

Instructions for Conceptual Data Modeling Design Practice

Problem Statement

This assignment is based upon the iSchool Webstore case. Please see the separate case description document. **Please note that our data model will only be covering a subset of the requirements identified in the case. See the description below to identify that subset.**

Assignment

Create a conceptual data model for the iSchool Webstore case expressed as an Entity-Relationship diagram (ERD). Concentrate on including all of the entities, attributes, and relationships necessary to support the functions described.

Note: Please limit the scope of your data model to the following subset of requirements for the iSchool Webstore case:

- Orders
- Items
- Customers
- Payment
- Picking Event
- Shipping Event

Note: Please disregard the following requirements from the iSchool Webstore case:

- Messaging between customer and webstore staff
- Logging In
- In-Person order pickup
- Automated interface to USPS
- Automated interface to suppliers
- Tracking of which employees performed which actions (picking, shipping, etc.)

To create your conceptual data model, I recommend the following process:

1. Follow the process described in the Part 1 tutorial video for this assignment to conduct a *ragbag exercise* for the iSchool Webstore data model. When you have completed this, you should have several lists of terms that can be used in the next steps.
2. Follow the process described in the Part 2 tutorial video to create the entity types and relationship types for your data model. Use the list of entity types created in step 1, place boxes on your diagram for the entity types. Use the list

of relationship types created in Step 1 to draw lines on the diagram for the relationship types.

3. Follow the process described in the Part 3 tutorial video to populate entity types with attributes. Then, mark the attributes on each entity type that will serve as the identifier for that type.
4. Make a final check of your data model to identify any relationships that carry data. An example of this would be the quantity of items that must be carried in each Order-Item relationship. Wherever data must be carried in a relationship, insert an associative entity to carry the data. This will result in two relationships with an intervening associative entity.

Tools

I prefer that you use MS Visio 2016. I have recorded a demo available that shows how to create a Conceptual ERD using this tool. If Visio is not available, the next best choice is probably the ER diagrammer feature of MySQL Workbench. The MySQL Workbench diagrammer does not really support conceptual data modeling. So, it creates foreign keys to implement each relationship in the model. Implementing foreign keys is really part of the next modeling step – logical data modeling. So, if you are forced to use the MySQL Workbench diagrammer, you will be one step ahead of this assignment.

Length

One ERD should be submitted. It may occupy several pages if necessary. Please remember to include data structures to support every feature that is part of the scope of this project as defined in these instructions.

Format

Please submit a **single PDF document**. The Visio 2016 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:

surname_givename_conceptual_data_modeling.pdf

If I were to submit this assignment, I would name the file as follows:

trainor_kevin_conceptual_data_modeling.pdf

Due By

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

Last Revised
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