



## Oracle Database Design with Entity Relationship Diagram

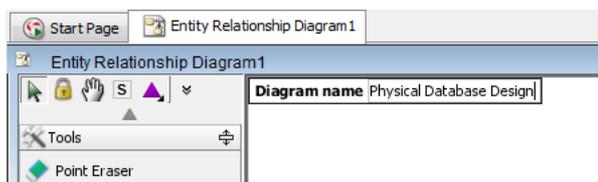
Written Date : September 1, 2009

This tutorial shows you how to design [Oracle database](#) with [Visual Paradigm](#). We will use [Entity Relationship Diagram](#) (ERD) to design database and then generate database initialization script directly to Oracle database.

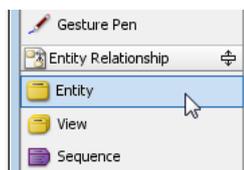
### Topics

1. Create physical database design ERD
2. Draw entities and connecting relationships
3. Create columns and primary keys
4. Connect to oracle database through JDBC
5. Export database schema to Oracle database

- 
1. In Visual Paradigm, create a new project by selecting **File > New Project** from the main menu. Name the project ComputerSales.
  2. Create an ERD by selecting **File > New Diagram > Database Modeling > Entity Relationship Diagram** from the main menu.
  3. Enter *Physical Database Design* as the name of diagram.



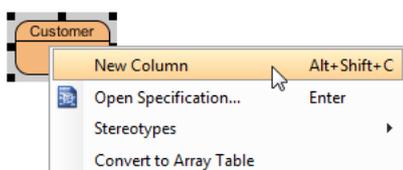
4. Select entity from the toolbar to create an entity.



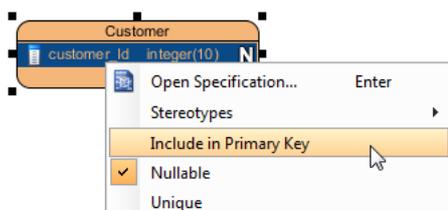
5. Drag to diagram to create an entity. Enter *Customer* as the name of entity.



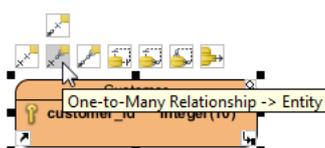
6. To add column to the entity, right-click on the entity and select **New Column** from the pop-up menu.



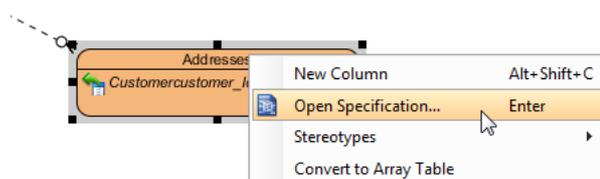
7. Enter *customer\_id* as the name of column.
8. To specify the column as primary key, right-click on the column and select **Include in primary key** from the pop-up menu.



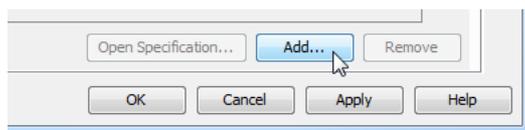
9. Move the mouse pointer over the entity, press on the **One-to-Many Relationship -> Entity** relationship icon.



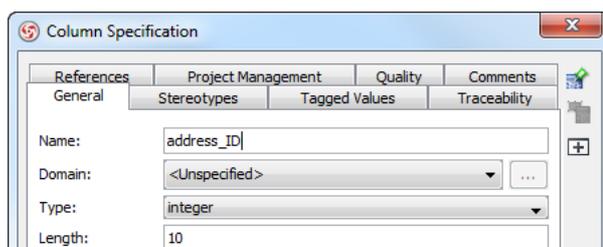
10. Drag out to an empty space to create an entity named *Addresses*.
11. You can also create column through the specification dialog. To open the specification dialog, right-click the entity and select **Open Specification...** from the pop-up menu.



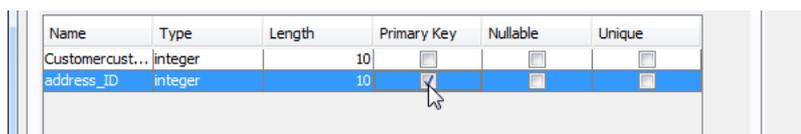
12. Select the **Columns** tab, and click **Add...**



13. Enter the column information and click **OK** to confirm.

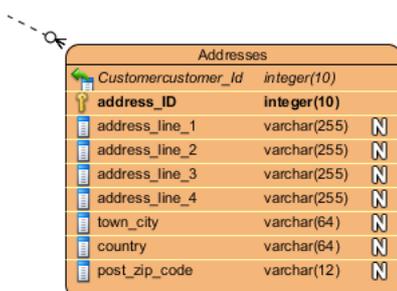


14. You also can specify the column as primary key by selecting the **Primary Key** property.

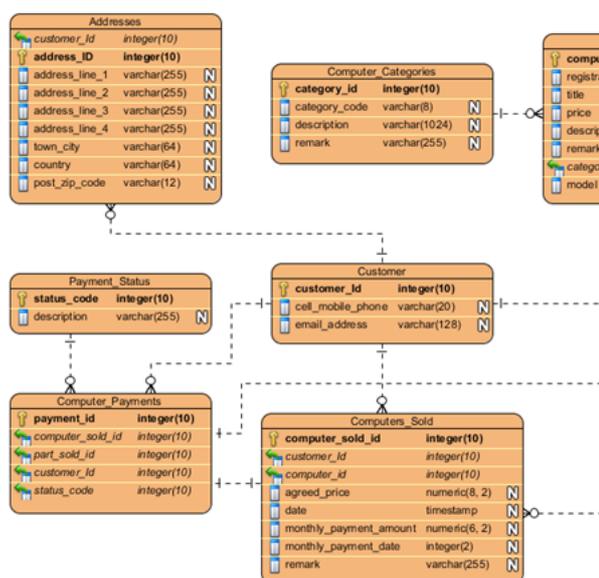


15. Click **OK**.

16. Column is added.

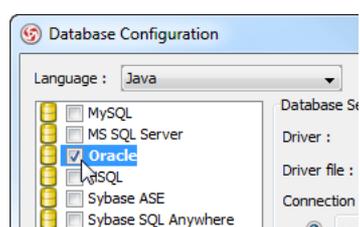


17. Let's repeat the previous steps to complete the ERD.

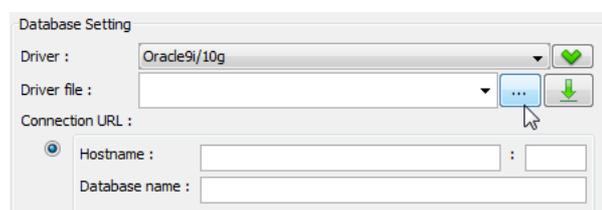


18. Let's configure the database configuration. Select **Tools > Database > Database Configuration...** from the main menu.

19. Select **Oracle** from the database list.



20. Click ... to specify the Oracle JDBC jar file location.



21. Select the Oracle JDBC driver file

- Fill in the information of the database to reverse, and click **Test Connection** to verify the connection. Click **Next**.

Connection URL :

Hostnames : 127.0.0.1 : 1521

Database name : XE

jdbc:oracle:thin:@127.0.0.1:1521:XE

User : john Password : .....

Test Connection

- Now it's time to generate database. Select **Tools > Database > Generate Database...** from the main menu.
- In the **Database Code Generation** dialog box, customize the database generation.
- By default, **Export to database** is unchecked, check it to export the entities to the database.

Code Database

Generate Database : Create Database

Export to database  Generate DDL  Generate Comment

Upper Case SQL  Formatted SQL Header

Generate sample data  Generate Individual DDL

- Press **OK** to start the generate process.
- Let's check with the Oracle Web Object Browser to verify the generation.

ORACLE Database Express Edition

User: JOHN

Home > Object Browser

Tables

ADDRESSES  
COMPUTER  
COMPUTERS\_SOLD  
COMPUTER\_CATEGORIES  
COMPUTER\_COMPUTER\_PARTS  
COMPUTER\_LOANS  
COMPUTER\_PART  
CUSTOMER  
CUSTOMER\_PAYMENTS  
FINANCE\_COMPANIES  
PARTS\_SOLD  
PART\_MANUFACTURERS  
PAYMENT\_STATUS

COMPUTE

Table Data Indexes Model Constraints Grants Statistics UI Defaults Trig

Add Column Modify Column Rename Column Drop Column Rename Copy

Column Name	Data Type	Nullable	Default	Primary Key
COMPUTER_ID	NUMBER(10,0)	No	-	1
REGISTRATION_DATE	TIMESTAMP(6)	Yes	-	-
TITLE	VARCHAR2(255)	Yes	-	-
PRICE	NUMBER(8,2)	Yes	-	-
DESCRIPTION	VARCHAR2(1024)	Yes	-	-
REMARK	VARCHAR2(255)	Yes	-	-
CATEGORY_ID	NUMBER(10,0)	No	-	-
MODEL	VARCHAR2(64)	Yes	-	-

1 - 8

#### Related Links

- [What is Entity Relationship Diagram \(ERD\)?](#)
- [Evaluate Visual Paradigm for FREE](#)

Trademark Disclaimer

Oracle is U.S. registered trademark of Oracle Corporation



[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/>)