Visio Tutorial: Database Model Design

IT 4153 Advanced Database

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Overview / Introduction

Use Visio for database modeling

Note

- The database model diagram template in Visio is really a logical database model (plus some physical model), not really a conceptual ERD model.
Starting from an ERD Example

We will create a logical model based on this ERD.
Open Visio 2010

Open Visio, and choose “Software and Database” from “Template Categories”, then choose “Database Model Diagram”
Settings in the Database Tab

1. Go to the “Database” tab; click on “Database Drivers” and select SQL Server.

2. Click on “Display Options” and see next slide.

Relational model template – although it is called “ERD”.

Zooming
Display Options

You may want to show crow's feet

Check this to show physical data types
Create the First Table

Drag an entity (it really should be a table) and place it on the work area.

Property categories; note that you need to highlight a shape (table or relationship) first to see its properties.

Change font size to make it bigger

Clicking on the table anytime will bring up this database property panel. Enter a name for the table.
Define Columns

No direct editing in the shape. Use "database properties" panel at the bottom.

Continue to create other 2 tables directly transformed from entities.

Enter name, choose data type, required or not, primary key (PK) here based on the transformation guidelines; double-click a data type to edit column size.

Advanced properties for columns, such as an identity column.
Define Relationships

Drag a relationship shape from the template. Connect the arrow end to the “one” side, and the other end to the “many” side. You may practice a while to move only the line end only (not the complete line).

When the red border appears, it’s connected.

The FK column is automatically added by Visio when the relationship line is connected. Sometimes you have another same column already. Just delete one which is not assigned as FK.

Visio will automatically detect the PK/FK pair. If not correct, click on the relationship and change it here.
Transform N:M Relationship -1

Create an intersection table between N:M
Transform N:M Relationship -2

Add two relationship lines. FKs are created automatically.
Set the composite PK.
Completed
Additional Tutorials

Create a database model

- Check out section 1 (should be 0, “create a new model diagram from scratch”) and 1

Database Concepts 5th edition Online Appendix D

- [http://www.pearsonhighered.com/kroenke](http://www.pearsonhighered.com/kroenke)

Visio 2007 video tutorial (there are three parts)

- [http://www.youtube.com/watch?v=1BYt3wmkgXE](http://www.youtube.com/watch?v=1BYt3wmkgXE)