



How to Insert Sample Records into ERD?

Written Date : August 16, 2010

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. If 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 *myshop* in advance.

A screenshot of a Windows command prompt window titled "D:\apps\mysql\bin\mysql.exe". The window contains the following text:

```
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>

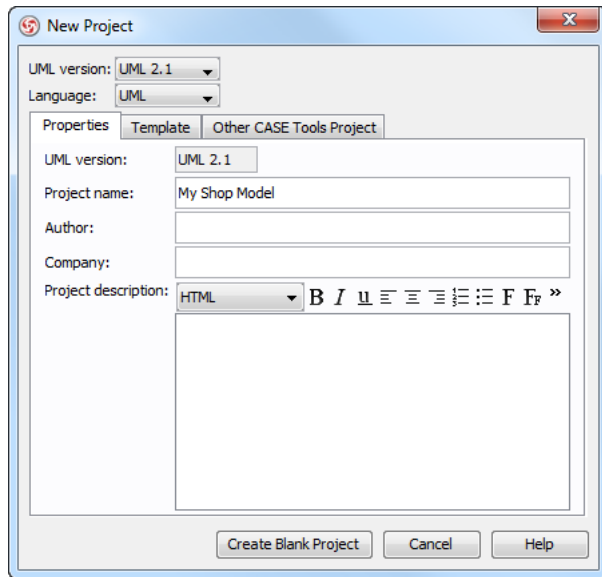
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> create database myshop;
Query OK, 1 row affected (0.00 sec)

mysql> _
```

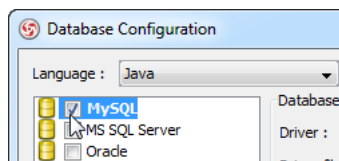
Creating a New Project

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

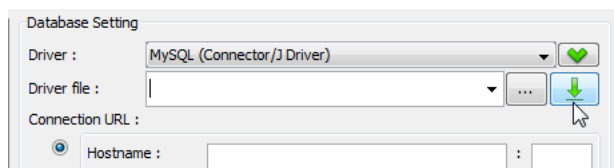


Configuring Your Database

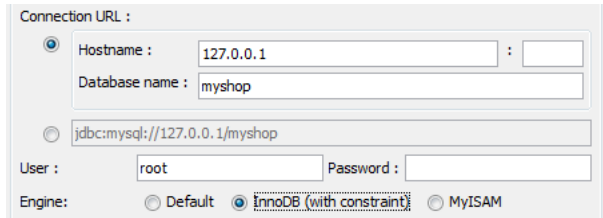
1. Select **Tools > Object-Relational Mapping (ORM) > Database Configuration...** from the main menu.
2. In the **Database Configuration** dialog box, check **MySQL** to select it as the database software.



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

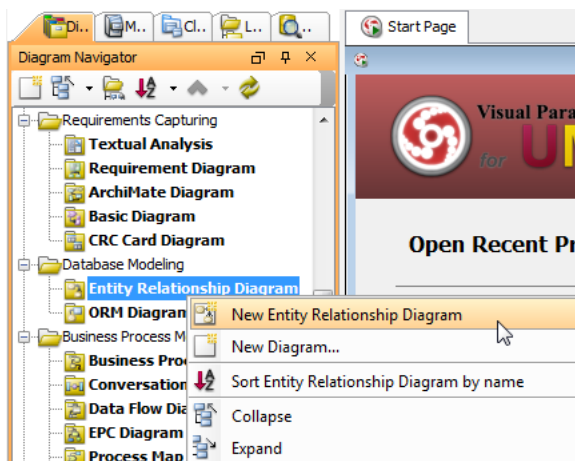


4. Fill in the connection information to connect to the database. Enter *myshop* as the database name. Select **InnoDB** as the engine to keep the relationships among entities when generating the database. Click on **Test Connection** to verify the connection. Click **OK** to close the configuration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



Drawing an ERD

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



2. Immediately, name the diagram **MyShop ERD** at the top left corner. Keep **Physical Model** selected at the top right corner.
3. Next, create an entity. Click on **Entity** on the diagram toolbar and drag to the diagram. Name it *PurchaseOrder* and press **Enter** to confirm.

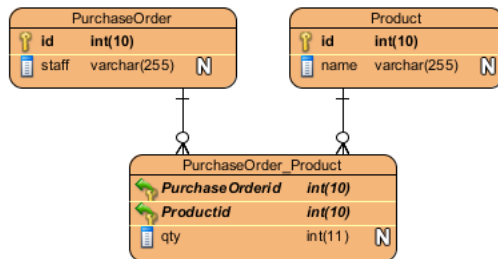
4. A purchase order consists of many products, while a product can appear in many purchase orders. This is a typical example of a many-to-many relationship. Now, create the product entity. Move the mouse pointer to the entity *PurchaseOrder*, click on the resource icon **Many-to-Many Relationship ->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

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

6.

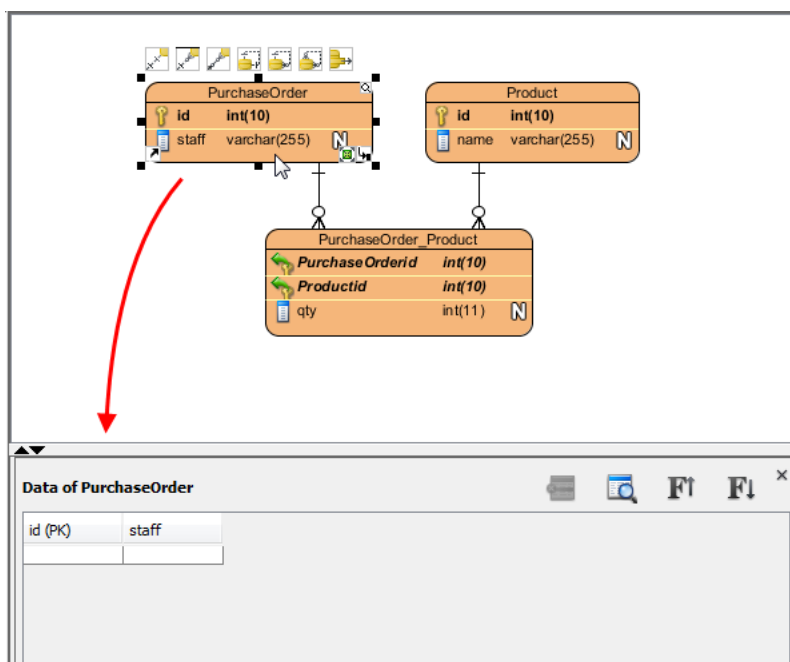
Entity	Column
PurchaseOrder	+id : int(10), staff : varchar(255)
Product	qty : int(11)
PurchaseOrder_Product	id : int(10), name : varchar(255)

The result of the diagram is shown below:

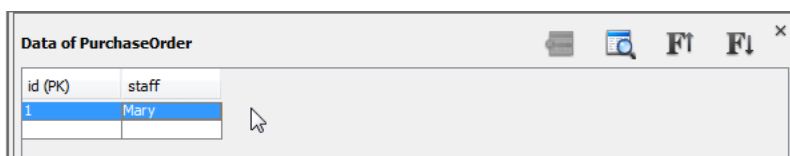


Entering Default Data

1. Select *PurchaseOrder*. You can see the table record editor appears at the bottom of the diagram listing 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 to the *PurchaseOrder* entity.

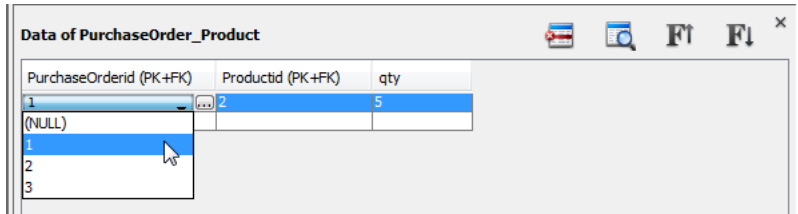
Id (PK)	staff
1	Mary
2	David
3	Paul

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

Id (PK)	name
1	Shampoo (500 ml)

2	Battery (AAA)
---	---------------

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

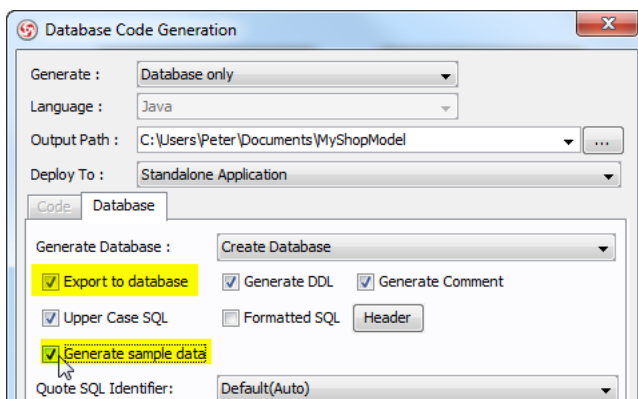


7. Add records to the *PurchaseOrder_Product* entity. Here are the records to add:

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

Generating Database

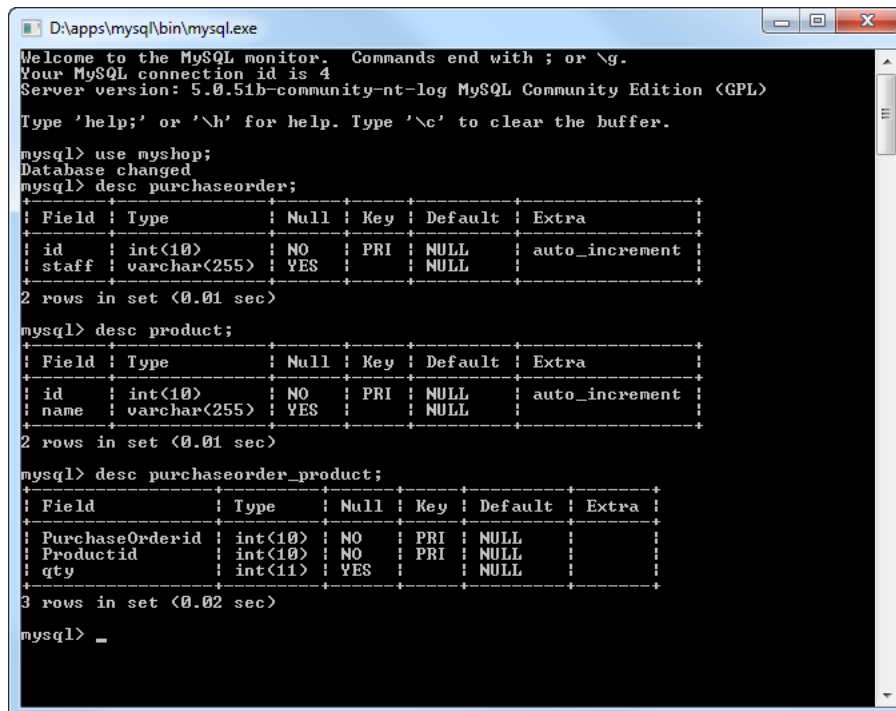
1. Select **Tools > Object-Relational Mapping (ORM) > Generate Database...** from the main menu.
2. In the **Database Code Generation** dialog box, check **Export to database** and **Generate sample data**. If you do not select them, both the database and sample data will not be created in the database.



3. Click the **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.



```
D:\apps\mysql\bin\mysql.exe
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.0.51b-community-nt-log MySQL Community Edition <GPL>
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

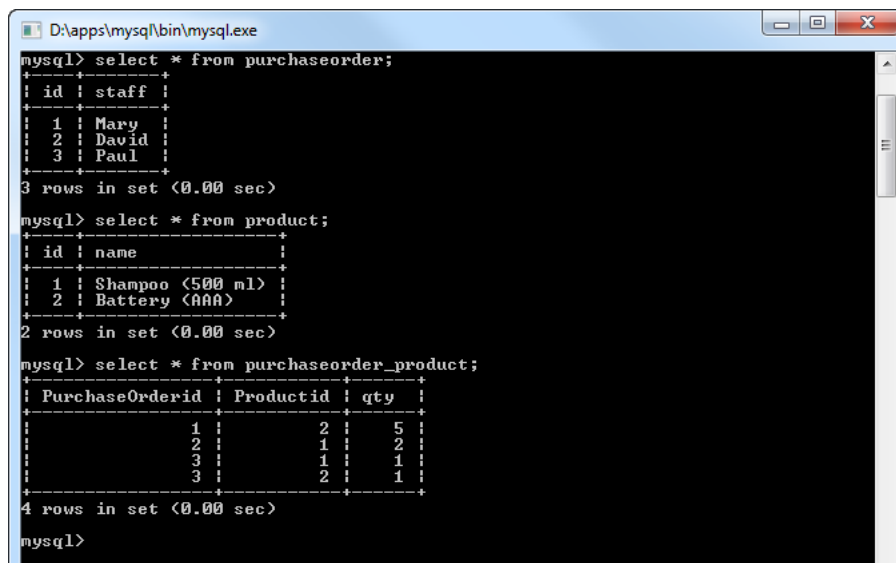
mysql> use myshop;
Database changed
mysql> desc purchaseorder;
+----+-----+-----+-----+-----+-----+
| Field | Type           | Null | Key | Default | Extra           |
+----+-----+-----+-----+-----+-----+
| id    | int(10)        | NO   | PRI | NULL    | auto_increment |
| staff | varchar(255)   | YES  |     | NULL    |                 |
+----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)

mysql> desc product;
+----+-----+-----+-----+-----+-----+
| Field | Type           | Null | Key | Default | Extra           |
+----+-----+-----+-----+-----+-----+
| id    | int(10)        | NO   | PRI | NULL    | auto_increment |
| name  | varchar(255)   | YES  |     | NULL    |                 |
+----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)

mysql> desc purchaseorder_product;
+----+-----+-----+-----+-----+-----+
| Field           | Type           | Null | Key | Default | Extra           |
+----+-----+-----+-----+-----+-----+
| PurchaseOrderid | int(10)        | NO   | PRI | NULL    |                 |
| Productid       | int(10)        | NO   | PRI | NULL    |                 |
| qty             | int(11)        | YES  |     | NULL    |                 |
+----+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

mysql> _
```

This is another screen that shows the default records added to the 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/>)

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