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CS405G Spring 2014 Project – Toys and Games

Part I – Finalized Database Design

ER Diagram

customerID

password

cartID

customerID

customerID

timestamp

orderStatus

orderID

itemID

cartID

orderID

quantity

itemID

isManager

password

staffID

Staff

name

price

numberInStock

itemID

CustomerOrder

itemQuantity

Customer

CartHasItem

Cart

Item

OrderHasItem

|  |  |
| --- | --- |
| CartHasItem | |
| itemID | INT (PK) |
| cartID | INT (PK) |
| itemQuantity | INT |

Database Schema Design

|  |  |
| --- | --- |
| Cart | |
| cartID | INT (PK) |
| customerID | INT (FK) |

|  |  |
| --- | --- |
| Customer | |
| customerID | INT (PK) |
| password | CHAR (20) |

|  |  |
| --- | --- |
| Item | |
| itemID | INT (PK) |
| numberInStock | INT |
| Name | Char(30) |
| Price | INT |

|  |  |
| --- | --- |
| OrderHasItem | |
| orderID | INT (PK) |
| itemID | INT (PK) |
| Quantity | INT |

|  |  |
| --- | --- |
| Staff | |
| staffID | INT (PK) |
| Password | Char(20) |
| isManager | Tinyint(1) |

|  |  |
| --- | --- |
| CustomerOrder | |
| orderID | INT, auto-increment (PK) |
| orderStatus | Char(30) |
| TimeStamp | Datetime |
| customerID | INT |

Functional Dependencies / Form

Part II – Description of Programs

Program Flow

A visitor to our site (both customers and staff) starts at the “Project Page”. From there, they can either click on a link to shop unregistered, sign in or register as a customer, or sign in as a staff member. If they shop unregistered, they are redirected to a page listing all inventory but are unable to take any action. If they clicked the “Customer Page” link, they are redirected to sign in / register for shopping. If the customerID and password are valid they will continue on to the Registered Shop page where they can add items to their cart, view their cart, purchase the items in their cart, and view past orders. If the user was a staff member, they could click on the Staff Login link on the original Project Page and they would be prompted to enter their staffID and password. From the staff page, all staff would be able to view inventory, update inventory, and view / ship pending customer orders. If the staff member is a manager they will have to additional pages to look at: Sales Stats and Item Promotions. Sales stats gives the manager a look at the number of each item sold in the specified time frame. Item Promotion allows the manager to set new item prices.

Data Structures

Algorithms

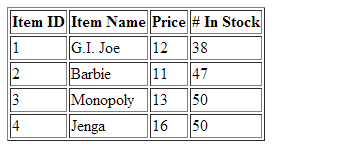
Part III – Program Functions

**Sample Input / Output**

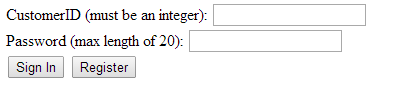
Home Page that both customers and staff see once visiting the site:



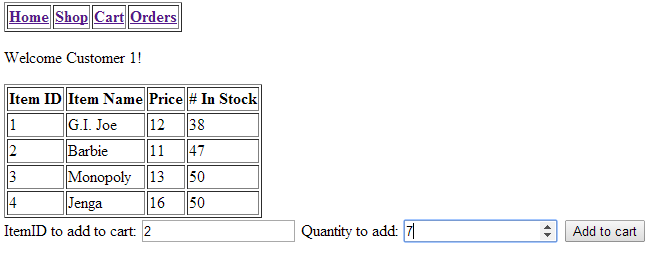
Unregistered shopping page:



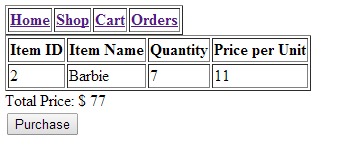
Customer Login / Register:



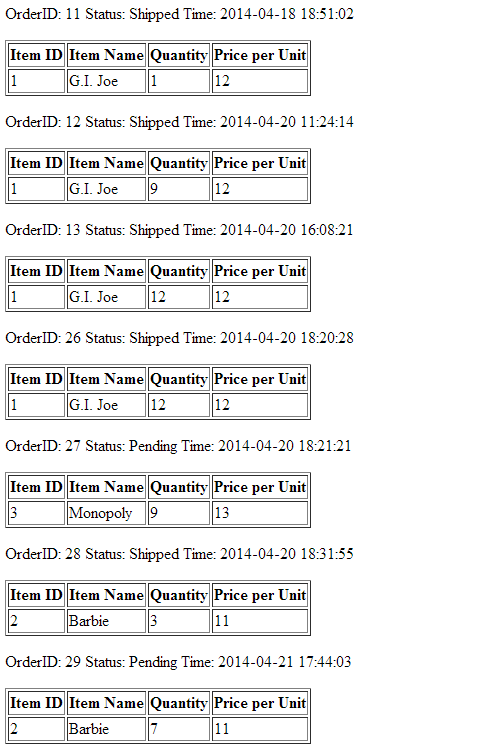
Registered Shopping Page. Notice the menu options at the top. Adding 7 Barbie’s to my Cart:



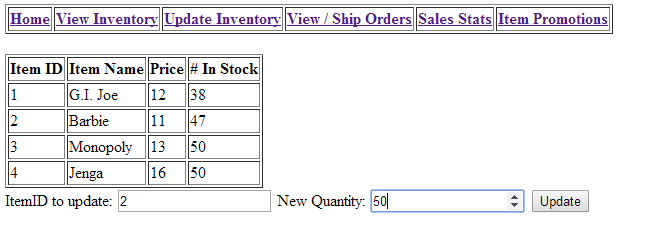
My Cart after adding the Barbie’s:

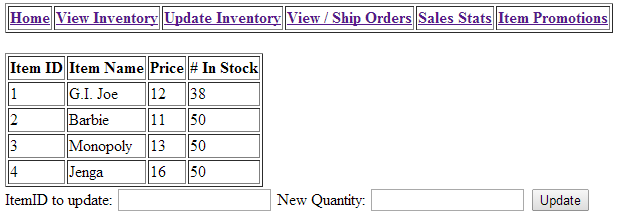


Viewing Orders After Barbie Purchase (Order 29):

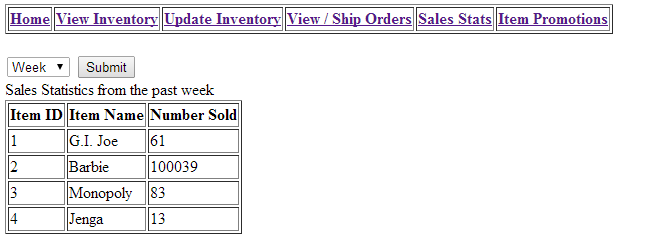


Manager about to update Inventory (Before and After):

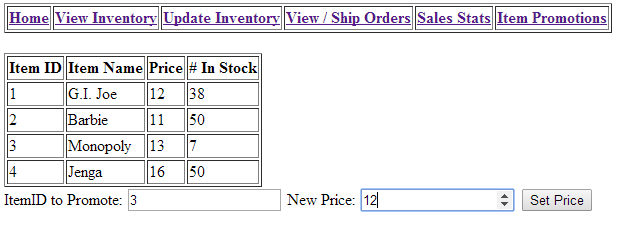


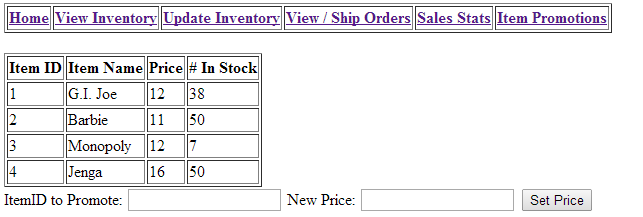


Manager looking at Sales Stats from past week:



Manager Set New Price for Monopoly:





Part IV – Testing

Tests

Project Experience