

# Final Report for Sealand Entitlements Online Store

## COSC 304

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December 1, 2006

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# 1 Introduction

SealandEntitlments is combination online and physical store that sells and ships unofficial items that are related to principality of Sealand. The website is located at

<http://sealand.thruhere.net>

which is a link to

<http://cs-suse-1.ok.ubc.ca/group1/tomcat>.

It is in no way affiliated with the principality of Sealand[1]. The company from here in will refer to Sealand Entitlements NARLLC[2]. This document focuses on the design and implementation of the online store system for the company with some integration with the inventory system of the physical stores. Using this system, a customer can purchase various items, such as degrees packages, certificates, seals and other related paraphernalia. All transactions and interaction with the company is performed online. The online store is developed in JSP, with the back end running on SQL Server 2005. It will collectively be referred to as *the system*.

## 2 Executive Summary

All products are centrally stocked at one main warehouse. The main warehouse is located in Burnaby, British Columbia. The main warehouse receives all stock directly from its suppliers. Inventory is distributed to individual stores. All products purchased online are shipped from the warehouse. When a customer places an order with the online store, it will be processed as soon as an Order Clerk receives the order and can ship the items. All orders are shipped on the next business day after they are processed. Business days are Monday through Friday. Orders Received on a Friday or on a weekend or holiday, will be processed on the next business day.

A guest is an un-registered customer. Both a guest and a customer can view products through the online store, where products are grouped by categories and associated with at least one picture. Guests and customers can also view reviews on products from other customers who have purchased a specific product. For a guest to make a purchase, they are required to have an active account with the online store. That is, they must have registered and created an account.

Customers can view their previous orders and review products, but can only review products they have purchased. A shopping cart of a registered customer is saved in the database when they leave and is reloaded when they login again. If they have guest cart and login the two carts will be merged. To place an order, a customer must select items to be placed in their shopping cart and the order will be processed from their shopping cart. Once an item

has been placed into an order, it will be removed from the shopping cart. Customers can view their order history at any time. Customers can also shop at a brick and mortar store, but their purchases will not be tracked from these locations.

If an item is out of stock or temporarily unavailable at the time their specific shipment is ready, they can request a partial shipment for the items that are available. Separate shipping charges will apply for split shipments. Alternatively, a customer can request to hold the shipment until all items are available.

The company has both store managers and assistant managers in addition to the Manager Boss and Order Clerks. Store managers only have the ability to track stock and request inventory. An assistant manager has the same permissions as store manager in addition to the ability to recover the system, import and export data. Additionally, an assistant manager can remove, or update item currently for sale. An order clerk can process customer orders. The Manager Boss has all the abilities of all the other employees. All administrative and manager functions are secured by a user id and password.

## **3 Walkthrough**

### **3.1 Login**

A guest to Sealand Entitlements can log in to the web site to gain access to a previously saved shopping cart and to place orders for products saved in the saved shopping cart. By clicking on the Login link located on the right hand menu on the main page, the user will be transferred to the login page, if they are currently not logged in. The user will be prompted for their email address and password. A user can not login if they have not previously created a user account. The user can complete the login by choosing the SUBMIT button or clear their choice with the RESET button. Once the user has completed the login, the login status will be displayed under the top main menu bar along with their name.

### **3.2 Logout**

A user that is logged in to the web site can choose to logout by clicking the logout link located under the top main menu bar along beside their login information. Once a user is logged out, they will be returned to the main page for Sealand Entitlements.

### **3.3 Viewing All Products**

A user can view the products available for sale at Sealand Entitlements by clicking the Product button along the main menu bar. The user will then be directed to the product list page,

the will display the available products, along with current inventory levels, the current price, the category, and links for viewing information about a given product in addition to a link for adding the product to a shopping cart. A user does not have to be logged in to the web site to add items to a shopping cart or to view descriptions.

Users can search for products by key words or phrases by typing the word or phrase into the text field located under the section header for the product list. The search is completed by clicking the SUMBIT button. If nothing is entered, clicking the SUBMIT button will return all products in a given category. The text field can be cleared by clicking the RESET button. A user can also search for products by category. A category can be selected by using the drop down menu located underneath the search text box. The category selection can be used in conjunction the text search, such that a product with the name 'Seal' can be located in a given category.

### **3.4 Views Details for a Product**

A user can view specific information about a given product by clicking on the name of the product in the product list. This will direct the user to the product details page. The product detail page will allow the user to read information about a given product, including the name, the price, category, a short description, a photo for the product and reviews and ratings. A rating is on a scale of 1 to 6, where 1 is a poor rating and 6 is a excellent rating. Multiple reviews are shown from users who have purchased this product previously and have chosen to leave a review. A user can return to the product list page, by clicking the link 'Back to Products' location beneath the Product Details header at the top of the page.

### **3.5 Adding a Product to a Shopping Cart**

A user can add a product to their shopping cart by clicking the link 'Add to Cart' located beside a given product and will direct users to the Shopping Cart Page. If a product is unavailable due to lack of inventory, the link will not be active. A user does not need to be logged in to the web site to add items to the shopping cart, but if a user is logged in, items added to their shopping cart will be automatically saved such that they will be available in the shopping cart in future sessions. A single product is added to the cart by this process. Information about products are displayed such as the available quantity, price per unit, and the subtotal for the number of items.

A user can change the number of a given product in the shopping cart by entering a number in the quantity field in the shopping cart list and clicking the 'Update Quantity' button located at the left side of each product description in the shopping cart. This will update the quantity of a given product. The user is permitted to enter a quantity that is larger than number of available units. Any items that are not available when the shopping

cart is processed will be put on back order. To remove an item from the shopping cart, the user can click the 'Remove from Cart' link located in the description for each product. This will remove all of a given item from the shopping cart.

If a user chooses to log in after they have created a guest shopping cart, the guest cart will be merged with the saved cart, if there is one, associated with their account. Users can return to the product list by clicking the 'Continue Shopping' link located on the bottom right of the page, or purchase their shopping cart by clicking the 'Check Out' link located on the bottom right of the page.

A user can also view their shopping cart at any time by clicking the 'Shopping Cart' link located along the top menu bar or the on the right hand side of the page. If the shopping cart is empty, the user will be notified of this when the view their shopping cart.

### **3.6 Checking Out**

A user can purchase the items in their shopping cart, by clicking the 'Check Out' link located on the shopping cart page. If the user is not logged in, they will directed to a login page where they can log in to complete the transaction using their username and password. If a user is already logged in, they will bypass this page.

Once a user is logged in, they will be directed to the order processing page, where they will be prompted to make choices for payment methods, as setup in their user profile, shipping methods, and a choice to allow for items to ship as they become available as in the case where an order contain items that are available and items that are backordered or to wait until all items are available before an order ships. Once a user select the appropriate options, they can process the order by clicking the 'PROCESS ORDER' button located on the lower left of the Page. This will direct the user to the order confirmation page. A user can also return to the main page by clicking the 'Back to Main Page' link location on the lower left of the page, or can go back to their shopping cart by clicking the 'Back to Shopping Cart' link location on the lower left of the page. Choosing either of these options, will stop the processing of the order.

### **3.7 Processing the Order**

When a user processes their order, they will directed to a summary page that will list all items in their order in addition to the ordered quantity, description and cost. The ship to address will also be displayed in addition to providing a reference for the order and the shipment. The shipment reference is for the initial shipment and will be confirmed by email when the order ships. If not all products are available for a given shipment, customer will

be notified of subsequent shipment reference number when additional products ship. Additionally, the shipping cost is not displayed, as this is calculated when the order ships. Once the order is completed, the user's shopping cart is emptied and will show empty if the user attempts to view the shopping cart immediately after an order is completed. A user can return to the product list page by clicking the 'Back to Products' link located on the lower left of the page or return to the main page by clicking the 'Back to Main Page' link of the lower left of the page.

### **3.8 Manage Account**

A visitor has the possibility to sign in as a new customer. The Manage Account tab in the menu list at the top of the page directs to the customer account form. A new customer will be prompted by an empty form. If an existing customer is logged in, the customer will be presented with the current account information and the ability to change them. The customer needs to enter the personal information in order to be able to add payment methods. Once the customer clicks the submit button, the system checks if the entered data is valid. Simple text fields like name and address are checked for SQL injection strings. Special fields like e-mail, phone number, and postal code are checked for proper formatting.

Once the personal information is stored in the system, the customer is prompted with a button to add new payment methods or to modify existing payment methods. To modify an existing payment method, the customer needs to select one before clicking the Modify button. The payment method page provides a form to enter credit card information. The customer has the choice between three types of credit cards: American Express, Visa, and MasterCard. The customer has to provide the card number and the expiry date. The system checks if the card number is a correct number of the corresponding type of credit card. For example, if a customer selects MasterCard but enters a Visa card number, the system will detect the invalid card number.

If a customer placed one or several orders, a link for each order is shown on the bottom of the Manage Account page. The link directs to an order detail page with details about the order and each product pertaining to that order. The product information contains the shipment status for the product and a button to write a review for the ordered product.

A customer can write one review per product. The review page shows a textfield for the review and a drop down menu to rate the product. The text in the review is checked by the system for SQL injections.

### **3.9 Management Site Walkthrough**

To manage the website, a manager will have to login to the management section of the website. It is located at <http://sealand.thruhere.net/manage/>. The manager will be unable

to access any of the management pages until he or she has been authenticated.

There are four types of employees and different management pages require specific management titles. For example, only the *Manager Boss* and *Assistant Manager* titles give access to the product, category, employee, and reports pages. Also, an *Order Clerk* can only access the Order Processing page.

### 3.9.1 Login

To login a manager must enter his or her ID, which is a number, and his password. To login as the *Manager Boss* use the ID, **1** with the password **bob**.

After the login, the Manager will be presented with the Management website. From here the manager can navigate to each of the specific management pages by clicking on one of the links in the page header or on one of the links in the sidebar.

### 3.9.2 Logout

A manager that is logged in to the management site can choose to logout by clicking the logout link located under the top main menu bar along beside their login information. Once a manager is logged out, they will be returned to the login page for the management section of the Sealand Entitlements website.

### 3.9.3 Categories

The first section is the *Category Management* page. From this page a Manager can add a new category, update an existing category, or remove an unused category. To add a new category, the manager must enter a unique integer ID along with the new category title and description.

To update an existing category the manager must click on the update link beside the category. The manager will then be presented with a form which will show the existing title and description of the category. The manager can then modify the text and click the submit button which will update the category.

To remove an existing category the manager must click the remove link. A category can only be removed if it has not been used for a product.

### 3.9.4 Products

The second section is the *Product Management* page. From here a Manager can add a new product, update an existing product, adjust warehouse inventory levels, and start or stop selling a product on the website.

Adding a product is similar to adding a category. The manager must fill out the form and can optionally upload a jpeg image for the product.

To adjust the inventory level the manager must enter a number into the textbox and click add inventory. The manager can also click the start or stop selling links to start or stop selling the product. The start selling link will give an inventory level of 0 and the stop selling link will remove all stock from the warehouse.

Clicking details will allow the manager to modify the product's details, including the name, description, and price. Also from here the manager can upload a new jpeg image to replace the current image.

### **3.9.5 Employees**

From the *Employees* section a manager can add, remove, or update employees. The Manager Boss is permanent and can't be updated or removed.

### **3.9.6 Reports**

To view a sales report for a specific month a manager should select a year and month on the *View Reports* page and click the **View Report** link. A new window will open that will display the selected monthly sales report in a printable format.

### **3.9.7 Store Inventory**

The *Store Inventory* page will display the inventory of the currently logged in store manager. If the *Manager Boss* or an *Assistant Manager* goes to the Store Inventory page, he or she will be presented with a list of stores. The manager can click the manage button to manage inventory at a specific store.

Once a store has been selected, a list of products will be displayed with inventory levels at the warehouse and current store. The manager can choose to start selling any product that is currently being sold from the warehouse.

When the manager chooses to transfer inventory by entering an amount and clicking the transfer button, the selected amount of inventory will be instantly transferred using the secret *Sealand Teleporter*. If the manager decides to stop selling a particular product at the store by clicking the stop selling button, the extra inventory will be transferred back to the warehouse.

### **3.9.8 Processing Orders**

Orders can be processed by the Manager Boss, Assistant Manager and order clerks. Store Managers do not have the permission to process orders for the online store. Selected users



can process orders that have been entered at the online store by clicking the 'Process Orders' link, located on the right hand side or along the top menu bar of the Sealand Entitlements website management page. This link will direct the user to a page that lists ordered that need to be processed by the online store. Older orders are located at the top of the list, with newer orders at the bottom. The list will show information about orders that need to be processed or have items that are back ordered. The columns of the table display the Shipment Id, the Order Id, Order Status, Shipment Choice, and whether the order is okay to ship. The order status ranges from 0 to 4 as:

**0** indicating that the order processing has not started

**1** indicates that the order is waiting for inventory that is not currently available

**2** indicates that the order can ship if only some items are available

**3** indicates that the order has partially shipped

**4** indicates that the order is complete

Orders that are available from processing will have a link 'Process Order' beside each order that is available for processing. When the user click on the link, they will be directed to the process page. The process page displays the items that are to ship in the order, whether items have previously shipped, the number of items still to ship and the overall order status. The status listed here indicated whether a given item has completely shipped for a given order. Users can only ship orders that are ready. The system will automatically determine what items are available for shipping. The user can process the order by clicking the 'Process' link on the lower left of the page, or return the list of orders by clicking the 'Back to Orders List' link on the lower left of the page.

When completing the process, the user will be directed to a process summary page that will display the status of the items that have shipped, the shipping address, the shipping fee, shipping number, and confirm that an email to the purchaser that the order has shipped. If there are remaining items that are on back order for a given order, the user will find a new shipment request in the process order list. As inventory becomes available, the user will be able to process the back orders.

### **3.9.9 Database Management**

The Database Management page allows a system administrator to perform database and data administration tasks such as changing databases, data import and export via XML, and database recreation. The page is intended for advanced system administrators. The access control lets only Assitant Managers and Manager Boss use the Database Management.

Database Connection of the system is stored in a system configuration file. The file location is currently `/home/group1/database.conf`. If the administrator changes the connection parameters, the file is overwritten with the new parameters. All web pages in the online store and the management application will use the connection in the configuration file. This allows an administrator to change the live database to a backup database in case of database maintenance or server crash. Once the connection is updated, the page shows the status of the new database. The status check tests for the existence of the most important database tables and the presence of some required base data.

The Database Import allows the administrator to import XML data into the database. There is currently no XML schema. However, the XML data should be formatted in the same way as the file provided by the export function described below. The XML parser does currently not validate the XML file and checks only if the file is well formed. At the current stage of the project, only the most important data is imported. This includes the Customer table, the Category table, and the Product table. Once an import is started, the page redirects to the Import Result page that shows the data that is imported. At the end of the import process, a link is provided to go back to the Database Management page.

The Database Export allows the administrator to export data from the database in a XML file. Currently only the most important database tables are exported. This includes the Customer table, the Category table, and the Product table. The XML file can be used for backup purposes and can be imported into a new database with the Database Import tool.

The Recreate Database tool allows the user to recreate a corrupt database. The recreation drops all the table of the database referenced in the Database Connection section and creates a new Sealand Entitlements database. It then inserts the required base data.

## 4 Entity Relationship Design

The entities in Figure 1 have been modeled to represent the required components for the system.

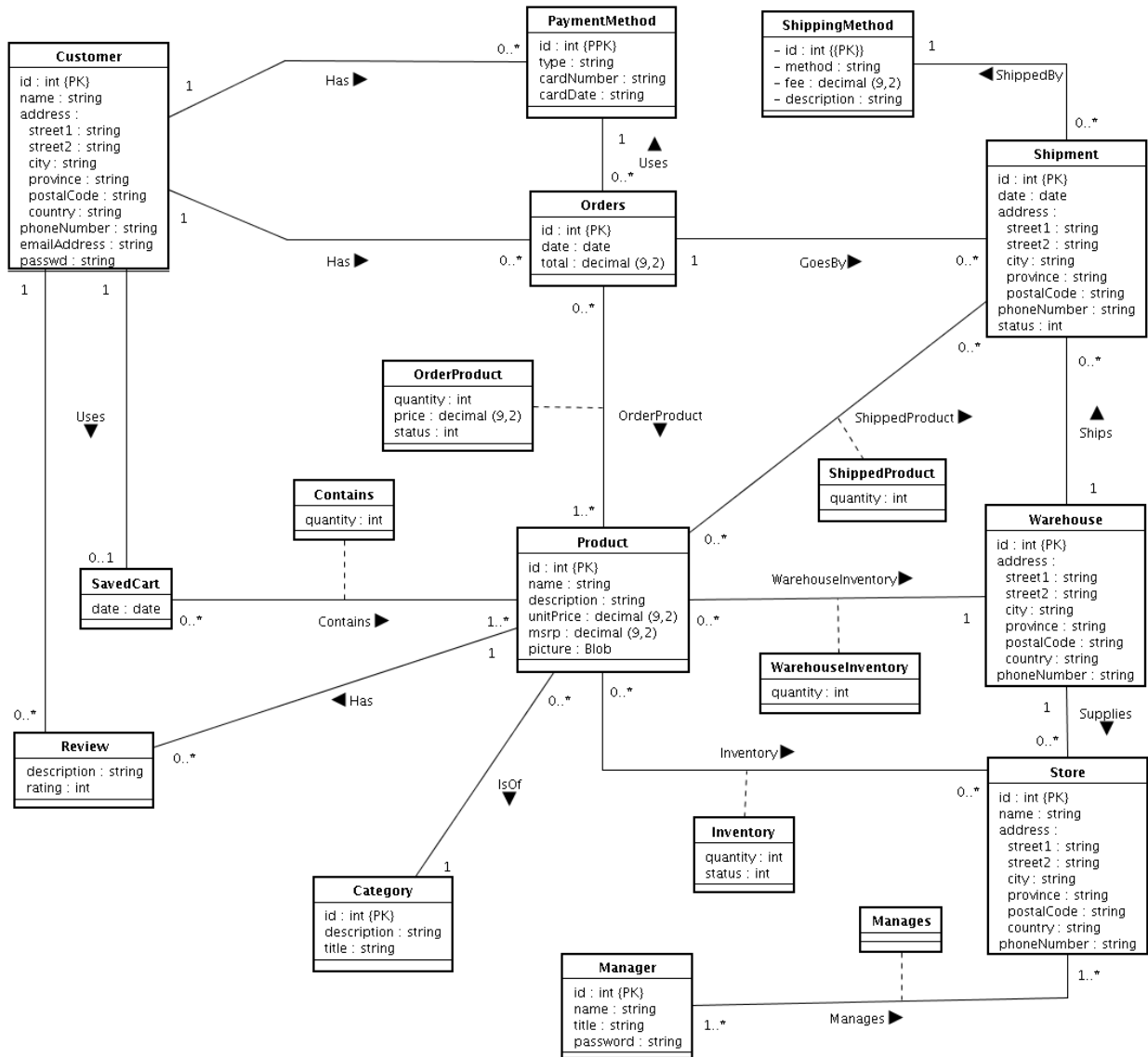


Figure 1: Sealand Entitlement Entity Relationship Model

## 4.1 Entity Attributes

### 4.1.1 Shipment

Attribute	Description
id {PK}	A shipment is identified by a unique id. Hence, id is the primary key of Shipment.
date	Once the shipment leaves the warehouse, a shipment date is recorded in the date attribute.
street1	the first line of the street address for the shipment address
sreet2	the second line of the street address for the shipment address
lemcity	the city for this address
province	the province for this address
postalCode	the postal code of the shipment
phoneNumber	If there is a problem with a shipment, the customer service might want to call the receiver of the shipment. The phoneNumber is therefore stored as a string.
shippingFee	Since shipment costs may vary, a shippingFee is stored as a decimal.
status	The status attribute indicates the present state of the shipment.

### 4.1.2 ShippingMethod

Attribute	Description
id {PK}	The id is the unique identifier of the relation. It is the primary key of ShippingMethod.
method	The method is a string that describes the shipping method in one word. Examples are Courier, Express, Normal, etc.
fee	The fee is the price a customer has to pay if he selects the ShippingMethod.
description	The description contains detailed information about the shipping method. As an example, the estimated shipping time could be contained in the description.

### 4.1.3 Product

Attribute	Description
id {PK}	Every product is identified by a unique integer id. This is the primary key of the relation.
name	The product name is mainly used by the customer, to identify the product. The name is a simple string.
description	The description of a product gives a customer a more detailed explanation of a product than the bare name. The description is a string.
unitPrice	The unitPrice is the company's cost for one unit of a product.
msrp	The suggested retail price of the product.
picture	The picture attribute is a Blob that contains an image of the product.

### 4.1.4 Review

Attribute	Description
description	A string that contains the actual review for the product.
rating	The rating is a value that represents the customer satisfaction about the product on a numerical scale. It is an integer field.

### 4.1.5 Warehouse

Attribute	Description
id {PK}	The warehouse is identified by unique integer id.
street1	The first line of the street address of the warehouse.
street2	The second line of the street address of the warehouse.
city	The city in which the warehouse is located.
province	The province in which the warehouse is located.
postalCode	The postal code of the warehouse.
country	The country in which the warehouse is located.
fax	The fax number of the warehouse

#### 4.1.6 Store

Attribute	Description
id {PK}	The store is identified by unique integer id.
name	The name of the store
street1	The first line of the street address of the store.
street2	The second line of the street address of the store.
city	The city in which the store is located.
province	The province in which the store is located.
postalCode	The postal code of the store.
country	The country in which the store is located.
phoneNumber	The phone number of the store.

#### 4.1.7 Manager

Attribute	Description
id {PK}	A manager is identified by unique integer id.
name	The name of the manager.
title	The current title of the manager.
password	The manager's password for accessing the management section of the website.

#### 4.1.8 Customer

Attribute	Description
id {PK}	a unique number that identifies a customer.
name	a customer's complete name.
street1	the first line of the street address for this address.
street2	the second line of the street address for this address
city	the city for this address.
province	the province for this address.
postalCode	the postal code of this address.
country	the country of this address.
phoneNumber	the phone number for this customer.
emailAddress	the email address for this customer

#### 4.1.9 SavedCart

Attribute	Description
date	The date the shopping cart for a customer was last saved
id {PPK}	The ppk along with customerId

#### 4.1.10 PaymentMethod

Attribute	Description
id {PPK}	a unique number, that in conjunction with a Customer's id uniquely identifies a payment method
type	the method of payment chosen such as Visa, MasterCard, etc.
cardNumber	the number that identifies the account of the type of payment method.
cardDate	the date that the payment method expires on or is invalid past.

#### 4.1.11 Orders

Attribute	Description
id {PK}	a unique number, that in conjunction with a Customer's id uniquely identifies an order.
date	the date on which the order was taken.
total	the total amount of all items of OrderdProducts, including tax, but excluding shipping fee's.

#### 4.1.12 Category

Attribute	Description
id {PK}	a unique number, that uniquely identifies a category.
title	the title for a given category.
description	A description of what type of items are in a category.

## 5 Detailed Implementation Description

### 5.1 File Descriptions and Features

To make the site design easier to maintain we separated the look and feel part of the HTML and CSS from the backend code. Each section of the website uses a different HTML header than the others. For example the product list and product details pages would include the file `includes/ProductListHeader.html`

#### 5.1.1 User Front End/Order Fulfillment

Without having to log in to the web site, users can browse for items and dynamically build and maintain a shopping cart that will be persistent for the current session or until a order is completed. When users browse for items, they can search for items by key word or category. Additionally, users can view a description and a picture for each item in the database. Items can be added and removed from the cart in addition to adjusting the quantity of a given

item. If a customer removes all items from the cart, the system recognizes that the cart is empty, updating the status as opposed to maintaining an empty cart.

### **5.1.2 ProductList.jsp**

The ProductList.jsp file displays all products that are available for sale along with the product name, category, price and availability, allows users to view descriptions of products and allows users to add products to their shopping cart.

### **5.1.3 addcart.jsp**

The addcart.jsp file allows items to be added to the shopping cart in addition to allowing users to modify the quantity and delete items from the shopping cart.

Users can complete their order using the payment information stored in their profile by logging into the website. They will be prompted with payment choices available for the current purchase in addition to shipping and ordering related information. Users are able to determine their login status through feedback from the website. If a user is not logged in when they attempt to complete their order, the user is prompted for log in information which is validated against customer accounts in the database.

### **5.1.4 checkout.jsp**

The checkout.jsp file prompts the user if they are not logged in for their user information and stores their login information in the session. If the user is already logged in, the page redirects the user to OrderPayment.jsp.

### **5.1.5 OrderPayment.jsp**

The OrderPayment.jsp file allows a user to choose payment methods, shipping methods and shipping choices for their order. If a user

### **5.1.6 order.jsp**

The order.jsp file completes the order and displays for the user, a summary of the order that has been placed, shipping information and confirmation numbers.

Once a user is logged in, they will remain logged in for the current session until they choose to logout from the website. When an order is completed, a transaction occurs to generate order and shipment information. At this time the customer is presented with the shipping information including a shipping and order number for tracking purposes. Order and shipping numbers are generated dynamically by the system at the time the order is processed.



### **5.1.7 login.jsp**

The login.jsp file allows a user to login to their account for the website and stores their login information in the session

## **5.2 includes/LoginStatus.jsp**

the includes/LoginStatus.jsp file displays the login status for a user through out all the front end web pages.

### **5.2.1 image.jsp**

The image.jsp file takes a product id as argument and returns the corresponding JPEG file.

### **5.2.2 ManageAccount.jsp**

The ManageAccount.jsp file implements the features for storing customer information in the database. It does input regular expressions check and links to the payment.jsp and the orders.jsp page.

### **5.2.3 payment.jsp**

The payment.jsp page verifies and stores the payment method information. Credit card number are checked with regular expressions using credit card number standard specifications.

### **5.2.4 orders.jsp**

The orders.jsp file is called from the ManageAccount.jsp page to show the orders a customer has done. The file implements a link to the review.jsp for every product.

### **5.2.5 review.jsp**

The review.jsp file is called form the orders.jsp page. It checks and stores the review input of a customer for a product.

### **5.2.6 manage/login.jsp**

If the user is not yet logged in and they attempt to access any page in the management section they will be redirected to the login.jsp page. Here managers have to input their ID and password. After the user is authenticated the login info is stored in the session until the manager logs out.

### **5.2.7 manage/index.jsp**

This page is the starting point for the management section of the website.

### **5.2.8 manage/logout.jsp**

When a manager goes to the logout page the session data for the manager is removed and the manager is no longer authenticated.

### **5.2.9 manage/addcategory.jsp**

From this page a manager can add a new category. The manager can also click a link to go to the update category page or the remove category page.

### **5.2.10 manage/updatecategory.jsp**

Here a manager can change the title or description of an existing category.

### **5.2.11 manage/removecategory.jsp**

This page will remove the specified category from the database if possible.

### **5.2.12 manage/manageprod.jsp**

From this page a manager can add a product, start or stop selling a product, or update the inventory for a product. There are links to pages that allow the manager to remove a product or update the product details.

### **5.2.13 manage/remprod.jsp**

This page will remove the specified product from the database if possible.

### **5.2.14 manage/proddetails.jsp**

A manager can change product details like name, description, and price here. A new image can also be uploaded for the specified product.

### **5.2.15 manage/employees.jsp**

From this page the *Manager Boss* and *Assistant Managers* can add, remove, and update employee details.

### **5.2.16 manage/database.jsp**

Here a manager can change the database connection details, rebuild the database, export customer and product data to XML, and import customer and product data from XML.

### 5.2.17 `manage/reports.jsp`

A manager can generate a report for a specific month and year on this page by selecting the desired month and year and clicking the *View Report* link.

### 5.2.18 `manage/DisplayReport.jsp`

This page generates the report for the desired month and year in a printable format.

### 5.2.19 `manage/inventory.jsp`

From here store managers can choose which products will be sold at their store and transfer stock from the main warehouse. The *Manager Boss* and *Assistant Managers* can access each of the stores and update inventory for the stores when needed. Time is not taken into consideration and it is assumed all inventory instantly transfers between the store and the warehouse.

### 5.2.20 `manage/includes/LoginStatus.jsp`

This file checks if the manager is logged in and redirects them to the login page if they are not.

### 5.2.21 `manage/includes/LoginInfo.jsp`

This file looks in the session and prints out the manager's name, title, and a logout link.

### 5.2.22 `manage/includes/checktitle.jsp`

This file checks if the logged in manager is the *Manager Boss* or an *Assistant Manager*. If not it prevents the manager from accessing the current page and displays an access denied message.

### 5.2.23 `manage/includes/procheck.jsp`

This file checks if the logged in manager is the *Manager Boss*, an *Assistant Manager* or an *Order Clerk*. If not it prevents the manager from accessing the current page and displays an access denied message. This file is used for access control for the Order Processing page.

## References

[1] Sealand, *The Principality of Sealand*, <http://www.sealandgov.org>

[2] SealandEntitlements NARLLC , not a real limited liability company, not even close.