CP476 Project: StudentSaver Webstore

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Introduction

The price of textbooks is a huge barrier for students pursuing a post-secondary education. Our store will allow students to acquire used textbooks online in a simple and cheap fashion. College and university textbooks will be sold to students at a lower rate than traditional bookstores and other online retailers.

Customers will be able to browse for textbooks by course category (math, english, science, etc.). For customers who know what they want, the catalogue can also be searched by title, author, or ISBN.

Problem solving and algorithms

Problem	**Solution**
Storing indexable information on textbooks	A MongoDB database collection with information on the books and stock levels.
Creating a checkout experience	Form with text fields to collect shipping and credit card information. The site will validate that it is all entered. No payments are actually processed for this course project.
Shopping cart	Each shopping cart will be tied to a user's account. The account collection in MongoDB will have an array field that stores ids of products in their cart and their quantities.
Account management	Another MongoDB database collection to store the customers usernames and passwords, along with their current shopping cart items.

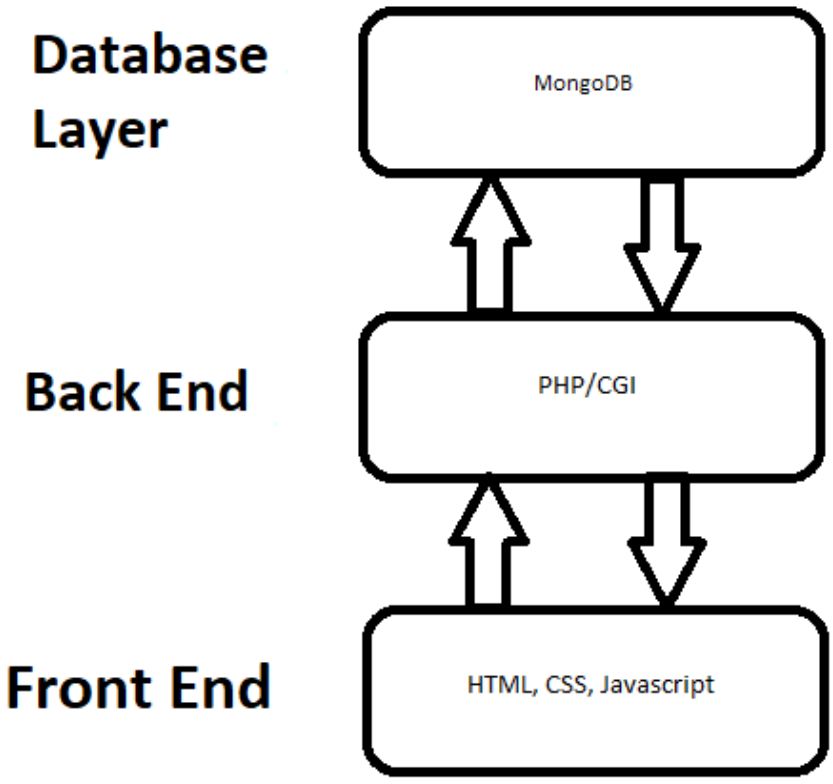
Front-end catalogue	HTML, CSS, and Javascript will be used to render the front-end catalogue.

System Design

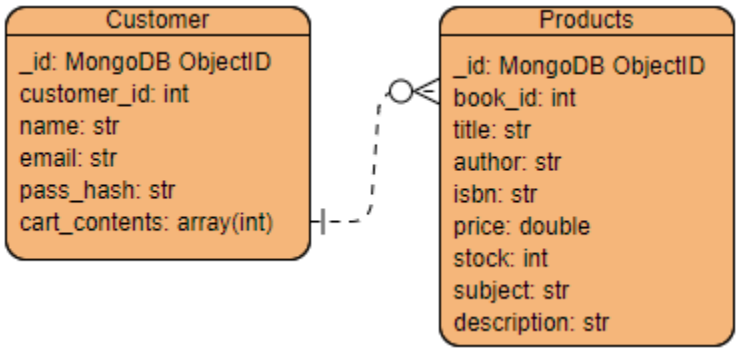
Our web application will be made up of three layers:

- HTML, CSS, and Javascript for front-end
- PHP server/backend
- MongoDB database layer

The following diagram illustrates the relationship between the multiple layers:



For the Database layer, the makeup of the structure of the MongoDB database is shown below:



The following is the general flow of how a user would interact with our website:

1. Upon arriving at the website, the user would first register for an account, hence adding their information to the database, specifically the Customer collection.
2. From there, they can browse through our inventory of textbooks, either by category, or they can search by title, author, etc.
3. The user will add the books they want to their cart. The current state of a customer's cart is stored in their entry in the database, along with their personal information.
4. When they are ready to checkout, they will click on a "checkout" button and proceed through the checkout process.
5. They will fill out their billing and shipping information, and place their order.

Milestones & schedule

Task ID	Description	Due date	Lead
1	Project research & team up	Day 5 of week 9	All
2	Project proposal	Day 1 of week 10	Patrick
3	MongoDB set up and working	Day 7 of week 10	Patrick
4	Back end PHP completed and working	Day 5 of week 11	Hayden
5	Front end HTML CSS working	Day 2 of week 12	Rob
6	Project demonstration	Day 5 of week 12	All

7	Project submission	Day 6 of week 12	Patrick

References

Our inspiration - https://www.vox.com/the-goods/2019/3/6/18252322/college-textbooks-cost-expensive-pearson-cengage-mcgraw-hill