

Introduction to Database Systems – CS43005 – Spring 2009

Project – Book Store

In this project you are to design a database application to run online Book Store. Your store operates as follows:

Any customer before she/he can use the book store, should register as a user. To register the customer supplies a selected user id, password, first name, last name, SSN, phone#, street address, city, state, zip, and current balance on the customer account. After the registration, the customer may start buy books. To do so, the customer connects to the book store site. Customer may first to browse the book database, to select the appropriate book or books. She/he can select and browse books by genre, year of publication, or by authors' names. For example, she/he can find all books that written by Ken Follett and published in 2001 and select some of these books to be put into shopping cart. Also, a customer can sort the books alphabetically or by the authors name(s) or publisher name or both. After the book was bought by the customer she/he may rate it and place its comments on the book site of the store. Thus, information about the books that the book database contains: a title, a publication date, number of pages, genre (action, drama, comedy, etc.), author or authors, customer rating along with the customer name that supplied the rating, price of the book and alternative places that the book can be bought below the bookstore price. The information about the book store includes: Name, email address, website of the store, customer service website and customer account website.

Customer operations for book store are register, edit registration, browse the store, and select a book to be placed in the shopping cart, payment process and placing comments process. Book store employee operations are: list customers and their recent purchases, list customer that mostly buying books of the same genre, send an advertisement of new book titles to a specified list of customers.

Implementation Environment

You will be implementing your project using MS Windows platform. Your application should use WEB interface between customers, employees and database. You are allowed to use PHP to implement your interface and Java/PHP for program. MySQL is used as database to store different tables.

Project Stages and Required Documentation:

A project goes through several stages and each stage is to be documented. The following stages are required:

- ER diagram for the online video store. Documentation should include a diagram, a description of every entity, attribute, and relationship. Additionally, for each entity a key must be given. Documentation should not exceed more than two pages;
- Conversion of the ER diagram into a minimal set of relations. Documentation should not exceed more than one page;

- A set of SQL table definitions. Loading sample tables. Your documentation of this step should include a set of Create and Create index SQL statements;
- Description of Web based user interface along with an outline of each screen. Documentation should not exceed more than 4-5 pages. You are to provide help screens and help pages to operate your database application.
- Description of a set of PHP program that take data from the web interface, prepare a SQL statement(s) and submit these statement to SQL. After the execution of the program, the data obtained from SQL should be displayed on the screen. You should allow users to scroll through your data and to cancel the query during the execution or modify the data on the screen. Documentation for this stage consists of a description of each program and a program source code.
- Finally, you should prepare a user manual (1-3pages) that describes how to install your application, and how to use it. You should assume that you give a user a diskette (or CD) that contains your application. User should be able to follow your instruction in installing your package.