

## Instructions for Logical Database Design Practice

### Assignment

Create a logical database design document for the iSchool Webstore case expressed as an Entity-Relationship diagram (ERD). You may use the conceptual data model that you created for the last assignment as your starting point. Or, you may use the conceptual data model that I presented as the exercise solution as your starting point.

To create your logical database design, follow the steps identified below. Please note that each of these steps is explained in more detail in the tutorial videos posted to our Weekly schedule and associated with this assignment.

Logical database design process:

To create your logical database design, I recommend the following process:

1. Refine conceptual data model.
2. Convert attributes into columns.
  - a. Give each column a data type.
  - b. Convert identifiers into primary keys.
  - c. Add further columns necessary to support functionality.
3. Normalize
  - a. Remove redundant columns
    - i. Truly redundant columns
    - ii. Columns that can be calculated
  - b. Remove redundant relationships
  - c. Eliminate repeating columns
  - d. Relocate misplaced columns
  - e. Replace free-form text columns with lookup tables
4. Resolve many-to-many relationships
5. Add foreign keys to implement relationships

### Tools

I prefer that you use MS Visio 2013. The tutorial videos that I have created show this product being used. If Visio is not available, the next best choice is probably the ER diagrammer feature of MySQL Workbench.

### Length

One ERD should be submitted. It may occupy several pages if necessary. Please remember to include data structures to support every feature of the iSchool Webstore.

### Format

Please submit a **single PDF document**. The Visio 2013 diagrammer can save diagrams in PDF format using the **File > Save As** menu option.

**File Naming Conventions**

The name of the file that you submit should include both your name and the name of the assignment. It should follow the form:

trainor\_kevin\_logical\_database\_design.pdf

**Due By**

Please submit this assignment by the date and time shown in the Weekly Schedule.