

Logical Database Design Assignment

Instructions

Overview

Create a logical database design document for the iSchool Webstore case expressed as an Entity-Relationship diagram (ERD). Use one of the following conceptual data models as your starting point:

- Your solution to the Conceptual Data Model Assignment
- My solution to the Conceptual Data Model Assignment

Deliverables

You will be submitting a logical database design expressed as an entity-relationship diagram (ERD).

Scope of Data Model

The scope of the data model for this assignment is the same as the scope used for the Conceptual Data Model Assignment. Please refer to those instructions for more details.

Steps of the Logical Database Design Process

To create your logical database design, follow the steps in the outline below. Please note that these steps are explained in detail in my Logical Database Design lecture. They are also illustrated in the tutorial video that accompanies this assignment.

- 1) Make final improvements to conceptual data model based on stakeholder feedback.
 - a) Missing or incorrect entities
 - b) Missing or incorrect relationships
 - c) Missing or incorrect attributes
 - d) Missing or incorrect unique identifiers
 - e) Missing or incorrect use of supertypes/subtypes
- 2) Normalize the data model.
 - a) Remove repeating elements.
 - i) Lists
 - ii) Repeating attributes
 - iii) Repeating attribute groups
 - b) Remove redundant attributes.
 - i) Truly redundant attributes
 - ii) Attributes that can be derived
 - c) Remove redundant relationships.
 - d) Relocate misplaced attributes.
 - e) Relocate misplaced relationships.
 - f) Replace free-form text attributes with relationships to lookup entities.

- 3) Adapt design to relational database technology.
 - a) Resolve many-to-many relationships.
 - b) Convert unique identifiers to primary keys.
 - c) Add foreign key attributes.

Tools

The ERD should be drawn with LucidChart.

Length

One ERD document should be submitted. It may occupy several pages if necessary. Please remember that you only need to support the subset of iSchool Webstore functionality that we addressed in the Conceptual Data Modeling Assignment.

Format

Please submit a single PDF document.

File Naming

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_logical_database_design.pdf

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

trainor_kevin_logical_database_design.pdf

PLEASE NOTE: All file names must be in lower case. Deductions will be made for submissions that do not conform to this standard.

Due Date

Please see the Weekly Schedule for the date and time when this assignment is due.

Last Revised

2021-11-01