

Visio 2010: Creating an ERD

CIS 3730

Designing and Managing Data

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Overview

- ◆ Visio download and first feel of Visio
- ◆ Use Visio to create a simple ERD
 - Note that the “Database Model Diagram” template in Visio is a logical model, not really a conceptual model. Don’t use it for ERD exercises and assignments in this session.

Visio 2010 Download

◆ MSDNAA

- http://msdn.e-academy.com/gsu_cis
- Download Visio 2010 (be sure to select the right edition x86 or x64)

◆ Tech support for login and download

- Email msdnaa_support@cis.gsu.edu
- Visit the support page
 - ◆ http://msdn.e-academy.com/elms/StorefrontSupport/MsdnaaStorefrontSupportMain.aspx?campus=gsu_cis
- Read FAQ
 - ◆ http://msdn.e-academy.com/elms/StorefrontSupport/MsdnaaFaq.aspx?campus=gsu_cis

Visio Tutorials for Beginners

- ◆ Please be sure to watch/read the following tutorials if you are new to Visio

- ◆ A beginner's guide to Visio 2010
 - <http://office.microsoft.com/en-us/visio-help/a-beginner-s-guide-to-visio-2010-HA010357067.aspx>

- ◆ Basic tasks in Visio 2010
 - <http://office.microsoft.com/en-us/visio-help/basic-tasks-in-visio-2010-HA101835290.aspx>

- ◆ Visio introduction video on YouTube
 - <http://www.youtube.com/watch?v=wDqXgMoEU4Q>

Visio Stencil

- ◆ Stencil is the shape library that we can use in diagrams and drawings
- ◆ Stencil files end with .vss
- ◆ Download the ERD Stencil and examples from my website or uLearn
 - <http://jackzheng.net/teaching/cis3730>
 - “ERD Stencil mini.vss” is the stencil file for ERD.

Open Visio 2010

Microsoft Visio

File Home Insert Design Data Review View

Save Save As Open Close Info Recent **New** Print Save & Send Help Options Exit

Choose a Template

Home

Recently Used Templates

Organization Chart (US units)

Template Categories

Other Ways to Get Started

Blank drawing Office.com templates Sample diagrams New from existing

Database Model Diagram (US units)

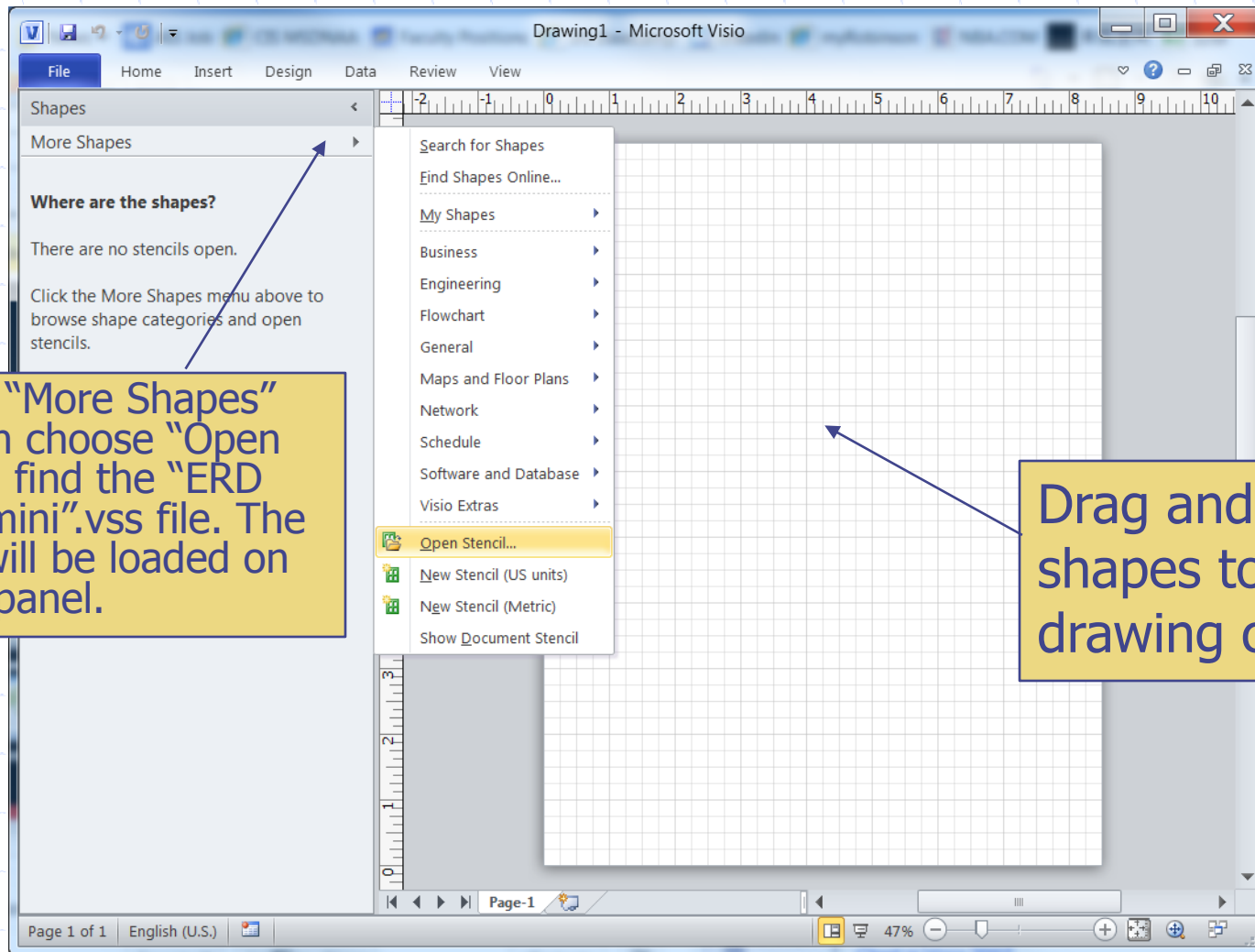
Document and design databases using IDEF1X and relational notations.

Create

Open Visio 2010 and create a blank drawing

Note that the "Database Model Diagram" template in Visio is a logical model, not really a conceptual model. Do NOT use it for ERD exercises and assignments in this session.

Loading Example Visio Stencil



Click on "More Shapes" and then choose "Open Stencil"; find the "ERD Stencil mini".vss file. The stencil will be loaded on the left panel.

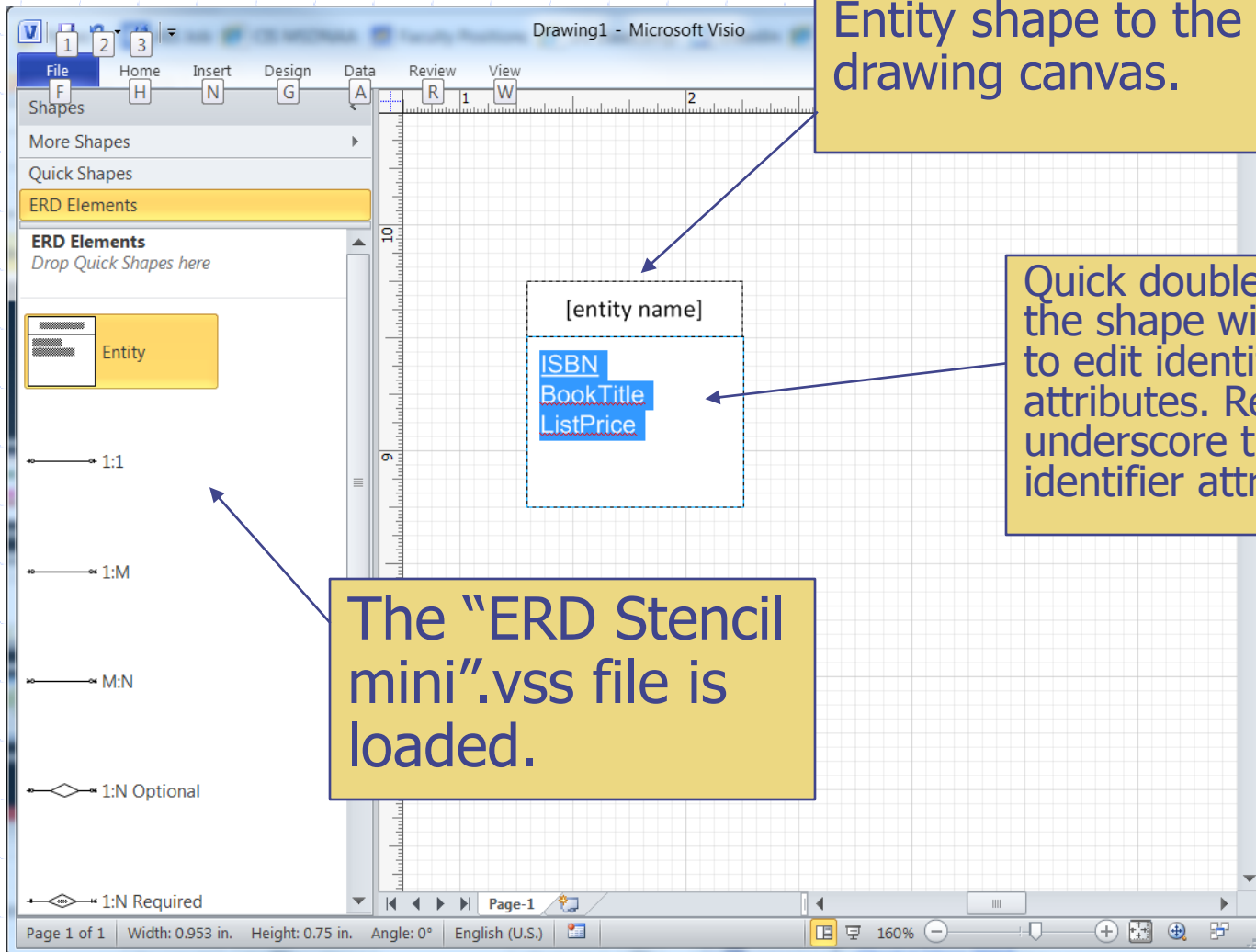
Drag and drop the shapes to the drawing canvas.

Draw an Entity

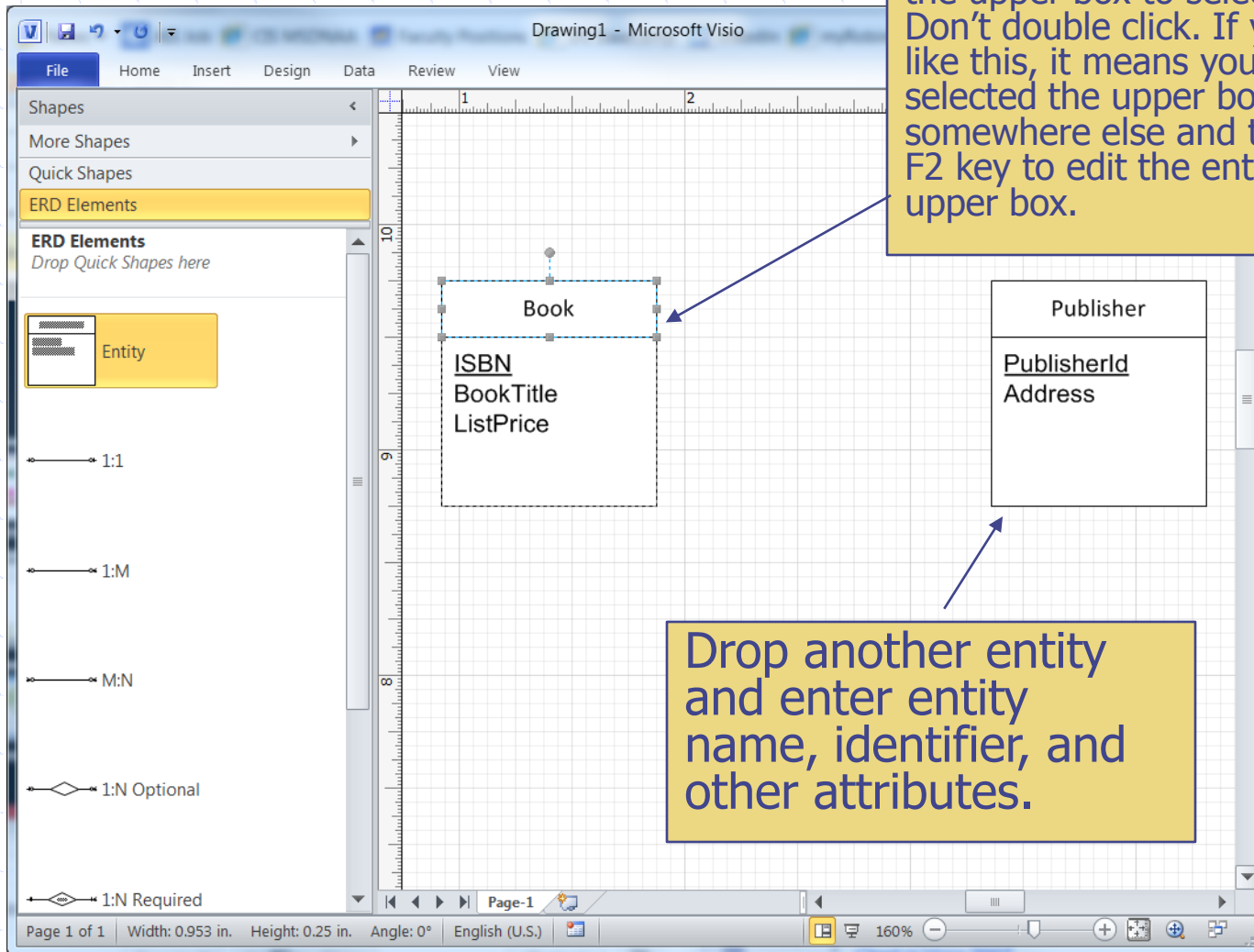
Drag and drop the Entity shape to the drawing canvas.

Quick double-click on the shape will allow you to edit identifiers and attributes. Remember to underscore the identifier attribute.

The "ERD Stencil mini".vss file is loaded.



Enter Entity Name



Click the entity shape, and then click the upper box to select the upper box. Don't double click. If you see something like this, it means you have successfully selected the upper box. If not, click on somewhere else and try it again. Hit the F2 key to edit the entity name in the upper box.

Drop another entity and enter entity name, identifier, and other attributes.

Draw a Relationship

The screenshot shows the Microsoft Visio interface with the 'ERD Elements' task pane on the left. The canvas displays two entity shapes: 'Book' (with attributes ISBN, BookTitle, ListPrice) and 'Publisher' (with attributes PublisherId, CompanyName, Address). A relationship shape, 'Publish / Published by', is being positioned between them. A red square connector point is visible on the relationship shape, and a tooltip 'Glue to Connection Point' is shown. The '1:M' relationship shape is highlighted in the task pane.

ERD Examples.vsd - Microsoft Visio

File Home Insert Design Data Review View

Shapes < More Shapes > Quick Shapes ERD Elements

ERD Elements Drop Quick Shapes here

Entity

1:1

1:M

M:N

Relationship Diamond Attribute for Relationship

Relationship (1) Relationship (N)

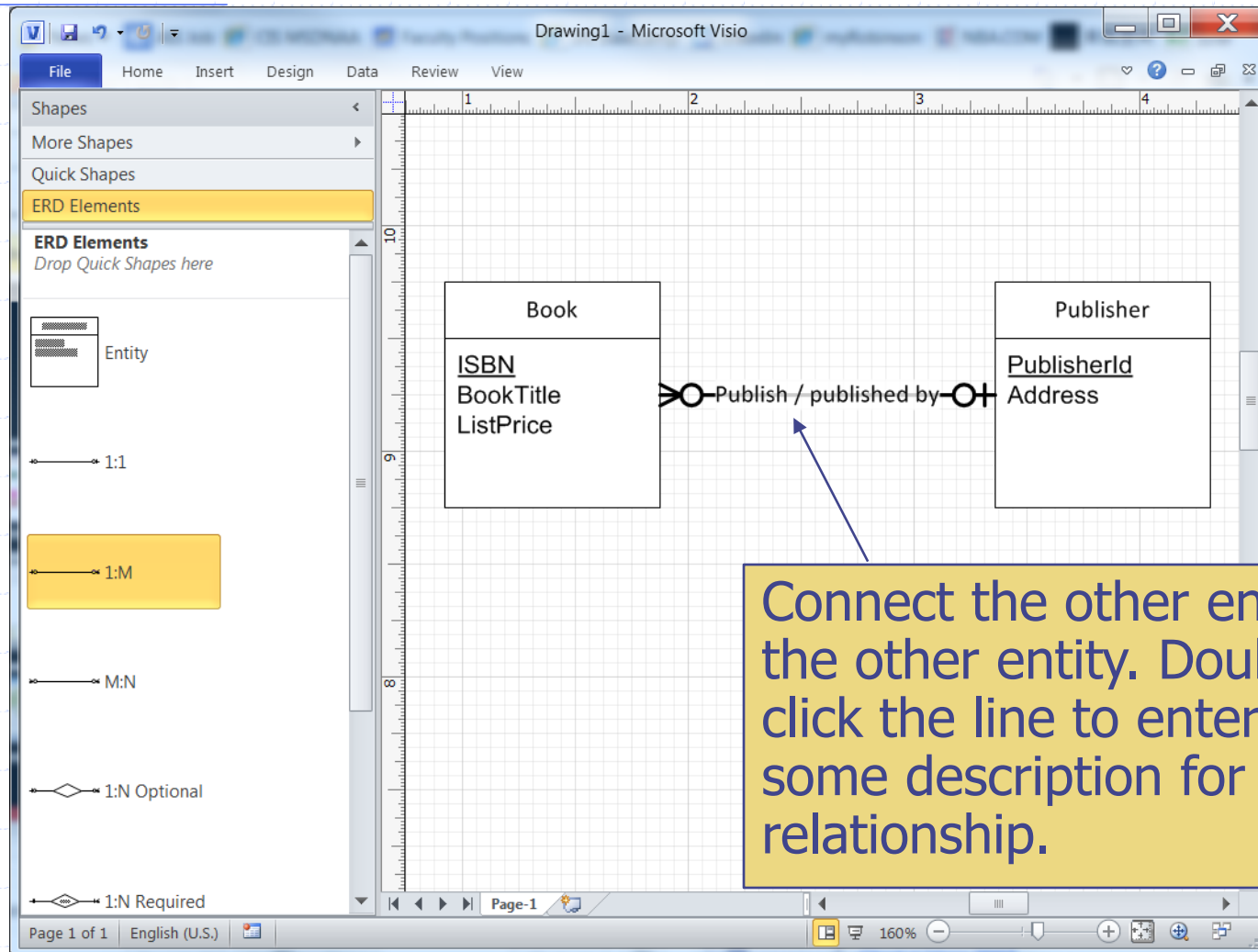
1:N Optional

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Connector points are around the shapes and try a few times to find the best connection point.

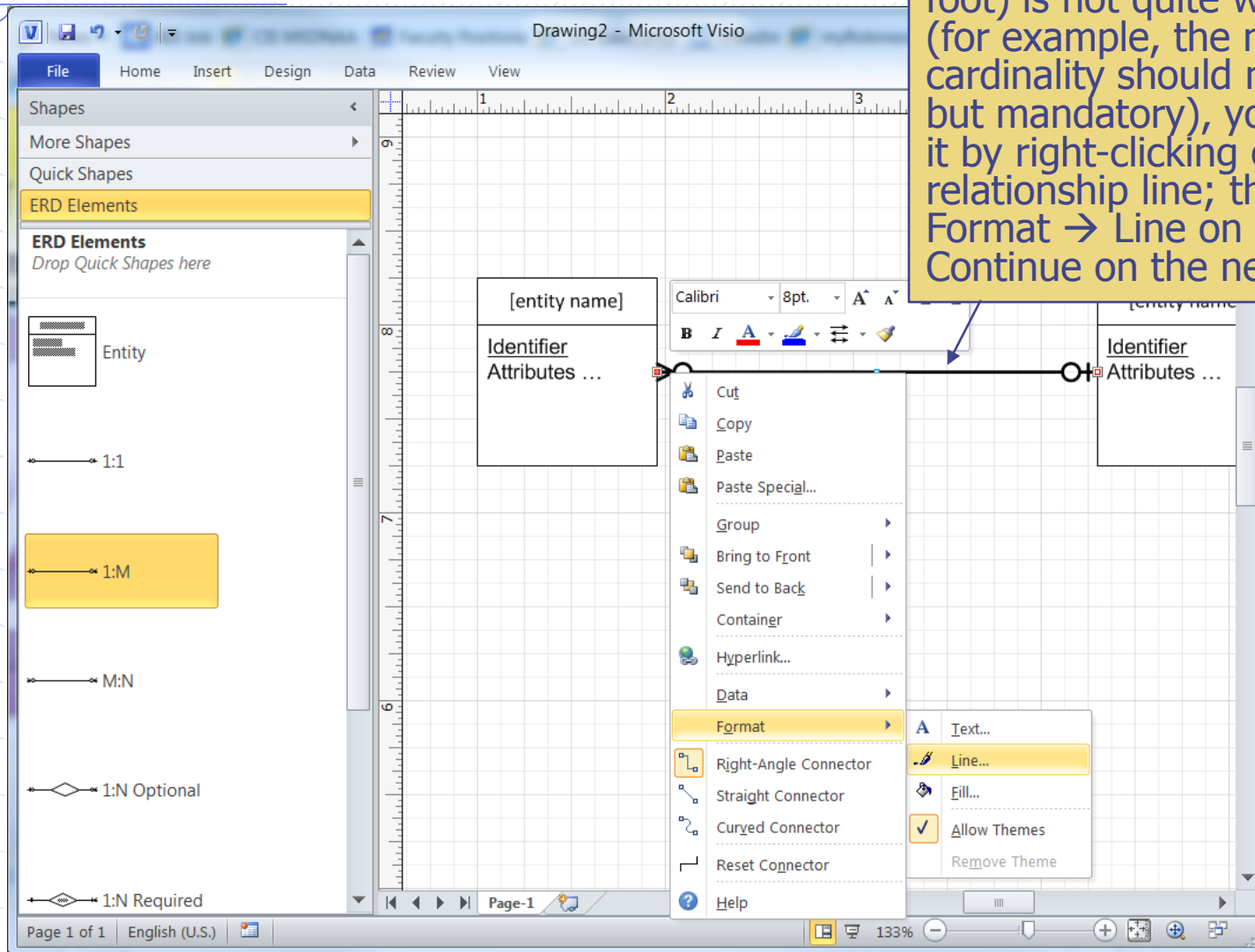
Get a one-to-many (1:M) relationship shape and drop it on the canvas. Drag the many end to the Book entity and drop it when you see a connecting point turned red; that means the end is connected to the entity shape and will move together with the entity.

Enter Relationship Name

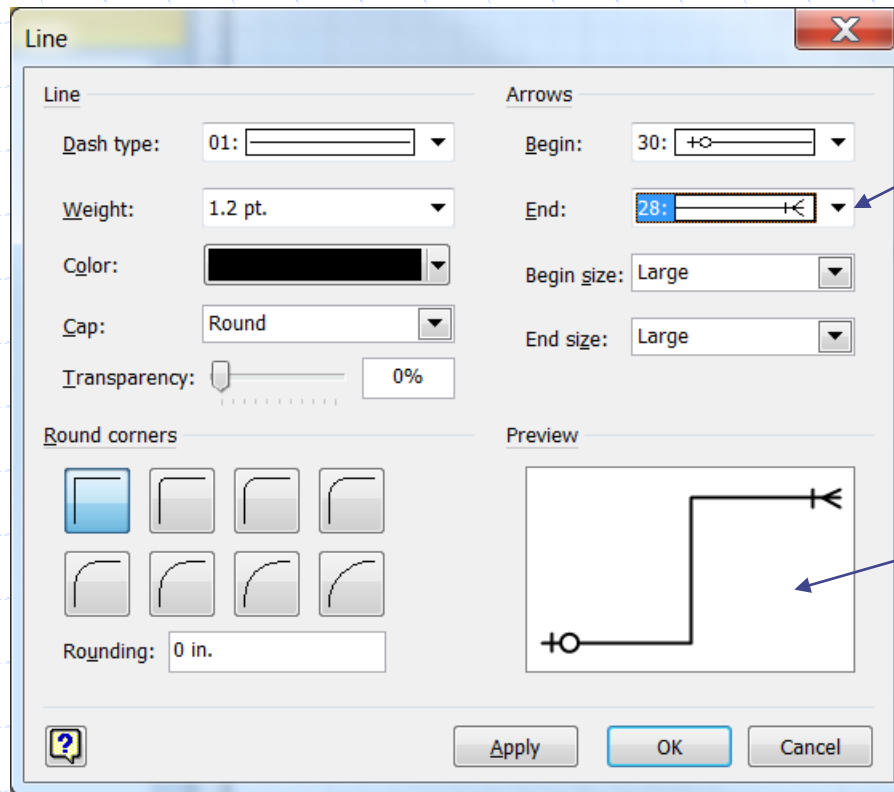


Change Cardinality

If the cardinality symbol (crow's foot) is not quite what you want (for example, the minimum cardinality should not be optional but mandatory), you can change it by right-clicking on the relationship line; then select Format → Line on the menu. Continue on the next slide.



Change Line End



Change the line begin or end style to the correct crow's foot notation.

Preview the change and click OK.

Complete the ERD and More Exercises

- ◆ Continue to model other entities and relationships to complete the ERD
 - Save the file!
- ◆ Download the Visio 2010 example file for the example illustrated in this tutorial
 - <http://jackzheng.net/teaching/cis3730>
- ◆ Practice using Visio 2010 to create simple ERD for in-class ERD exercises
- ◆ Use Visio 2010 to complete assignment #3