# Visual Paradigm

Generating Database Change Script

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In order to patch existing database to newer version, database administrator need to prepare DDL (Data Definition Language) scripts with commands of updates. Visual Paradigm is capable in updating database, or just to generate the DDL required, by comparing differences between the design, which is the ERD(s), and the database, and to generate the DDL scripts accordingly. In addition to generating update scripts, Visual Paradigm can also generate scripts for creating and dropping database. In this tutorial, we will focus on generating the update scripts.
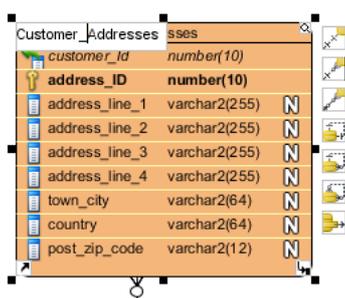
Topics

1. Update database design - the ERD
2. Generate database scripts for "Update Database"
3. Execute scripts in Oracle

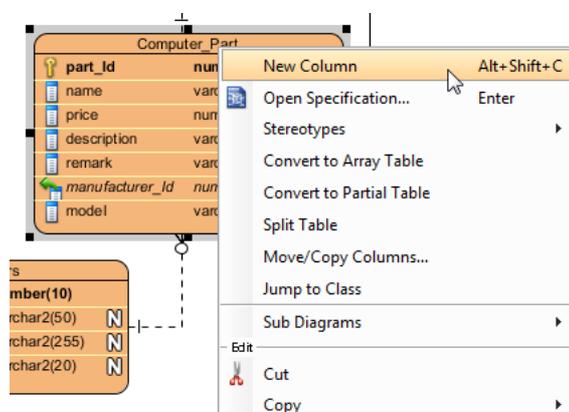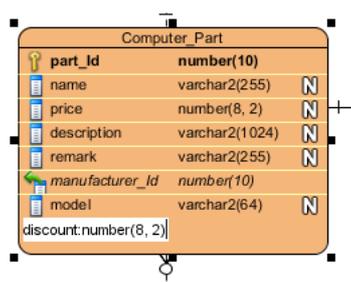The original database design for the *Computer Sales* project:
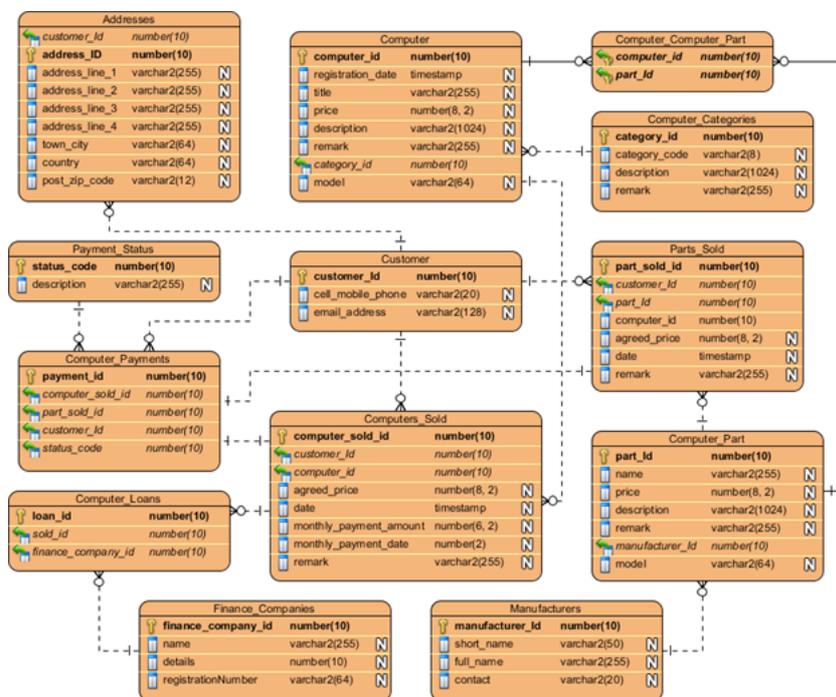
1.　　Let's update the design. Rename entity *Addresses* to *Customer_Addresses.*

2.　　Add a new column to entity *Computer_Part* by right clicking on it and selecting **New Column** from the popup menu.


3.　　Enter *discount : numeric(8, 2)* as the column definition, press the **Enter** key and then the **Esc** key to confirm editing.


4.　　Move the mouse cursor over *Computer_Part*, press on the **One-to-Many Relationship -> Entity** icon in the resource-centric interface, and drag to the empty region to create a new entity. Enter *Part_Usage* as entity name.

5.　　Rename the automatically created FK (foreign key) column to *part_id*.

6. Repeat the previous steps to add the following columns to *Part_Usage*.

   • **+usage_id : number(10)**

   • **description : varchar2(1024)**
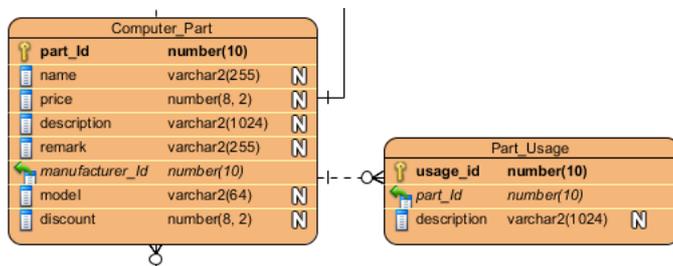
7. The design is now updated. To generate the scripts of changes, select **Tools** > **Database** > **Generate Database...** from the main menu.

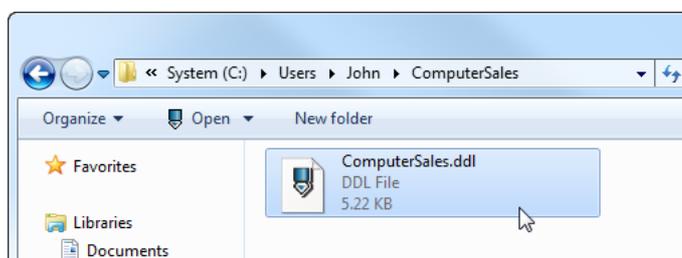8. In the **Database Code Generation** dialog box, specify the output path of the DDL script file.
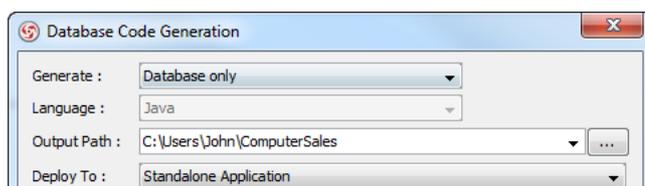
9. Select **Update Database** as the type of generation.
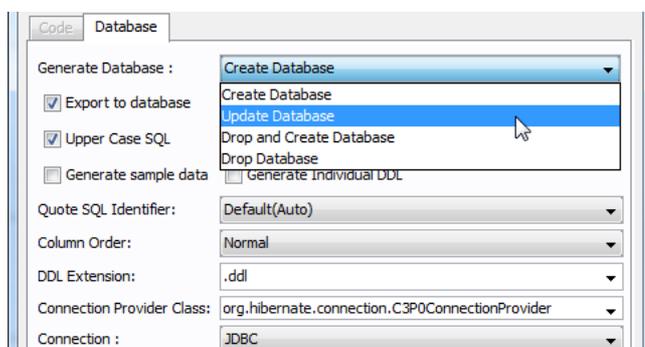
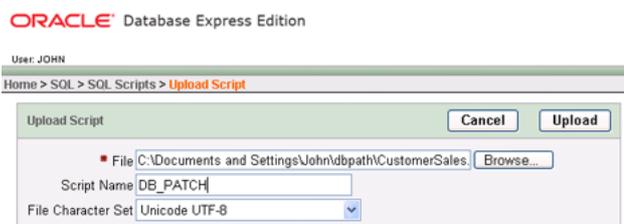10. Un-check **Export to database** to make it generate scripts file only.
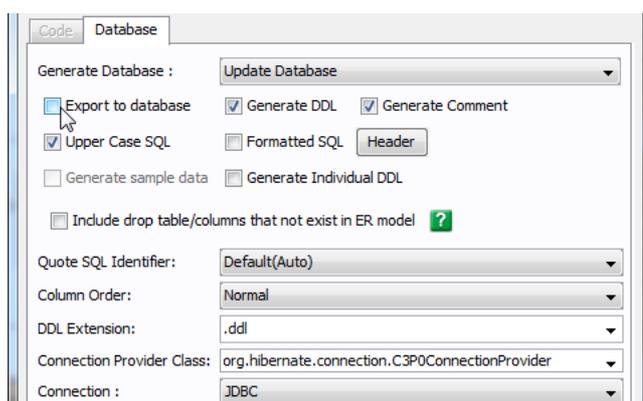
11. Click **OK** to start generation.
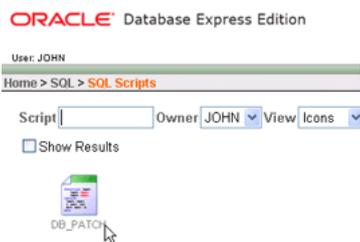
12. The script is generated to the given path.

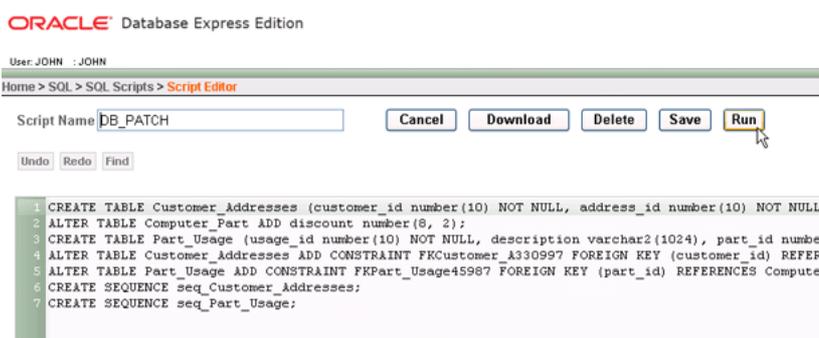13. Let's take a look at the generated scripts.

14. To execute the scripts, open the Oracle Web client, select **SQL** > **SQL Scripts**, and click **Upload** to upload the generated DDL file.

15. Once the file is uploaded, click the script icon.

16. Click **Run** to execute the scripts to database.

17. Click **Run** again to confirm.

18. Click the file icon to check the result.

19. The scripts are executed successfully. Database is updated.

20. We can see the changes in the Object Browser.

Related Links
• [What is Entity Relationship Diagram (ERD)?](#)

• [Evaluate Visual Paradigm for FREE](#)

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