



## How to Insert Sample Records into ERD?

Written Date : August 16, 2010

[Visual Paradigm](#) allows you to design your database with [entity relationship diagram \(ERD\)](#), and finally [generate the design to database](#) as database schema. On top of the schema that will be generated, you can also [specify default data](#) to insert into database upon database generation. In this tutorial, we will draw a simple ERD with three entities, specify default data and generate database. You are expected to have a fundamental knowledge on database modeling with ERD and database engineering.

---

### Setting up your database

MySQL will be used as database software throughout this tutorial. You can, however, use any other types of database products that we support. When you are familiar with the database software you are using, it won't be hard for you to complete this tutorial.

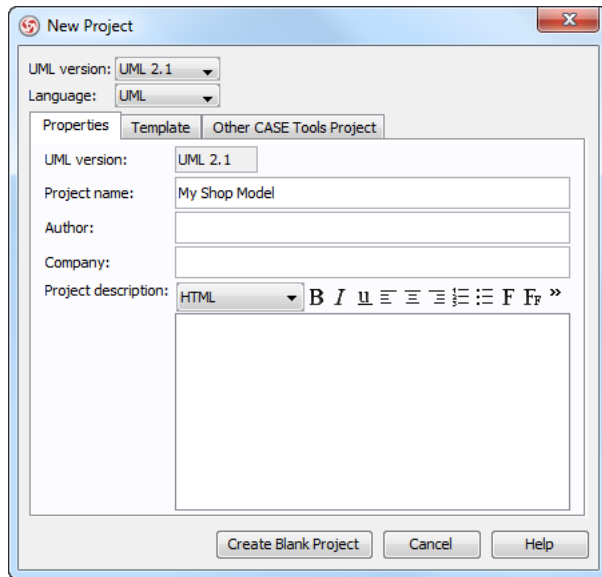
Create a database and name it as *myshop* in advance.

A screenshot of a Windows command prompt window titled "D:\apps\mysql\bin\mysql.exe". The window shows the MySQL command-line interface. The text displayed is: "Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 1 Server version: 5.0.51b-community-nt-log MySQL Community Edition (GPL) Type 'help;' or '\h' for help. Type '\c' to clear the buffer. mysql> create database myshop; Query OK, 1 row affected (0.00 sec) mysql> \_".

```
D:\apps\mysql\bin\mysql.exe
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 1
Server version: 5.0.51b-community-nt-log MySQL Community Edition (GPL)
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.
mysql> create database myshop;
Query OK, 1 row affected (0.00 sec)
mysql> _
```

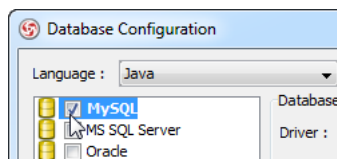
### Creating new project

Create a new project by selecting **Project > New** from the application toolbar. In the **New Project** window, enter *My Shop Model* as project name and click **Create Blank Project**.

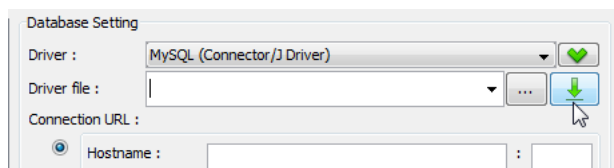


### Configuring your database

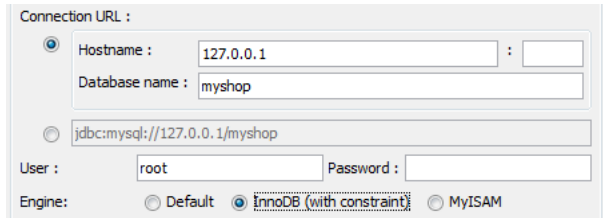
1. Select **Tools > Object-Relational Mapping (ORM) > Database Configuration...** from the main menu.
2. In the **Database Configuration** dialog box, check **MySQL** to select it as the database software.



3. In the **Database Setting** panel, press the upside down arrow button next to **Driver file** field. If your database providers does not support downloading driver file, scroll down to **Database Driver Description** to deal with the problem.

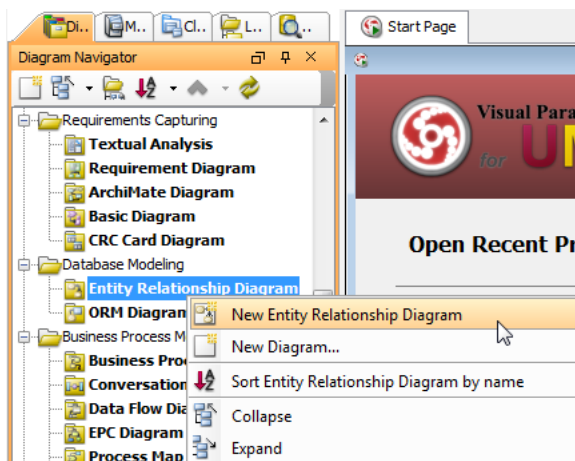


- Fill in the connection information to connect to database. Enter *myshop* as database name. Select **InnoDB** as engine to keep the relationships among entities when generating database. Click on **Test Connection** to verify the connection. Click **OK** to close the configuration dialog box.

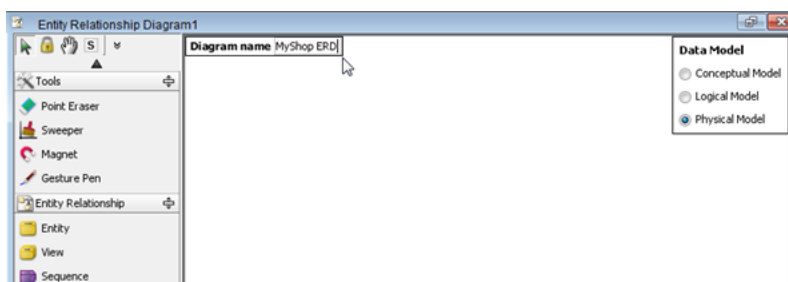


## Drawing an ERD

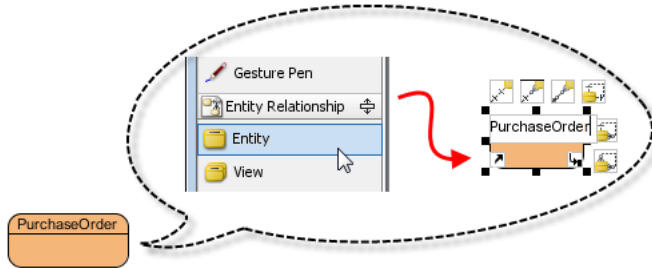
- Create an ERD. Right-click on **Entity Relationship Diagram** in **Diagram Navigator** and select **New Entity Relationship Diagram** from the pop-up menu.



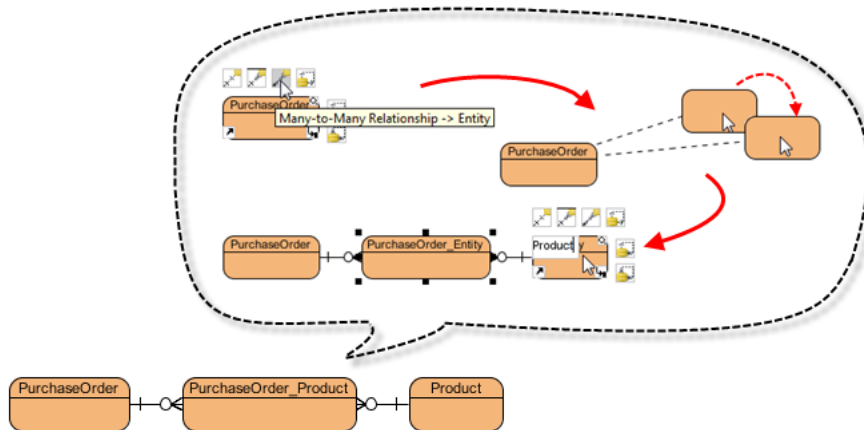
- Immediately, name the diagram as **MyShop ERD** at the top left corner. Keep **Physical Model** selected at the top right corner.



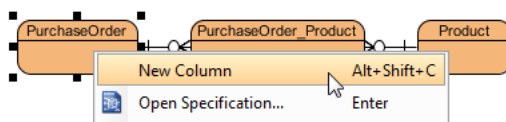
- Next, create an entity. Press on **Entity** on diagram toolbar and drag to the diagram. Name it as *PurchaseOrder* and press **Enter** to confirm.



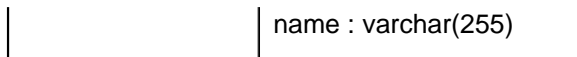
- A purchase order consists of many products, while a product can appear in many purchase order. This is a typical example of many-to-many relationship. Now, create the product entity. Move the mouse pointer to the entity *PurchaseOrder*, press on the resource icon **Many-to-Many Relationship -> Entity**, drag it out and then release the mouse button to confirm. Name the entity as *Product*.



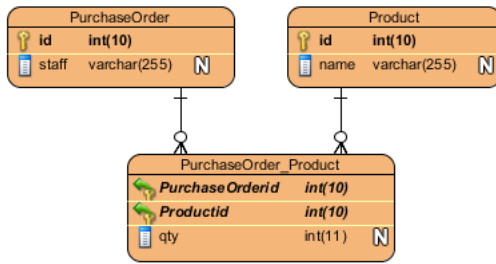
- Add columns to the entities. Right-click on *PurchaseOrder* and select **New Column** from the pop-up menu. Enter *+id : int* as name (note: The plus sign indicates that this is a Primary Key column). Press **Enter**.



- | Entity                | Column                                 |
|-----------------------|--|
| PurchaseOrder         | +id : int(10),<br>staff : varchar(255) |
| Product               | qty : int(11)                          |
| PurchaseOrder_Product | product : int(10),                     |

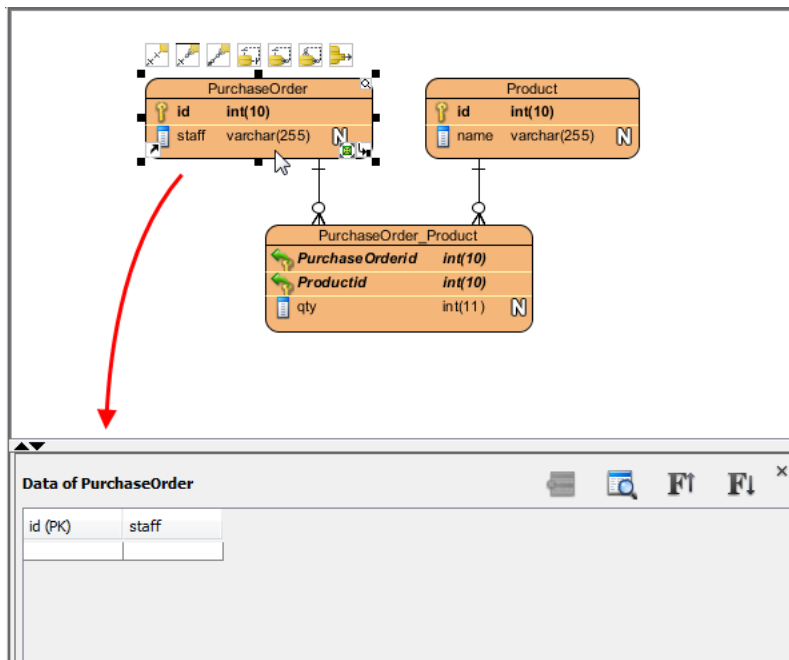


The result of diagram is shown as below:

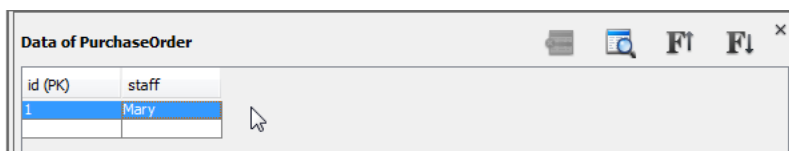


### Entering default data

1. Select *PurchaseOrder*. You can see the table record editor appears at the bottom of diagram lists the columns for you to add default data. If you do not see the editor, right-click on the ERD's background and select **Show Table Record Editor** from the pop-up menu.



2. Double click on the **id** cell and enter *1*. Then, double click on the **staff** cell and enter *Mary*. Press **Enter**.



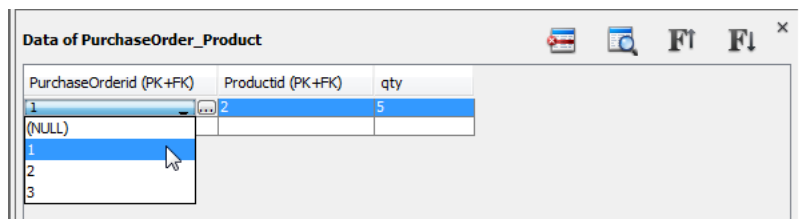
3. Follow the table below to add records in *PurchaseOrder* entity.

Id (PK)	staff
1	Mary
2	David
3	Paul

4. Repeat the previous steps to add records in *Product* entity. Here are the records to add:

Id (PK)	name
1	Shampoo (500 ml)
2	Battery (AAA)

5. Select PurchaseOrder\_Product entity.  
6. In the editor, select 1 in **PurchaseOrderid** and 2 in **Productid**, and then enter 5 in **qty**.



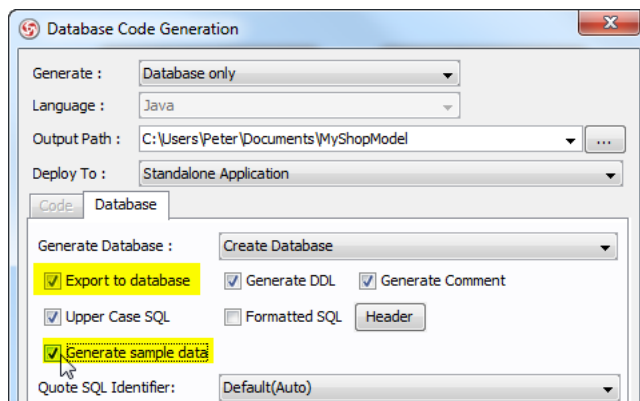
7. Add records to the *PurchaseOrder\_Product* entity. Here are the records to add:

PurchaseOrderid (PK+FK)	Productid (PK +FK)	qty
1	2	5
2	1	2
3	1	1
3	2	1

## Generating database

1. Select **Tools > Object-Relational Mapping (ORM) > Generate Database...** from the main menu.

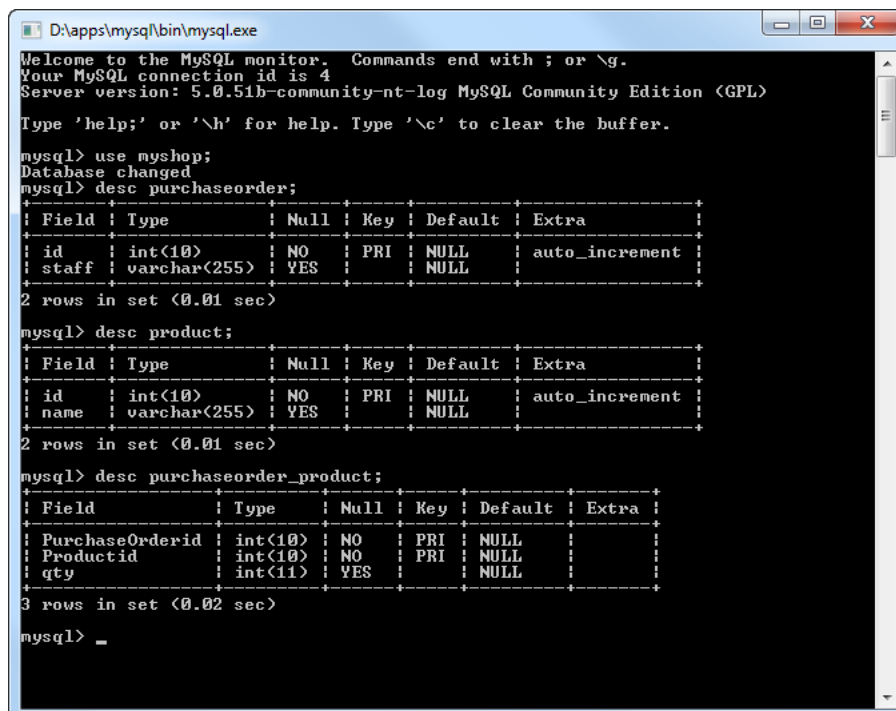
2. In the **Database Code Generation** dialog box, check **Export to database** and **Generate sample data**. If you do not select them, both database and sample data will not be created in database.



3. Click **OK** button to start generation.

### Checking your database

You can now check your database to see if the schema and default data are both generated. Here is a screenshot captured under [MySQL](#), for checking the generated schema.



This is another screen that shows the default records added to database.

```
D:\apps\mysql\bin\mysql.exe
mysql> select * from purchaseorder;
+----+-----+
| id | staff |
+----+-----+
| 1  | Mary  |
| 2  | David |
| 3  | Paul  |
+----+-----+
3 rows in set (0.00 sec)

mysql> select * from product;
+----+-----+
| id | name          |
+----+-----+
| 1  | Shampoo (500 ml) |
| 2  | Battery (AAA)    |
+----+-----+
2 rows in set (0.00 sec)

mysql> select * from purchaseorder_product;
+-----+-----+-----+
| PurchaseOrderid | Productid | qty |
+-----+-----+-----+
| 1                | 2         | 5   |
| 2                | 1         | 2   |
| 3                | 1         | 1   |
| 3                | 2         | 1   |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

#### Related Links

- [What is Entity Relationship Diagram \(ERD\)?](#)



[Visual Paradigm home page](https://www.visual-paradigm.com/)  
(<https://www.visual-paradigm.com/>)

[Visual Paradigm tutorials](https://www.visual-paradigm.com/tutorials/)  
(<https://www.visual-paradigm.com/tutorials/>)