

Project Report
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A Database System For Managing An Online Bookstore

I have provided two different users for logging in and testing the database:

email address: test@test.com password: test - This account is a normal user.

email address: testadmin@test.com password: test - This account is an administrator.

Of course, any one is more than welcome to register for an account, and start buying books!

The idea behind this project was to make a user friendly interface that allowed users to interact with a database. I decided to make a bookstore because it is easy to see how a database could be extremely helpful in the successful upkeep of a bookstore. The database is used efficiently store and manage customers, books, login information, stock levels, and much more. I decided to make a web based project because it is more user friendly then a command line interface, it handles concurrency better, and no special computer is needed to run the software. Anyone with a modern web browser can use this software.

All of the server side code was written using PHP. Because PHP can be used to generate HTML, it is very good for creating dynamic websites. PHP also has an easy to use API for connecting to a MySQL database, which is used to store all of the information. I choose to use MySQL because it is free, open source, and has a large amount of documentation available. Specifics about internal implementation / database architecture are located in the developer's guide that has been included with this project.

The project has the following features:

- Allows anyone to purchase a book, whether a guest, administrator, or normal user.
- Generates easy to read itemized receipts for every order.
- Uses a user friendly web interface to handle concurrency.
- A shopping cart which lets users look at items they plan on buying
- A simple interface for viewing past orders and recipes.
- Searching which allows users to look up books via ISBN, title, or author.
- A intuitive tool for editing personal information, updating passwords, etc.
- Easy to use administrative tools that assist in managing the store, such as:
- Tools to add books, remove books, update stock levels, and prices.
- A tool to easily search customers by name or email address.
- A tool to view past orders, either by email address or order ID number.
- A comments section, that lets users address any questions or problems they are having.

The results of this project is a user friendly web interface for managing a bookstore that can be easily maintained and expanded by other developers. Users can put items into a shopping cart, edit the amount of items in the cart, and checkout an order. They can also view past orders, change account information, and other things that make the user experience enjoyable. The

administrators can add books, update stock levels, and other jobs needed to maintain a store. Because Apache is being used, concurrency is not an issue, and all of these things can be happening at the same time.

I had never really done any work with PHP / MySQL before, so I can say that I learned a lot by creating this project. I had also done little in terms of HTML / Javascript before, so I can also say that I have learned a lot in that area as well. I can honestly say that the best way to learn how to do something is do start doing it, and this for sure true with developing software. Another lesson I learned is how large a role database systems actually play in our day to day lives. Whether you are using MySQL, Microsoft Access, or any other RDBMS, every piece of software that needs to store information efficiently needs to use a RDBMS. The amazing part is how all of this is hidden from the user, and they are just given a user friendly user interface to interact with.