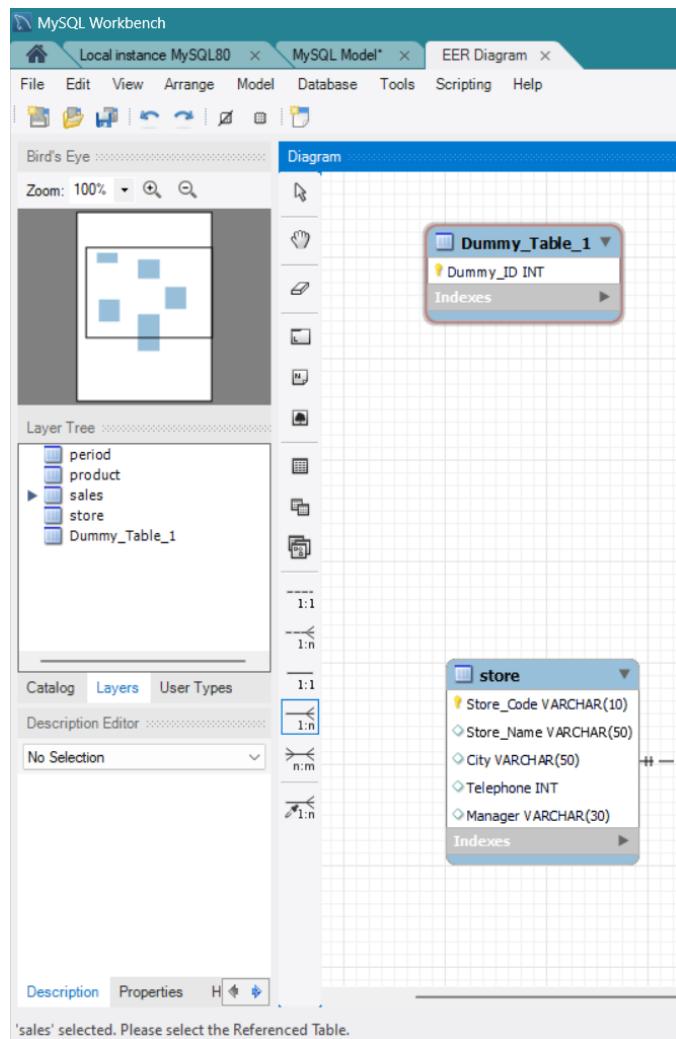
- I. See the bottom 4 options select one of them. In this example 1:n i.e 3rd last icon in above screenshot is selected



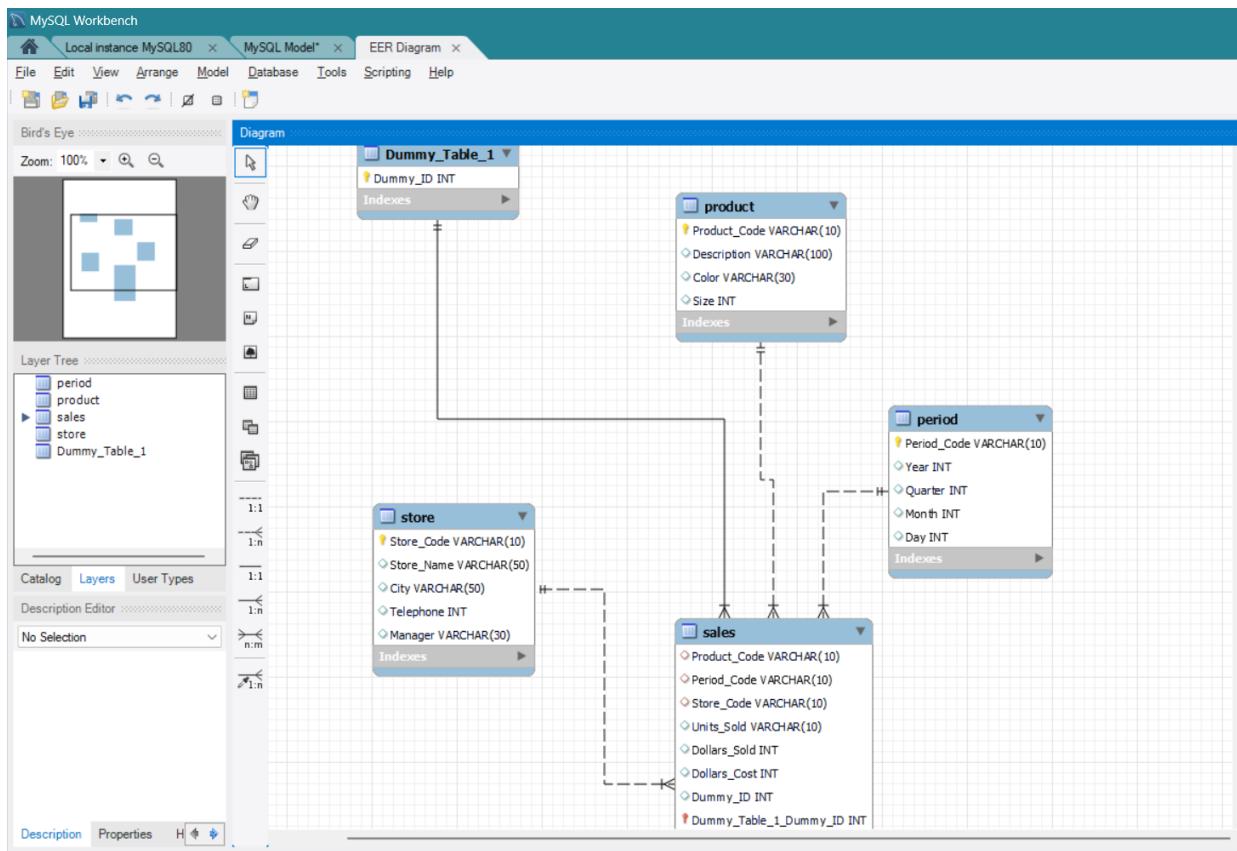
- II. It will prompt to select the table that receives foreign key. In this example Sales table selected



- III. Then select Referenced table. In this example Dummy_Table selected.

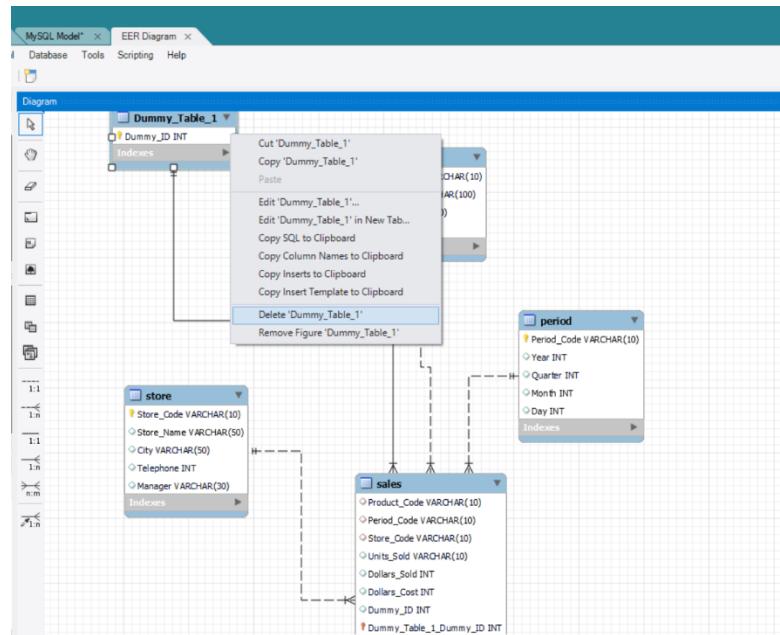


IV. Then the relationship is drawn , in this case between Dummy_Table and Sales

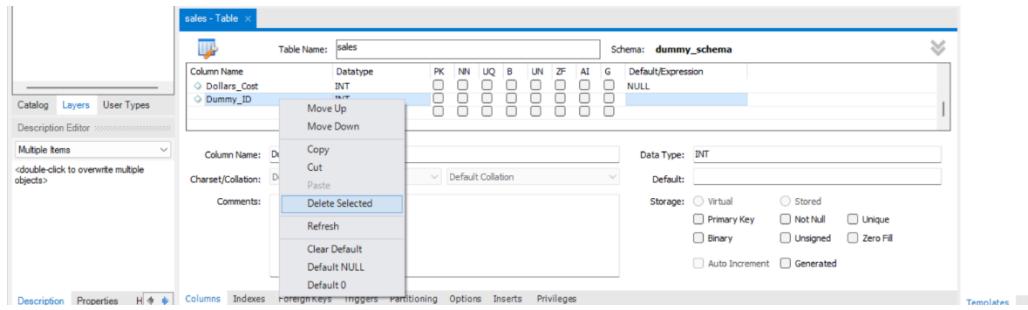


v. Delete a table or attribute

I. Right click the table and click option delete {Table_Name}



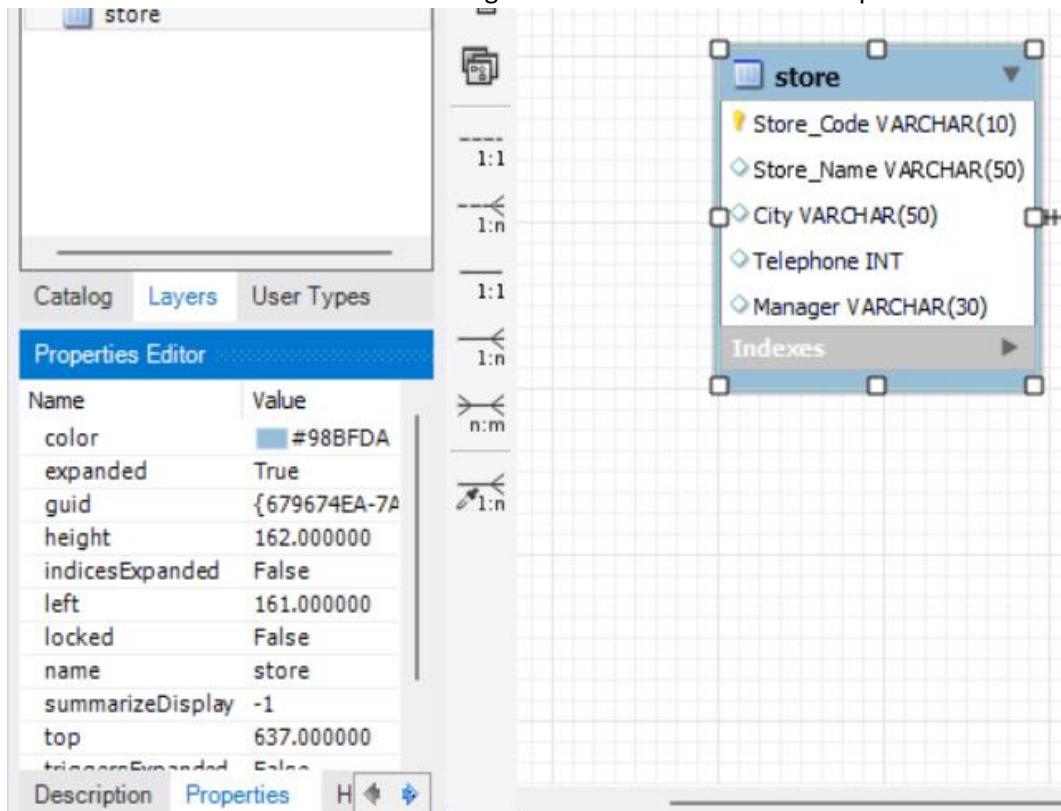
- II. To delete attribute just how attribute was added double click table / right click table and click edit , then just click the attribute row in the tab that opens at the bottom , right click and select delete selected.



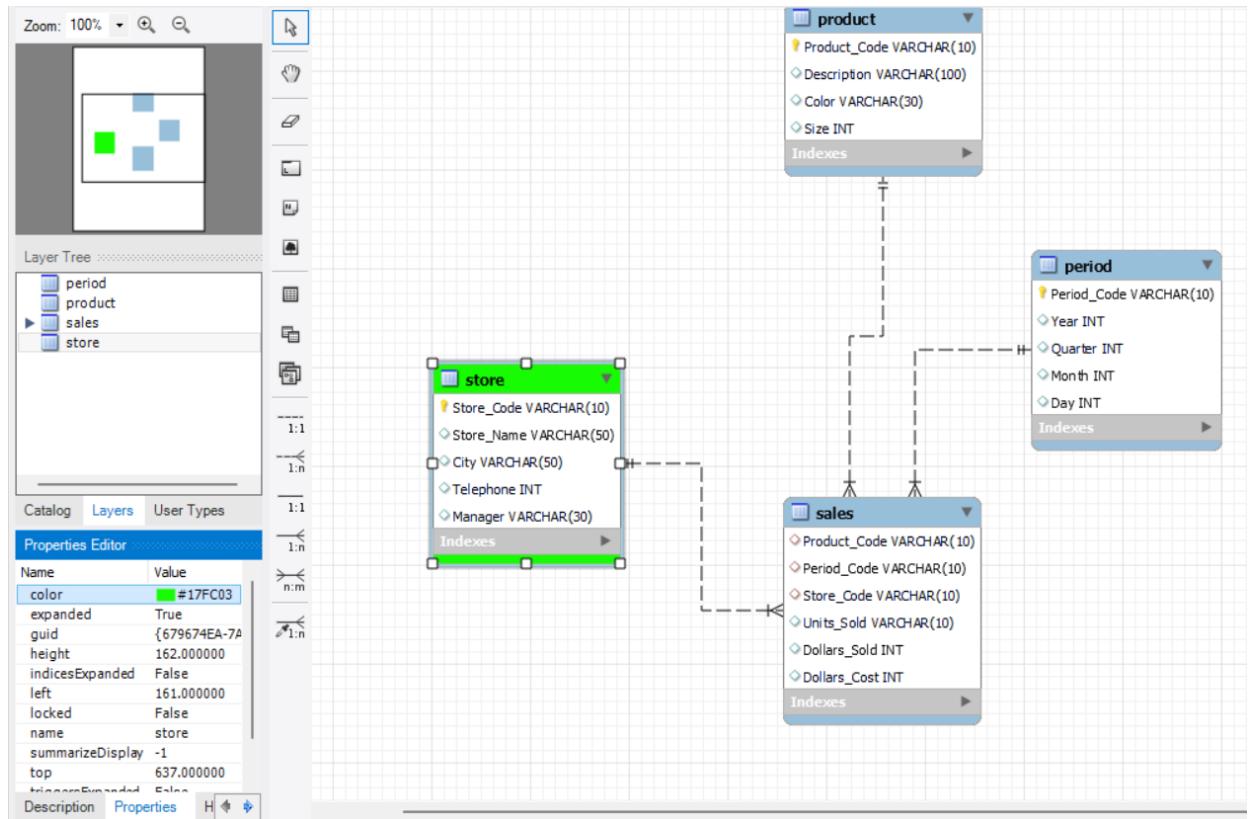
vi. Change the color of a table

Note : store table is considered at first for this example

- I. Click the table whose color is to be changed and at bottom left click Properties



- II. Change the color column value to any hexadecimal color. Note that store table has a new color which is light green after changing the color value. Note the color is now #17fc03



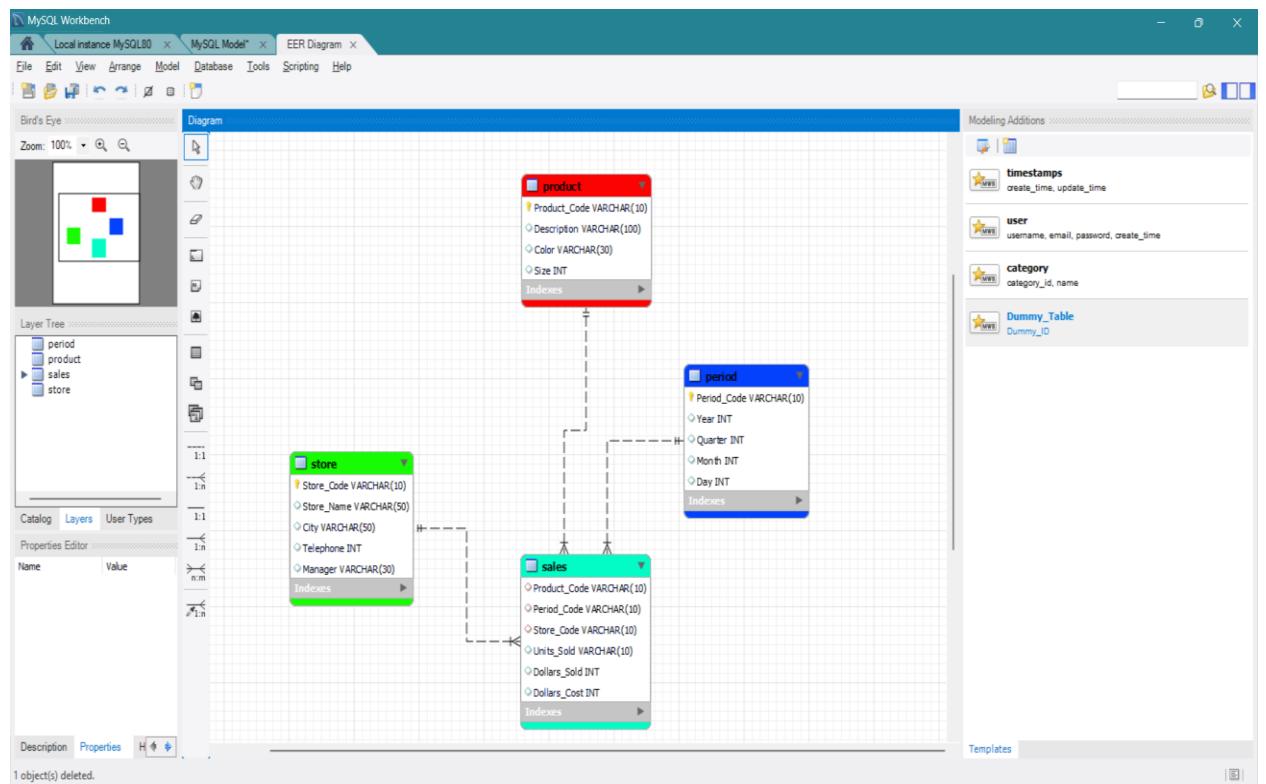
- III. Now the color of all tables can be changed similarly

Product - #FC0303

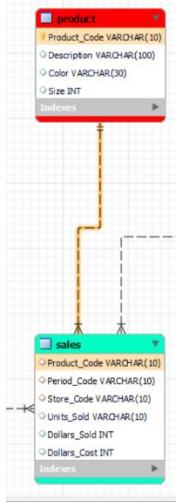
Store - #17FC03

Sales – #03FCC6

Period - #0341FC

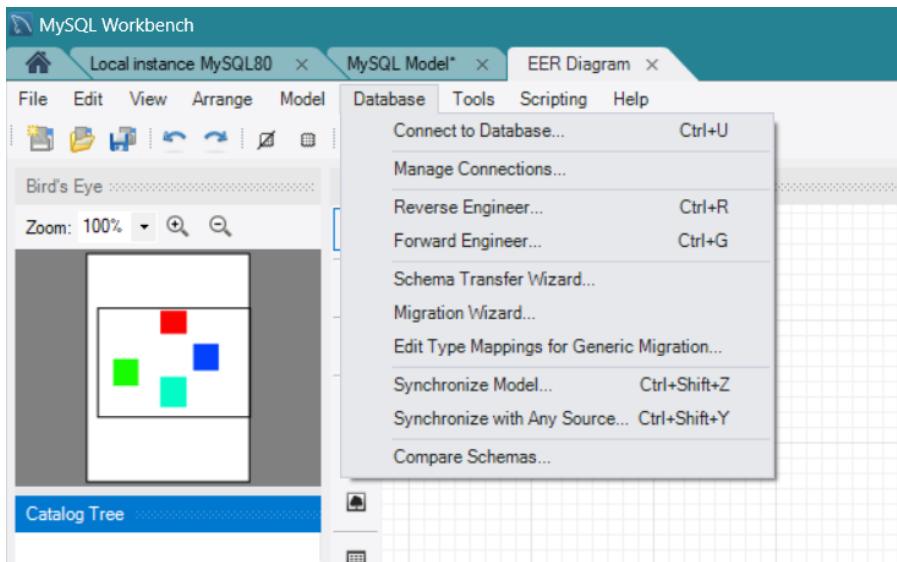


vii. Note when hovering over a relationship line , the color of relationship line and the attributes involved in the relationship change dynamically as seen in the below example.

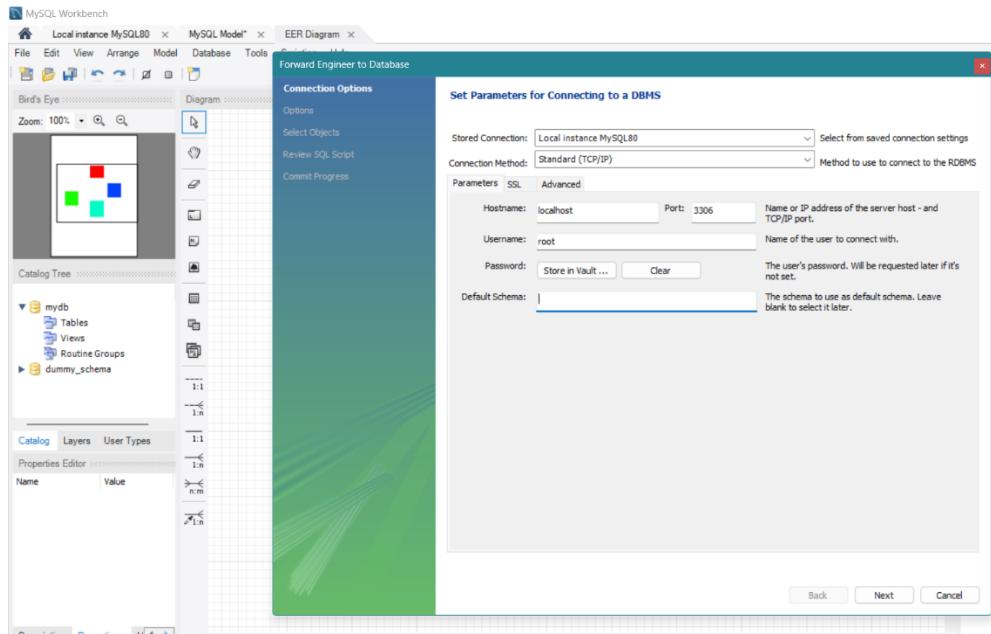


viii. Export the schema diagram i.e Forward Engineering

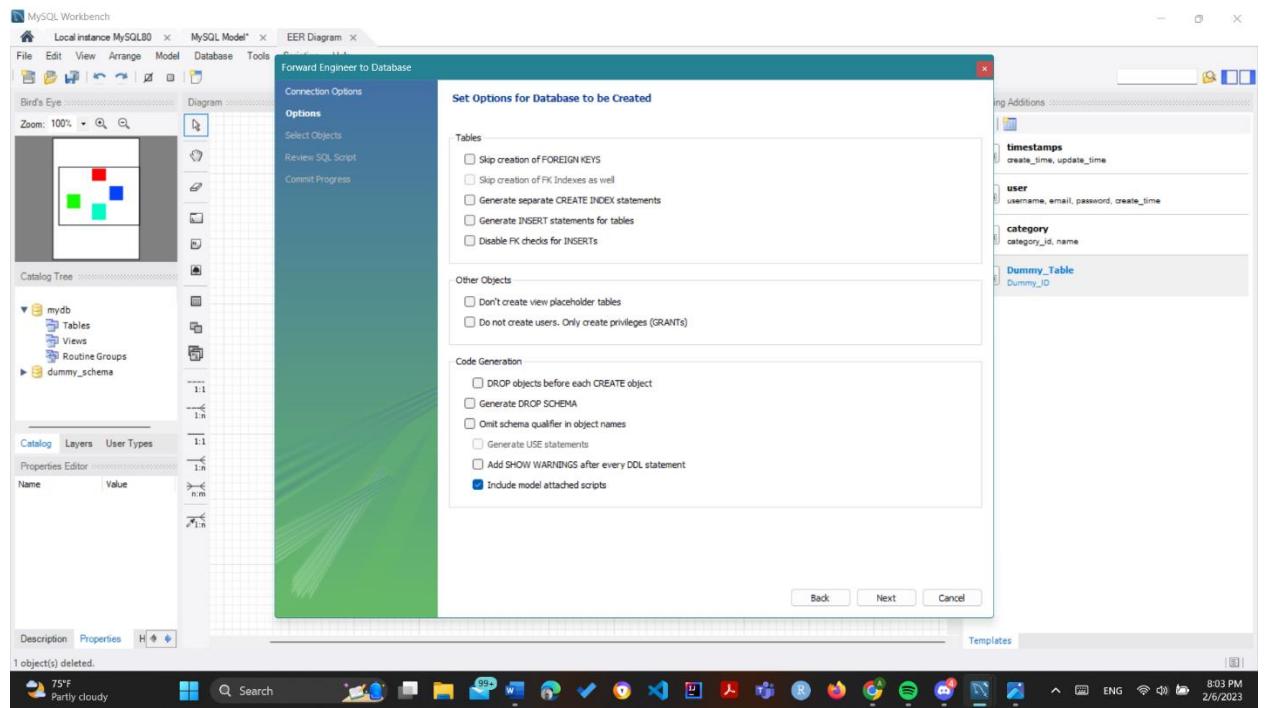
I. Click Database in top menu then Forward Engineering



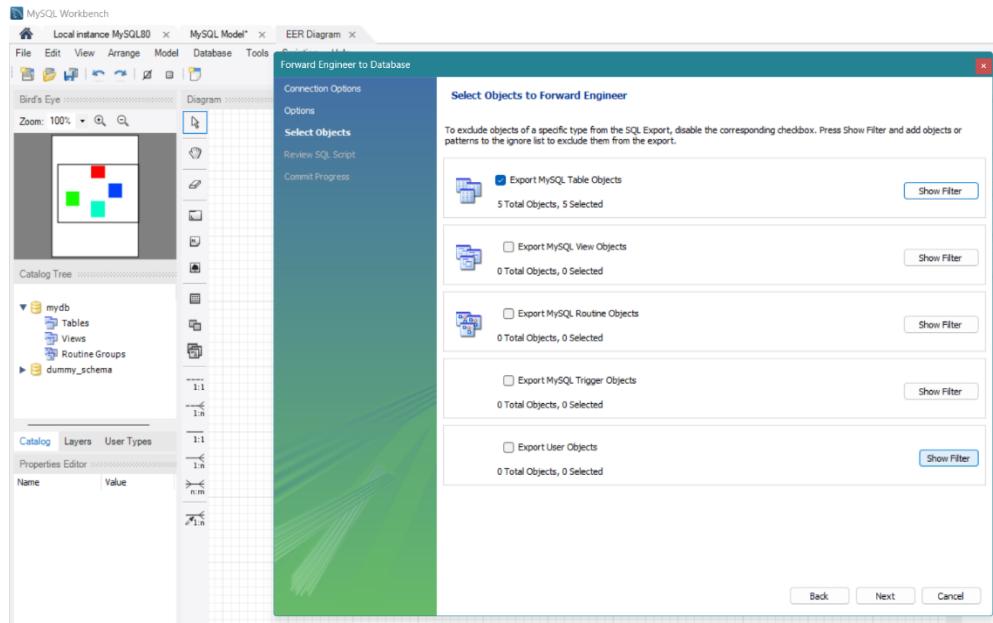
II. Fill Required details



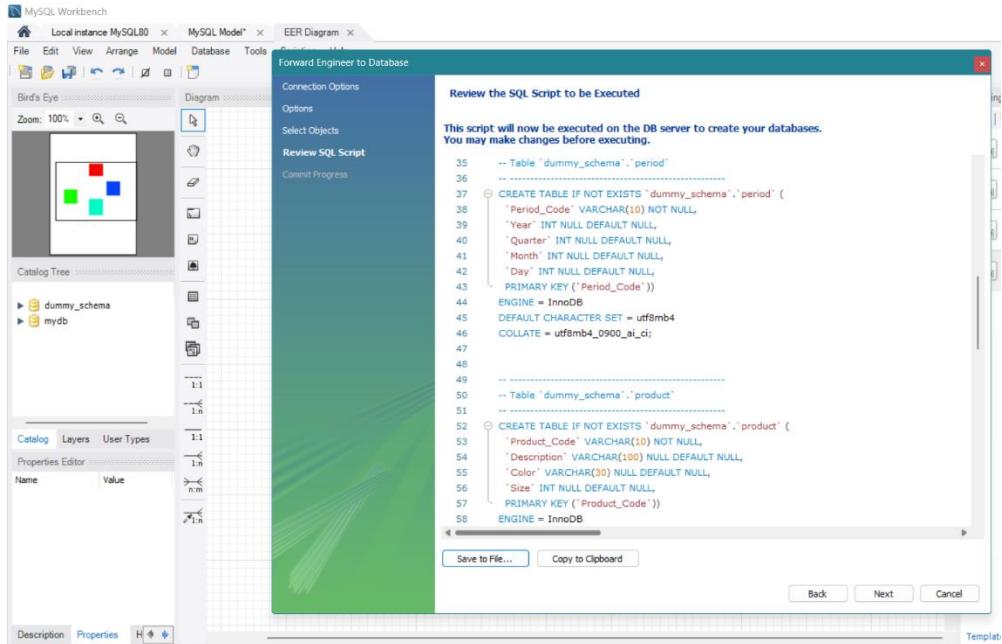
III. Select any options if needed



IV. Select any options if needed



V. SQL Script is visible and can be saved to a file or else it can be copied to clipboard

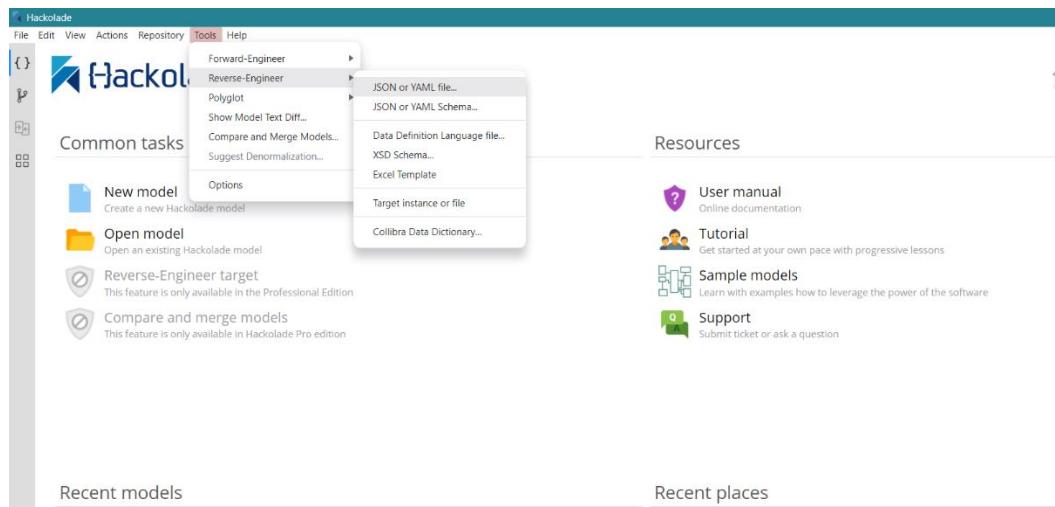


Then the code is executed and the code can be saved in clipboard or in a file

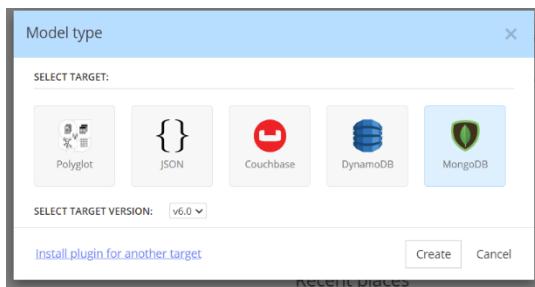
4. Hackolade

i. Import a mongodb file as json

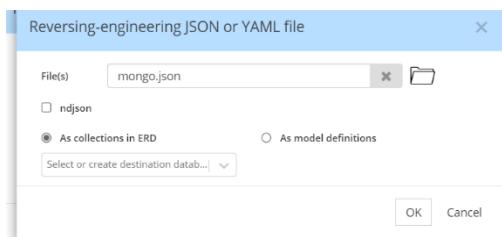
I. Go to tools , Reverse Engineer and JSON or YAML file



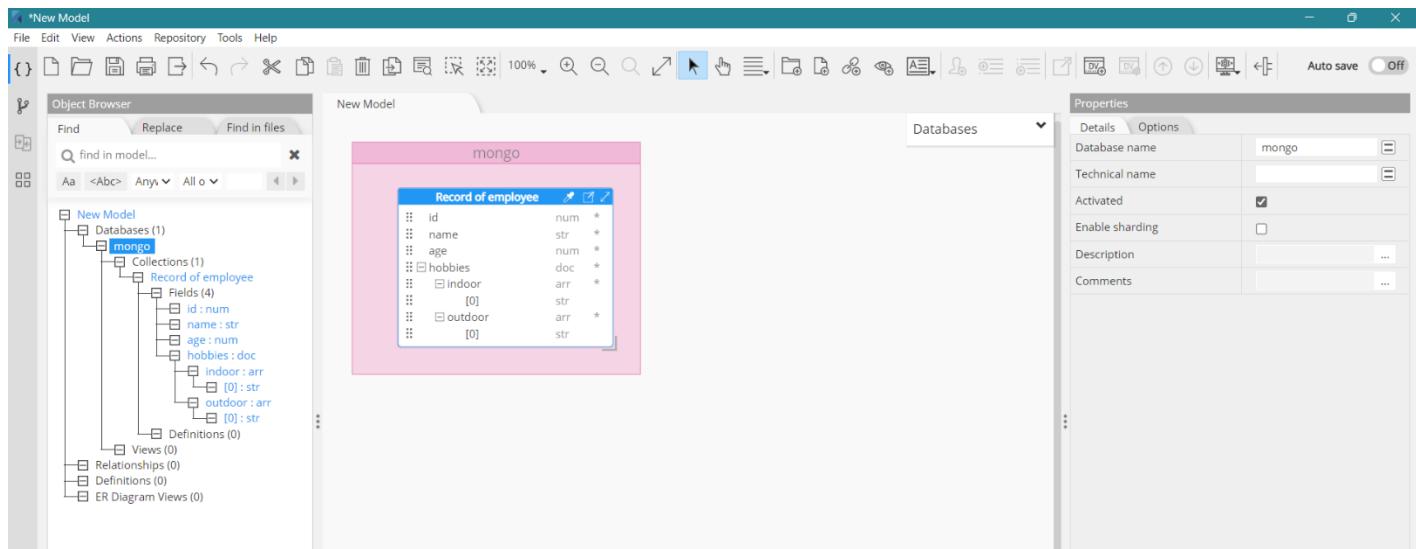
II. Select MongoDB and version then Create



III. Select the file to import

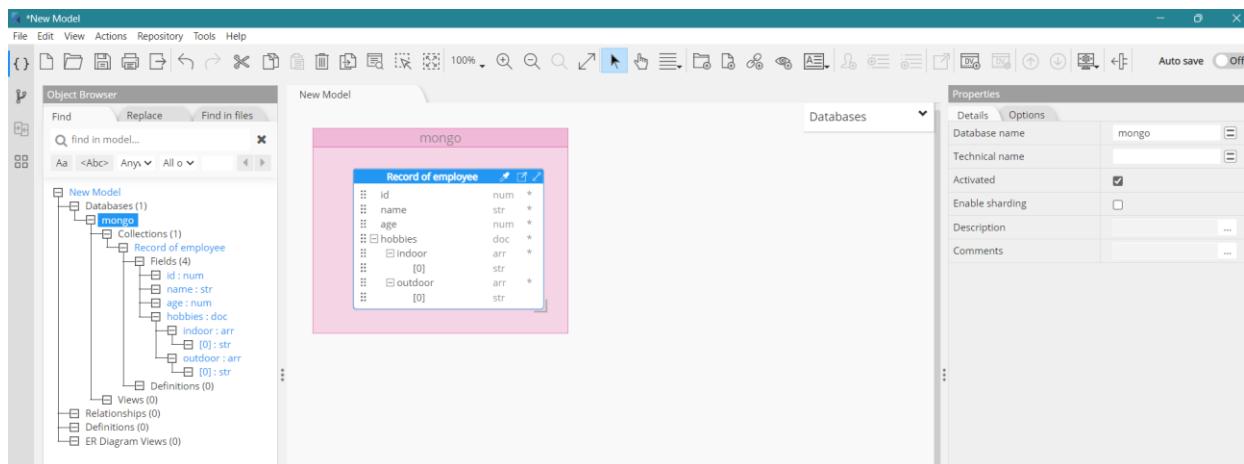


IV. The schema diagram is generated

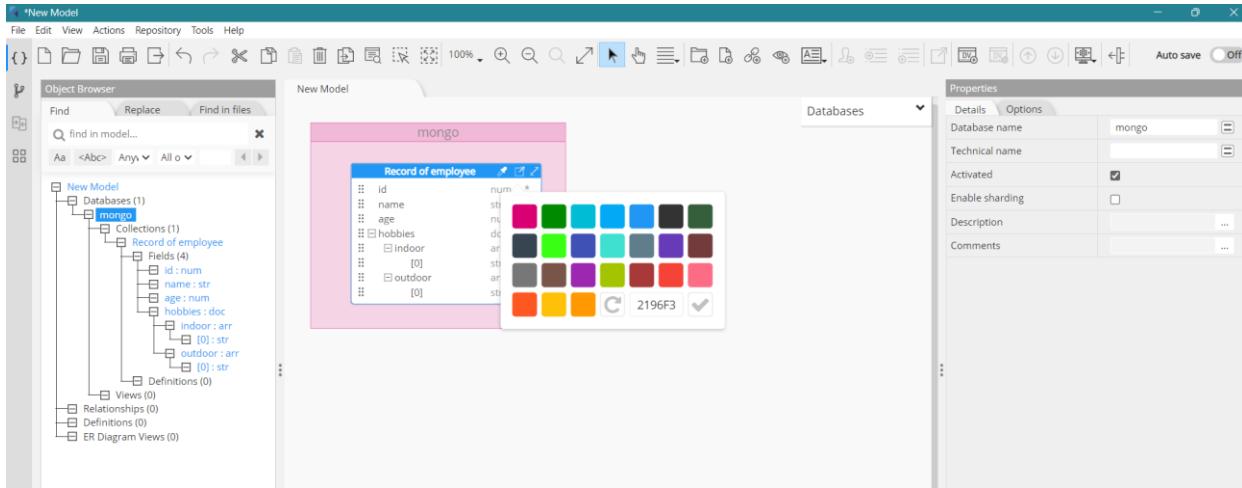


ii. Change color of table

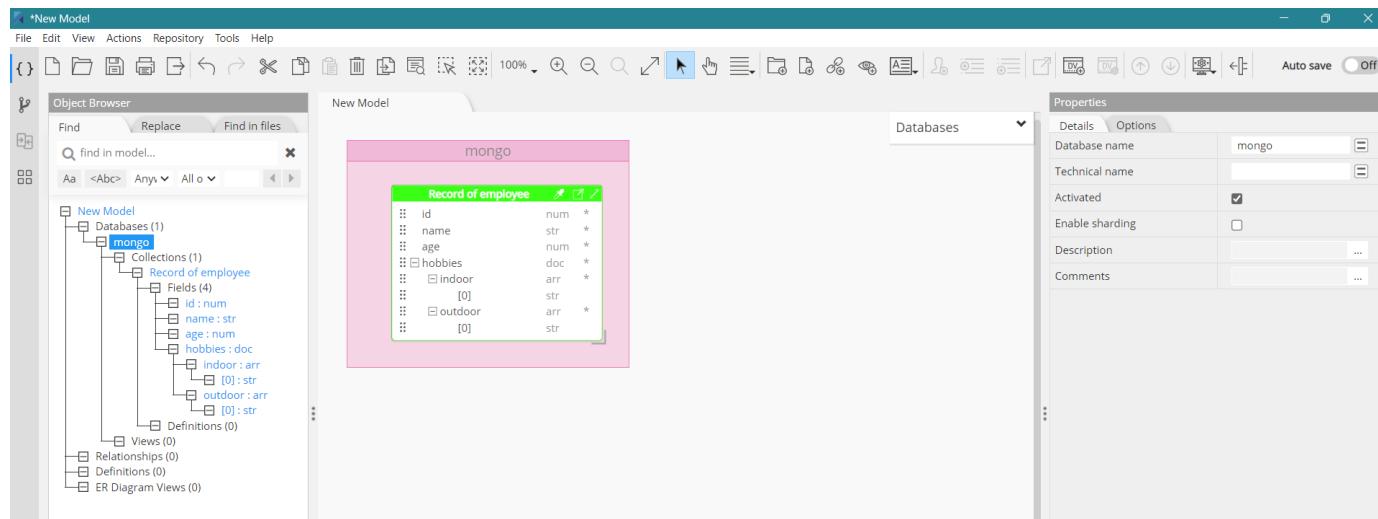
- Just select the first icon for custom color picker beside the table name ie just beside Record of Employee in this case



II. Select the color from options available

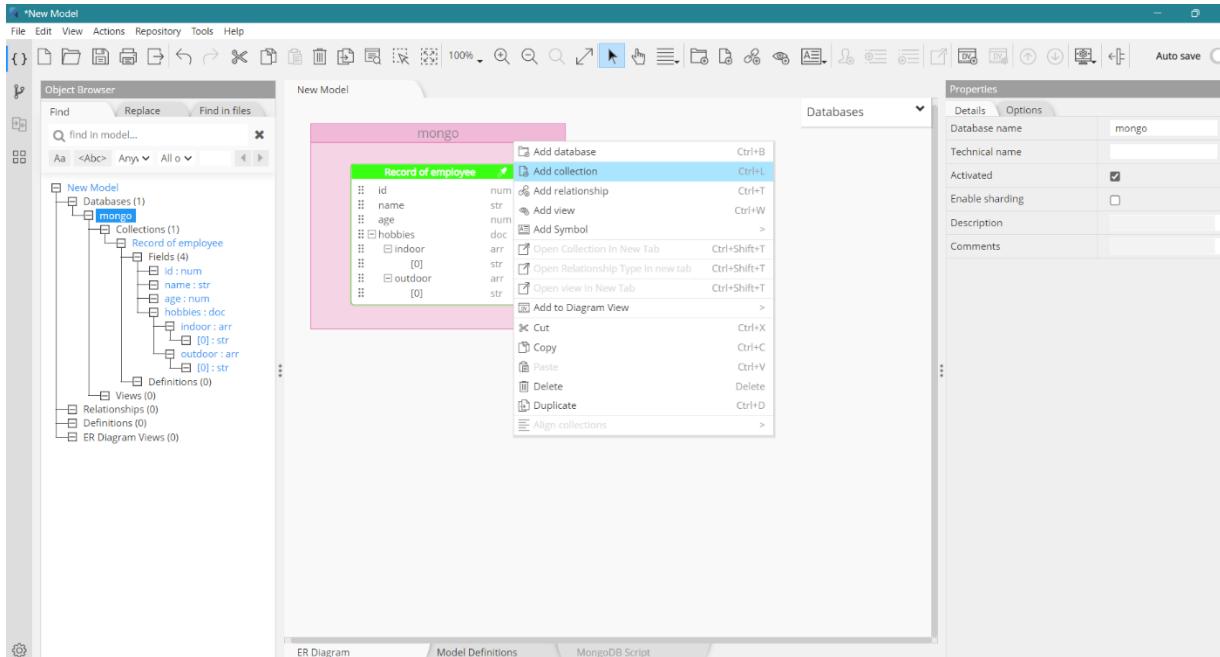


III. Note that the color of table is changed to light green

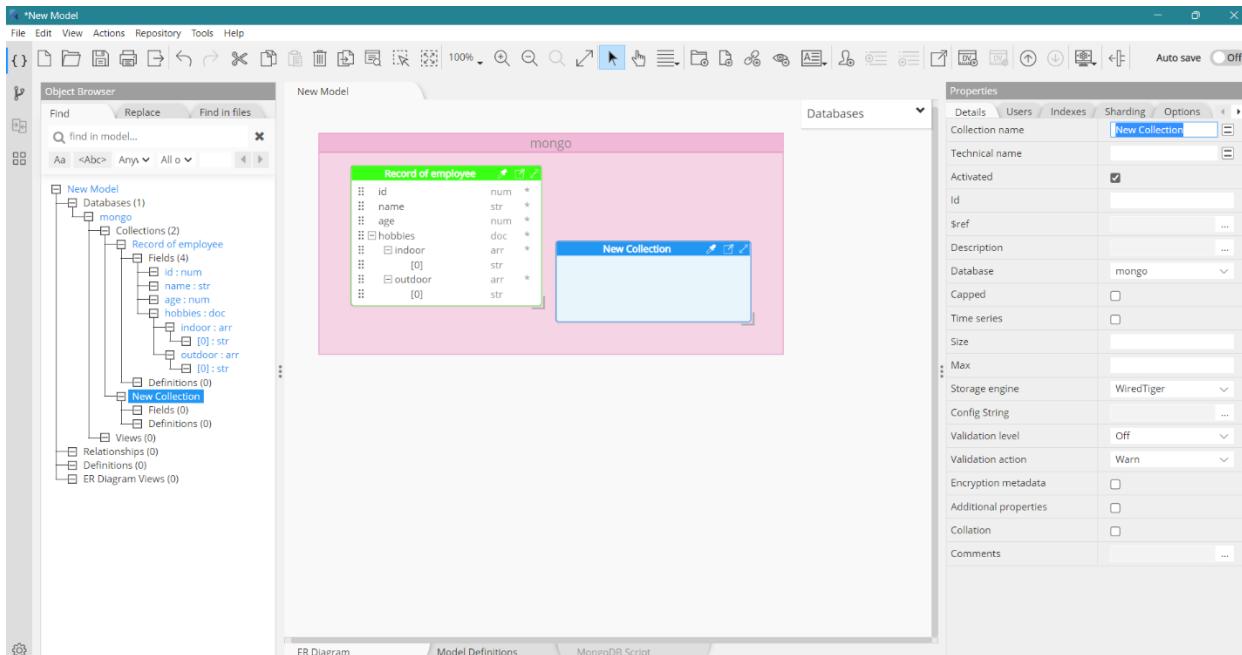


iii. Add collection

I. Right click database and click add collection

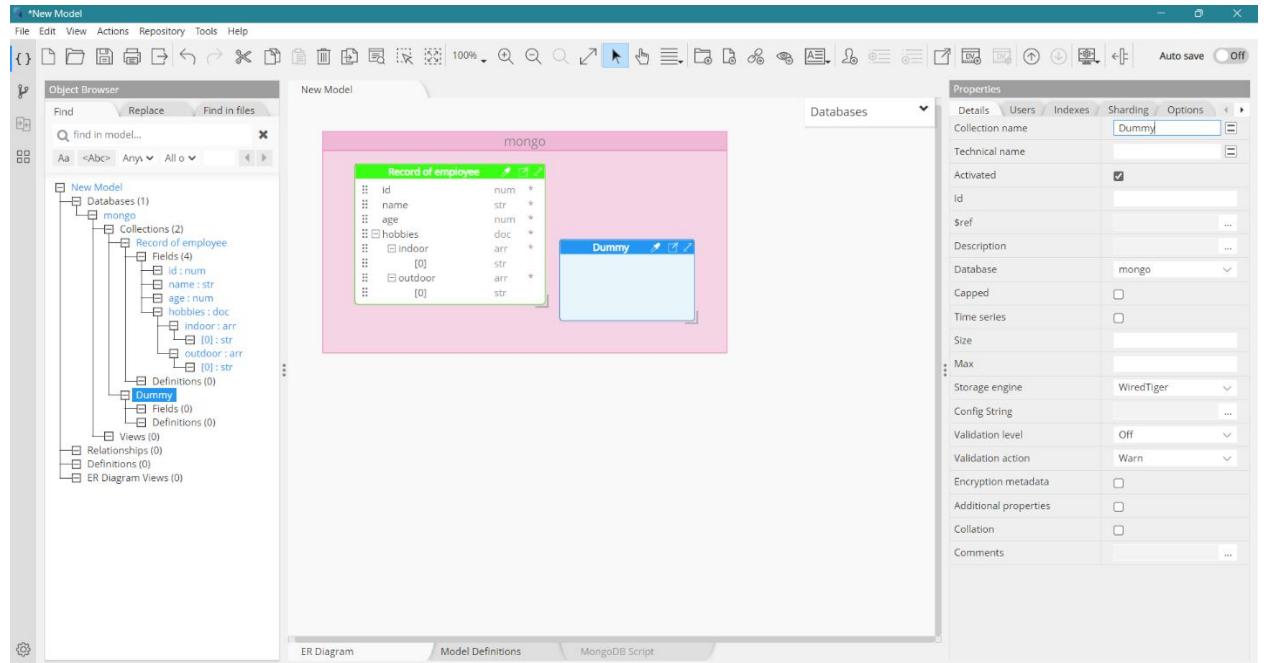


II. Note that a new collection is created



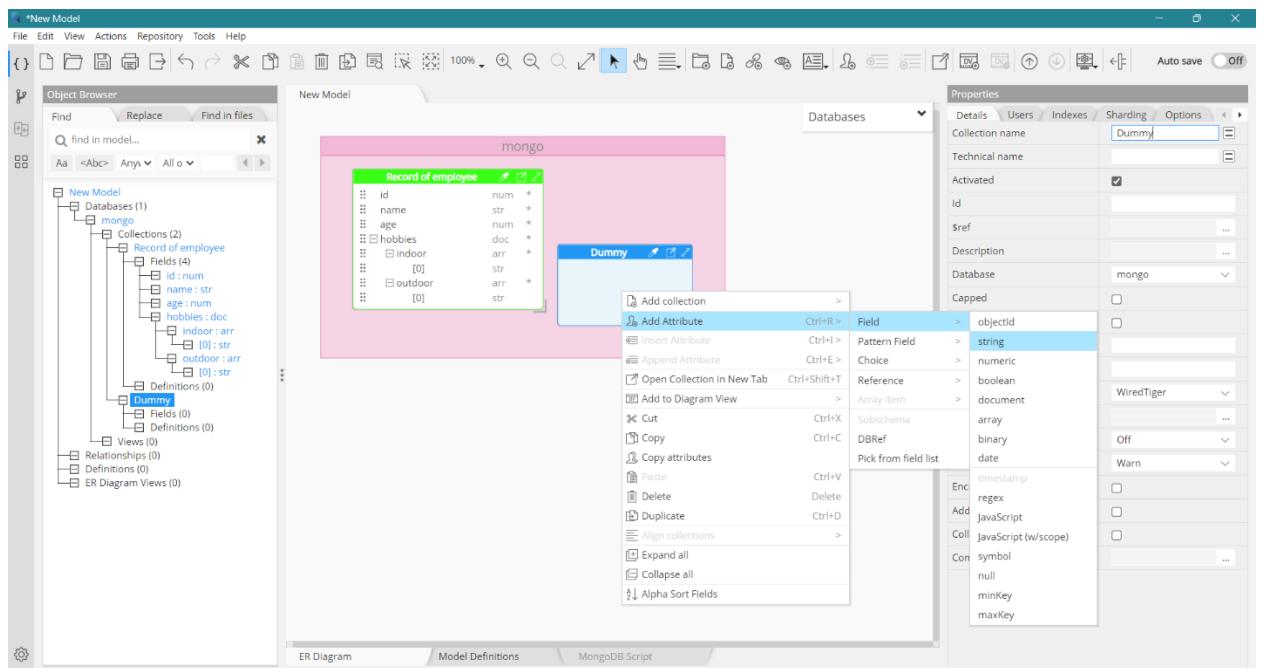
iv. Rename a collection

- I. Click the collection to edit in this case New Collection as of now and rename it from the right bar in this case the collection is renamed to Dummy

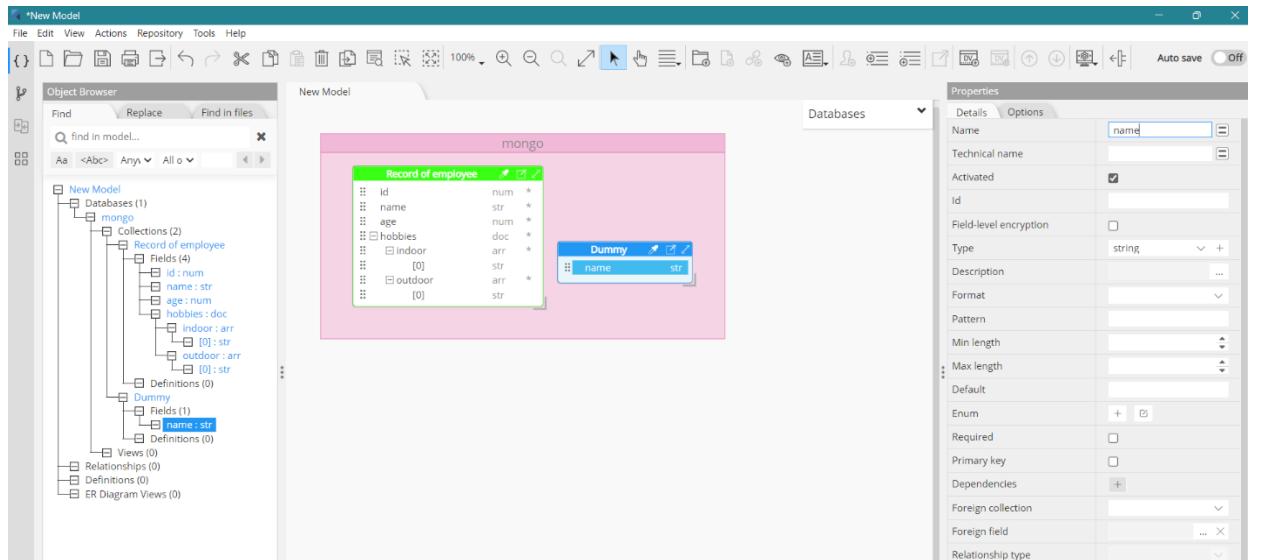


v. Add fields to a collection

- I. Right click the collection to which the field is to be added in this case Dummy and field and string

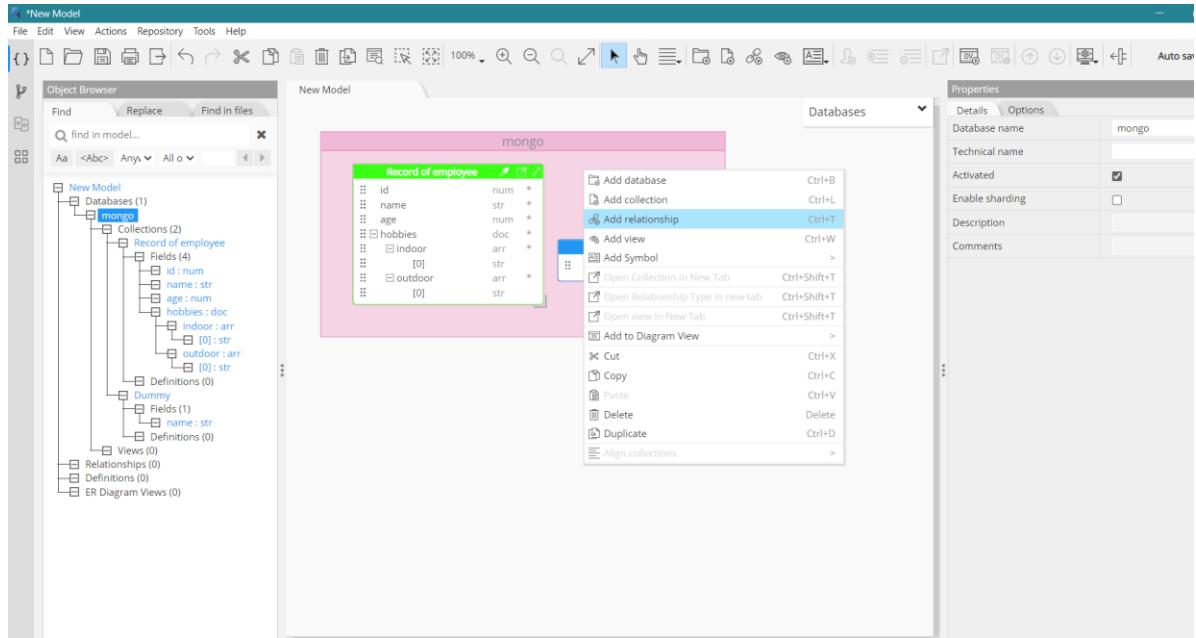


II. Edit the name in the right bar , in this example name of field is name and is an str

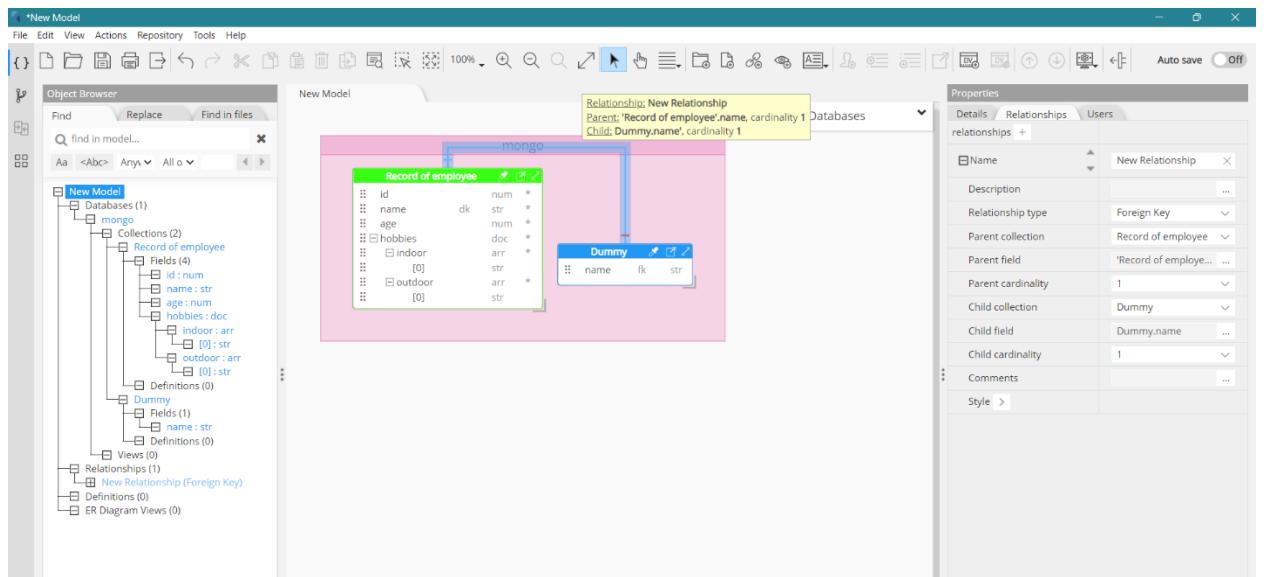


vi. Add relationship

I. Right click database and click add relationship



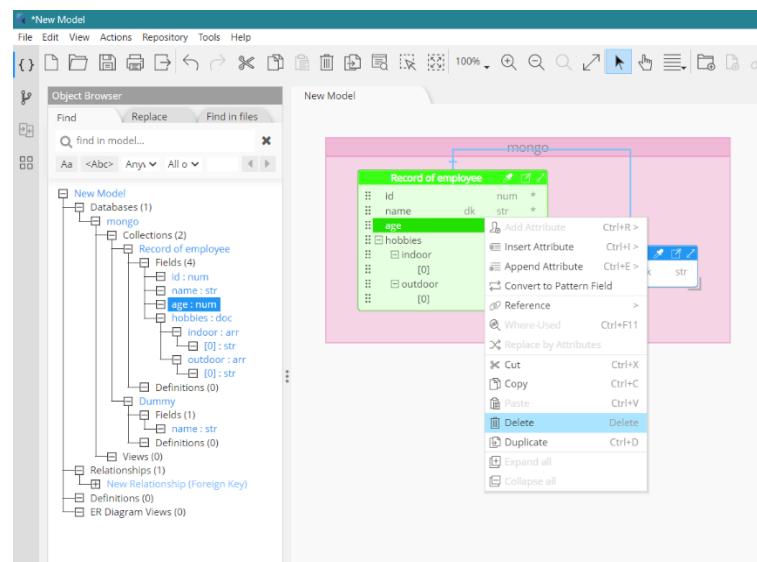
II. Edit relationship details in the right hand bar , fill all details and the relationship is shown in the schema



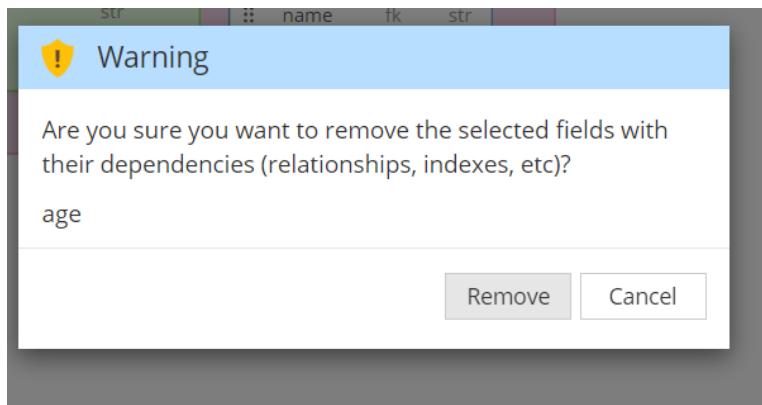
vii. Delete field

Note : In this example age field of Record of employee collection is deleted

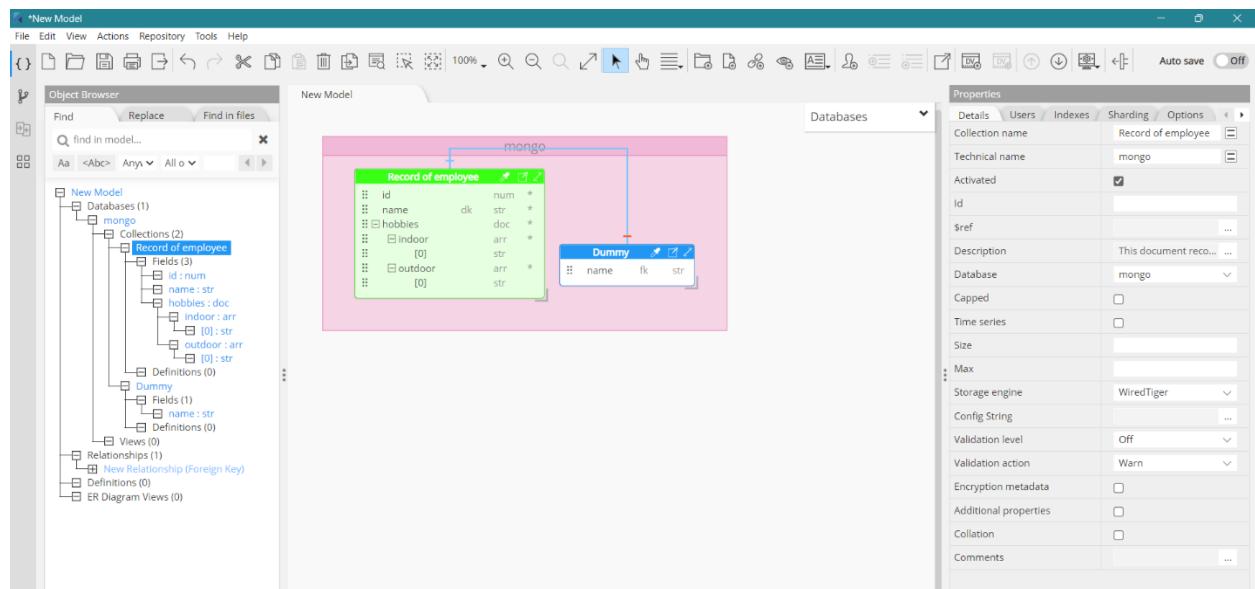
I. Right click attribute to be deleted and click delete



II. Click Remove on the pop up



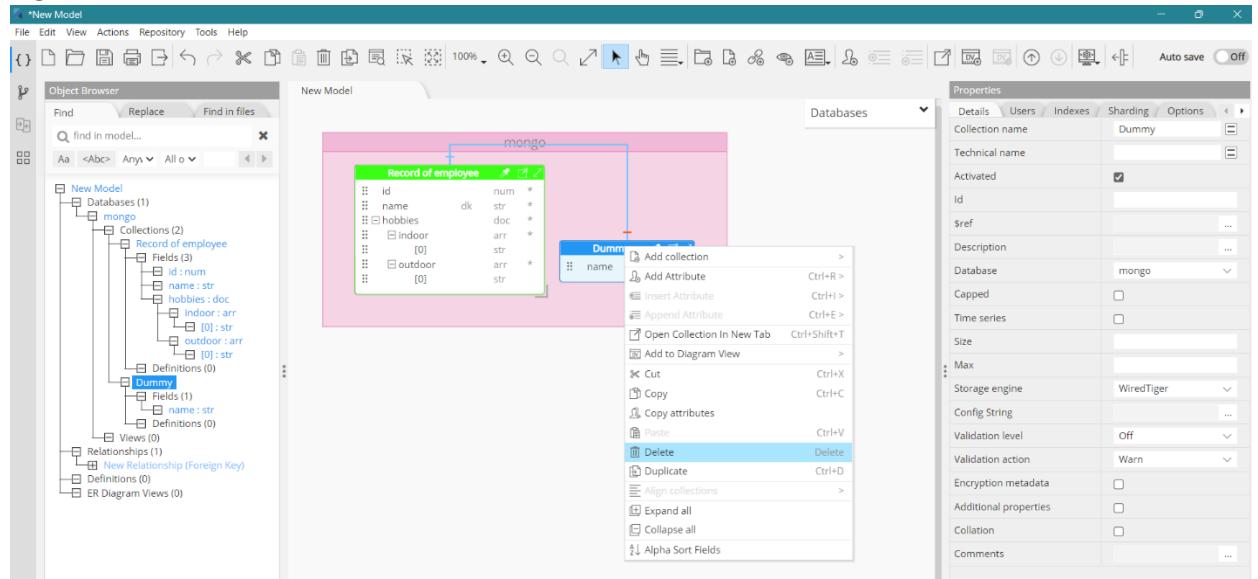
III. Now see in the Record of employee table the age field has been deleted



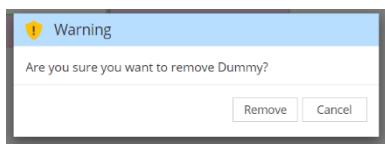
viii. Delete a collection

Note : For this example the dummy collection will be deleted

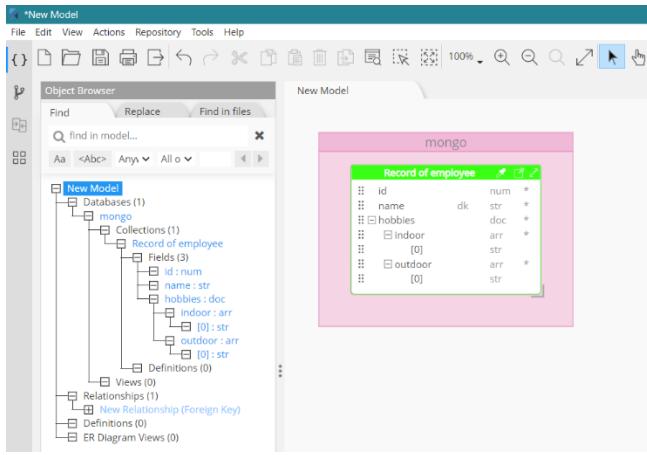
I. Right click table to be deleted and click delete



II. Click Remove on the Pop-up that appears



III. Notice that the Dummy table has been deleted



ix. Export as mongodb script – Forward Engineering

I. Select Tools in Menu , Forward-Engineer , MongoDB Script

