

## Website Specifications

1. Maintain data associated with the inventory (a collection of products)
  - a. A Product has a name, description, quantity and price
  - b. The inventory also keep track of the stock/quantity of each product
2. Maintain records for many Users
  - a. A user can be either a member or non-member.
  - b. A user has a username (unique across all users), password (restriction imposed for security), email address (no restrictions), and postal address (unverified.)
  - c. Anyone may sign up for a customer account.
  - d. Allow any customer to become a member.
3. Show a listing of available products
  - a. Products are to be displayed in categories.
  - b. Name of product and Price
4. Allow customers and managers to log in and out of the system.
  - a. Users (both customers and the manager) will be logged out if inactive for 10 minutes.
5. Shopping cart
  - a. Anyone is able to add one or more products to the shopping cart.
  - b. The shopping cart allows more than one piece/unit /Kg of product.
6. Checkout
  - a. Checkout is only available to logged-in customers. A user that is not logged in as a customer is given a chance to log in
  - b. Collect a 16-digit credit card number from the customer
  - c. Log/record the transaction
7. Admin panel
  - a. Notify Admin when products are ordered
  - b. When the quantity a book falls below a threshold, the admin is notified that the product needs to be reordered.
  - c. One exception when product is discontinued.
8. Allow admin to update stock quantities
  - a. Allow admin to change any product's price
  - b. Allow admin to view transaction logs

Assumptions: • There is no need for anyone to be able to order more than a single copy of a book (or any item) in a single transaction. • The manager account's username and password maybe hard coded. • The manager cannot be a customer. • Any user cannot edit their account information.

## Specific Requirements

### 1. Data Structure

#### 1.1. Product has these attributes

2.1.1.Unique ID (auto-increment starting at 1/random Id using alpha numeric)

2.1.2.Product Name

2.1.3.Description

- 2.1.4.Price
  - 2.1.5.Stock
  - 2.1.6 Discount
  - 2.1.7 Category
  - 2.1.8 Quantity
  - 2.1.9 Estimated delivery
- 2.2.Customer has these attributes
  - 2.2.1.Unique Username
  - 2.2.2.Password
  - 2.2.3.Name
  - 2.2.4.Email Address
  - 2.2.5.Postal Address
  - 2.2.6. Email ID
  - 2.2.7. Session Time
- 2.3.Manager has these attributes
  - 2.3.1.Username
  - 2.3.2.Password
  - 2.3.3.Email address
- 2.4.Order log entries have these attributes:
  - 2.4.1.Unique ID (auto generated)
  - 2.4.2.Time transaction took place
  - 2.4.3.Date transaction took place
  - 2.4.4.Username of customer
  - 2.4.5.Listing of the contents in customer's shopping cart
- 3. System
  - 3.1.Browse Inventory
    - 3.1.1.Organization
      - 3.1.1.1. Items Listed on single page
        - 3.1.1.1.1. Name
        - 3.1.1.3.2. Category
    - 3.1.2.Interaction
      - 3.1.2.1. Each Item has Add to cart to mark selection
  - 3.2. Search Inventory
    - 3.2.1.Search available only by name of product
    - 3.2.2.Search is exact-match only
  - 3.3.Create, Update and Destroy (CRUD) Functionality
    - 3.3.1.Only managers are allowed to modify inventory
    - 3.3.2.Managers have an interface to:
      - 3.3.2.1. Create new product entry
      - 3.3.2.2. Update a product entry
      - 3.3.2.3. Update the stock/quantity of a particular product
      - 3.3.2.5. Review current inventory
        - 3.3.2.5.1. Using the same interface to browse inventory as described in section 3.1, the

manager has an additional “Edit Item” option for each product.

3.3.2.5.1.1. Manager has full CRUD capabilities on each product.

3.3.3. Managers may delete product from the inventory

### 3.4. Shopping Cart

#### 3.4.1. Logged In

3.4.1.1. Can add items to cart

3.4.1.1.1. If Item is not in stock, you will be disabled to add items.

3.4.1.2. If shopping cart not empty, a user may

### 3.5. Checkout procedure

3.5.1. User must successfully use shopping cart before beginning this procedure

3.5.2. Checkout page consists of

3.5.2.1. An overview of the purchase

3.5.2.2. Payment gateway – 3<sup>rd</sup> party

3.5.2.3. A button to complete the order

3.5.3. Order details sent via email after the checkout has

completed

3.5.4. On order completion the inventory is decremented based on items purchased by user

### 3.6. Authentication System

#### 3.6.1. User Levels

3.6.1.1. Manager (single, hardcoded user, no orders)

3.6.1.2. Customer (unlimited, open creation, unlimited orders)

#### 3.6.2. Account Creation

3.6.2.1. Everyone is allowed to create an account

3.6.2.2. Required Information

3.6.2.2.1. Listed in section 2.2

#### 3.6.3. Account Modification

3.6.3.1. Users are not able to modify any aspect of their account after creation

#### 3.6.4. Login and Logout

3.6.4.1. There is forgot password with email OTP

3.6.4.2. Logging in allows one to logout

3.6.4.3. Logging in allows checkout

3.6.4.4. There is a 10-minute session time out after which a logged in user will be logged out automatically.

### 3.9. Order Logging

#### 3.9.1. Specifications

3.9.1.1. Required Information:

3.9.1.1.1. Listed in section 2.4

3.9.1.2. A manager can view all past transactions from all Order log entries are generated when a user successfully checks out their shopping cart