

# Project Final Document



**UNIVERSITY OF BRITISH COLUMBIA OKANAGAN COSC 304,  
INTRODUCTION TO DATABASES, FALL 2018**

**Team Members:**  
Removed

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# **1. Introduction**

Super(natural) Store is one of the most popular supernatural stores. For this reason we were contacted and asked to build them an online website. The Super(natural) Store ([supernaturalstore.worobetz.ca](http://supernaturalstore.worobetz.ca)) allows users to purchase from our online site and ship the items to their address or pick up at their nearest store. This website allows users to shop comfortably from their very own home.

## **1.1. Purpose of Document**

The purpose of this document is to give an outline of the design requirements and underlying structure of the Super(natural) Store. This will describe the underlying database and provide a UML diagram, relational schema, site map, as well as our plans going forward.

## **1.2. Mission Statement**

Our mission is to provide everyone with the opportunity to purchase a supernatural creature and/or gear without having to hunt them themselves, whilst providing the highest quality of experience. We plan to design, build, and implement an efficient and accessible store for a safe and fulfilling experience for customers, visitors, and administrators.

## **1.3. Executive Summary**

Super(natural) Store is a website designed for everyone to have the opportunity to gain access to the everyday creature and gear or the opportunity to peruse our premium selections. Premium selections include items such as the famous Dracula or perhaps Samuels Colt. These items were brought to you by specialty hunters to take the work out of capturing your average creature or a specialty selection. The goal of the website is to be simple and easily accessible. Thus, allowing all guests to be able to view products and add them to their cart then login in to purchase or register if they have not already.

The website provides an easy to use navigation which allows the customer, visitor, or administration to search and filter through our product selection with use of our database. A guest is able to view all of the selection as well as add items to their cart. However, for a user to purchase these items they must make an account. Users who have chosen to create an account will input their first and last name, create a password, and enter their email. The system can also store shipping and billing information, credit card information, and other preferences. Each of the products we supply contain at least one picture, a title, description, and price.

A user can also be an administrator, however, these individual are only those that are part of the company. Administrators have the ability to perform maintenance changes to items, users, and orders. This section of the website is private to the administrator accounts. Administrators are also able to get website analytics.

To register for an account, a user must provide their first and last name, email address, and create a password. The password must be six characters long and contain at least one number. The user has the ability to change their account information at any time.

## 2. System Features

The following section of the document gives a short description of the system features including a description, status, as well as code files.

<b>System Features</b>	<b>Points</b>	<b>%Complete</b>	<b>Code Files</b>
Hosting			
Running on cosc 360	<b>2 (N/A)</b>	<b>75%</b>	(N/A)
OR: Running on external hosted server	<b>5</b>	<b>100%</b>	Supernaturalstore .worobetz.ca, index.php
Main Page			
Search for a product by name	<b>1</b>	<b>100%</b>	Header.php, products.php
Browse products by category	<b>1</b>	<b>100%</b>	productSidebar.p hp, product.php
List products (by search/browse)	<b>1</b>	<b>100%</b>	Product.php, productSidebar.p hp
List product with image	<b>2</b>	<b>100%</b>	Product.php, productSidebar.p hp
Page header with menu	<b>1</b>	<b>100%</b>	header.php
Page header shows current logged in user	<b>1</b>	<b>100%</b>	header.php
Dynamic products on page based on sales	<b>2</b>	<b>100%</b>	Products.php (top 5)

Product recommendation based on user	4	(N/A)	(N/A)
Shopping Cart			
Add to shopping cart	1	100%	Product.php individualProduct.php
View shopping cart	1	100%	Cart.php, checkout.php, accountDetails.php
Update quantity (with data validation)	2	100%	Cart.php, checkout.php, accountDetails.php
Remove item from shopping cart	1	100%	Cart.php, checkout.php, accountDetails.php
Improved formatting/UI (e.g. in header bar)	1	100%	header.php
Cart stored in database between sessions	3	100%	Login.php, logout.php
Checkout			
Checkout with customer id	1	100%	checkout.php
Checkout with payment/shipping info	2	100%	checkout.php
Checkout with data validation	3	100%	checkout.php checkout-payment.js checkout-shipment.js checkoutNewPayment.php checkoutShipping.php
Inventory tracking per item	2	100%	addToCart.php, cart.php, checkout.php
Inventory tracking by store/warehouse	3	100%	addToCart.php,

			cart.php, checkout.php
Multiple shipments per order supported	<b>3</b>	<b>(N/A)</b>	
Calculate taxes/shipping (by items/state)	<b>2</b>	<b>50%</b>	Checkout.php (calculate a tax and add delivery fees)
<b>Product Detail Page</b>			
Product detail page and item description	<b>3</b>	<b>100%</b>	Product.php, individualProduct. php
Product detail has an image	<b>1</b>	<b>100%</b>	Product.php, individualProduct. php
Product detail has an image from database	<b>4</b>	<b>100%</b>	Product.php, individualProduct. php
<b>User Accounts and Login</b>			
Create user account page	<b>3</b>	<b>100%</b>	createAccount.php
Create account with data validation	<b>3</b>	<b>100%</b>	createAccount.php
Login/logout	<b>2</b>	<b>100%</b>	Login.php accountDetails.php
Register user/Forgot password email	<b>4</b>	<b>100%</b>	Login.php accountDetails.php
Page listing all order for user	<b>1</b>	<b>100%</b>	accountDetails.php
<b>Product Reviews</b>			
Ability to enter a review on a product	<b>2</b>	<b>100%</b>	individualProduct. php, review.php
Display product review on product detail	<b>1</b>	<b>100%</b>	individualProduct. php
Restrict to one review per user on item purchased	<b>2</b>	<b>100%</b>	individualProduct. php
<b>Administrator Portal</b>			

Secured by login	3	100%	Admin.php (all admin page children done the same)
List all customers	1	100%	customerlist.php
List report showing total sales/orders	1	100%	orderList.php
Report with a graph	3	(N/A)	(N/A)
Add new product	2	100%	add.php
Update/delete product	2	100%	productDetails.php, delete.php
Change order status/ship order	1	N/A	N/A
Upload a photo to file system for product	2	N/A	N/A
OR: Upload photo to database for product	4	100%	add.php
Database restore with SQL script	2	N/A	N/A
Add/update warehouse, customer	2	50%	Add.php (customer only)
Database System/General			
Implement some validation using triggers	2	N/A	N/A
Use AJAX for some pages	4	N/A	N/A
User Interface and navigation/usability	5	100%	header.php
Our Suggestions			
Sort products price: high-low and low-high	1	100%	product.php
Shopping cart shows the amount of item types in your cart	1	100%	Header.php, header-footer.css
Total: Maximum 50	81		

### 3. Known Issues

The following section of the document gives a short description of the issues the site is having both client and server side. These include incomplete features as well as errors and bugs.

### 3.1 Incomplete Features & Errors and Bugs

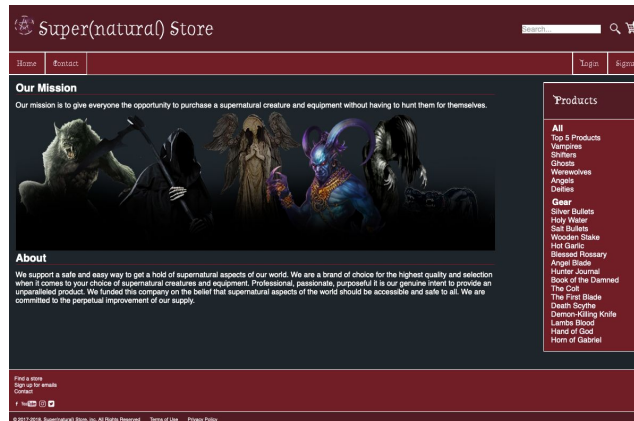
We would have liked to implement more AJAX, however we ran out of time. We would like to implement ajax in an attempt to make our comments on the individual product pages asynchronous. Could add more validations on inputs such as credit cards, names, and towns. Pages load fairly slowly this could be due to the image sizes.

## 4. User Walkthrough

### 4.1 Home page

Visiting the link: <https://supernaturalstore.worobetz.ca> will bring you to the home page of the Super(natural) Store. It includes a quick navigation bar to grant the ability to find items while also giving users an opportunity to learn about our page.

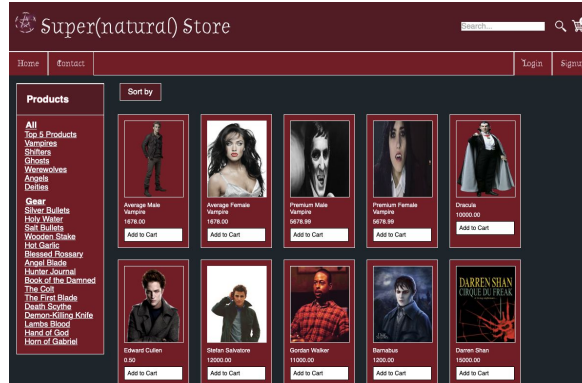
Every page on Super(natural) Store also has a fixed header that provides access to the websites services including: homepage, contact information, account details, search, shopping cart, as well as login and signup access. If you are an admin account you will also have access to the admin page. These options allow the user to get back to the homepage, contact the stores and see a list of FAQ. Users can also search through the products, direct themselves to their shopping cart, or go to the login and signup page. You can then click All products on the side bar to navigate to the products page.



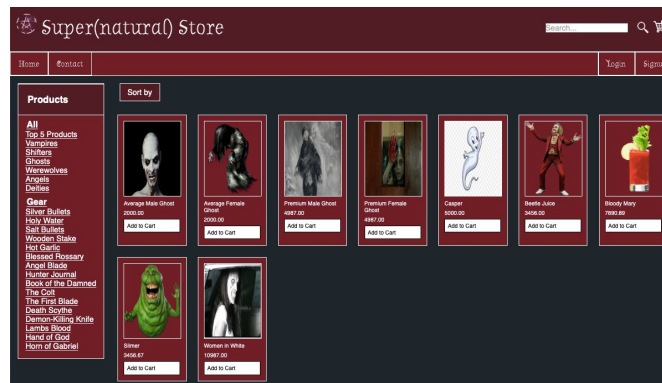
### 4.2 Product Page

The product page is used to navigate through categories and subcategories to find your desired product, giving the ability to browse all items at once. The sort by button is available to sort products by price high to low and low to high. There is also a hot 5 products section which is listed in the product sidebar as Top 5 Products. You can add items to cart from here or click on an image to bring up a detailed description page of the product.



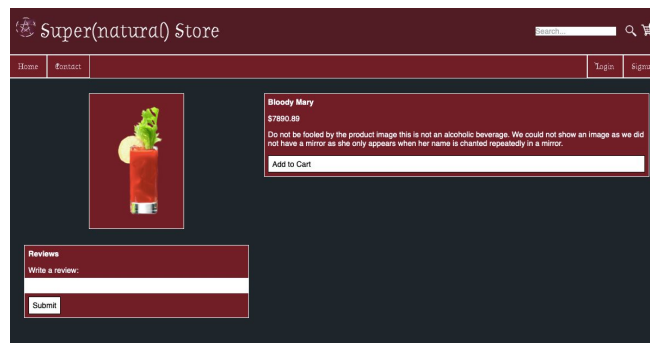


On the sidebar click on ghosts to see the products organized by the specific category. You can also make use of our handy search bar in the top right and search Bloody Mary. From here click on the image of Bloody Mary, this will bring up the individual product page.



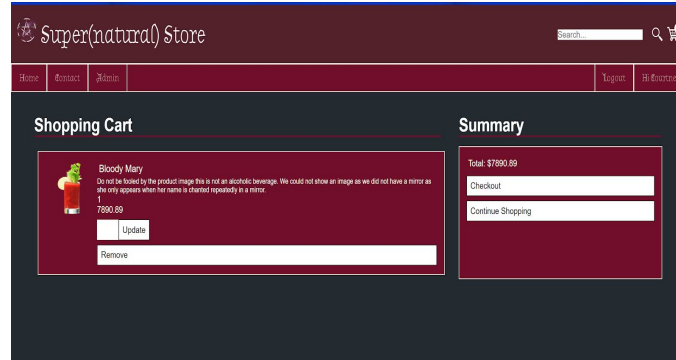
### 4.3 Individual Product Page

On this page you can see an enlarged image of the product as well as a description and the ability to add the product to your cart. You can also write a review if you are logged in. Reviews are restricted to one review per product. Admins cannot make reviews. Next, add Bloody Mary to your cart and click on the shopping cart item in the top right corner. If an item is out of stock an alert will indicate that. The icon updates as items are added to allow you to keep track of your spending.



### 4.4 Shopping Cart

The shopping cart gives you the ability to view items that you have added to you cart. You can increase the quantity which will update your price total. If you update the quantity to be greater than the amount of stock an alert will indicate you can't add any more items. Further you can remove an item, see the price of a single item, subtotal of all items, continue shopping and navigate to the checkout page. Next, try to checkout.

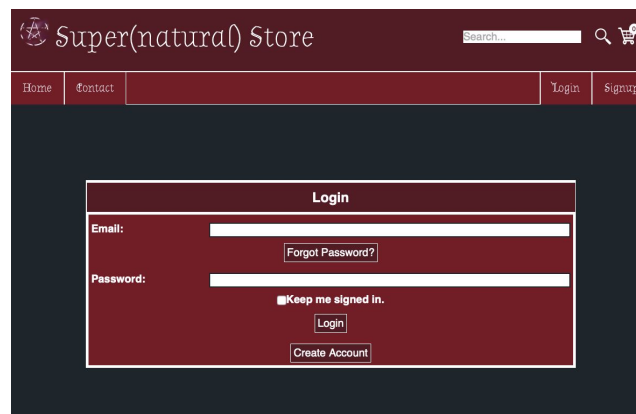


#### 4.5 Login Page

You must be a user to make a purchase so trying to check while viewing as a guest will bring you to the login page. From here a previous user can enter account details to gain full access to our site. Email address and password used for login. It also contains a link to create an account, recover password and gives the ability to keep users signed in.

Email: scottfzacklerley@gmail.com

Password: Password1



#### 4.6 Create Account Page

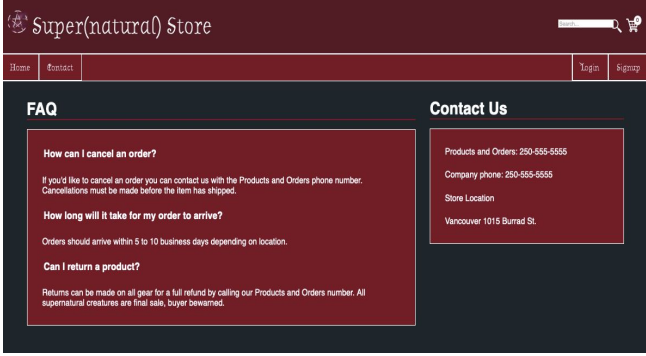
Click create an account so you can check out. To create an account, you will have to provide first and last name, password twice and email address twice. Your password will have to meet certain requirements such as; be at least six characters long and contain one number. From this page you will also be able to navigate back to the main login page if you already have an account. From here, you can enter your info to create an account we did use your ubc email to make an admin account so that email will be taken.



Now that you are signed in you will be able to checkout and the previously added items are kept in the cart. Before you checkout click on Contact in the header to find questions and contact information.

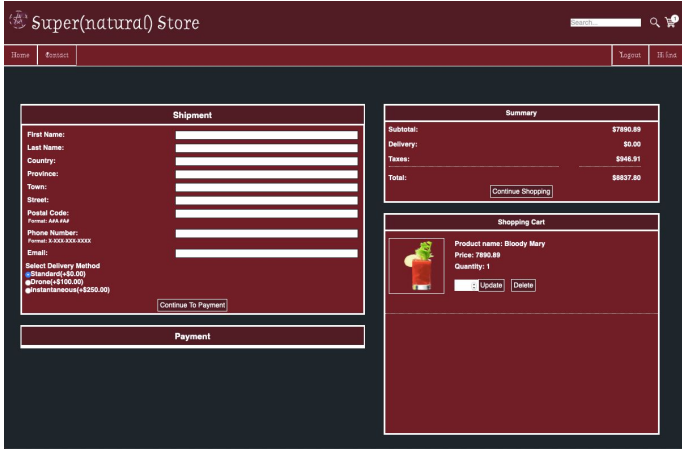
**4.7 Contact**

Users can find information on how to contact the site administrator if they have problems with our page or a purchased item. There are also some frequently asked questions to answer any questions about your order.

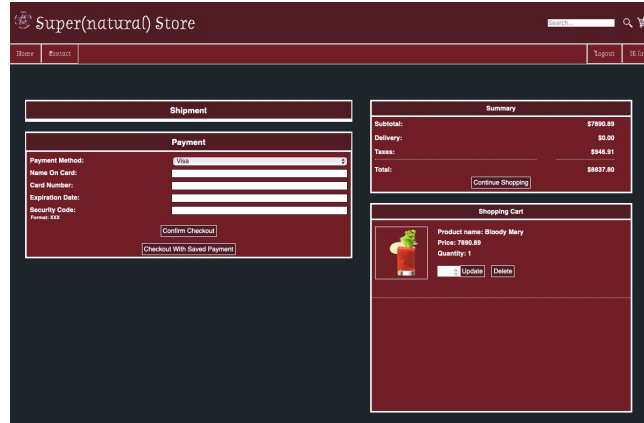


**4.8 Checkout**

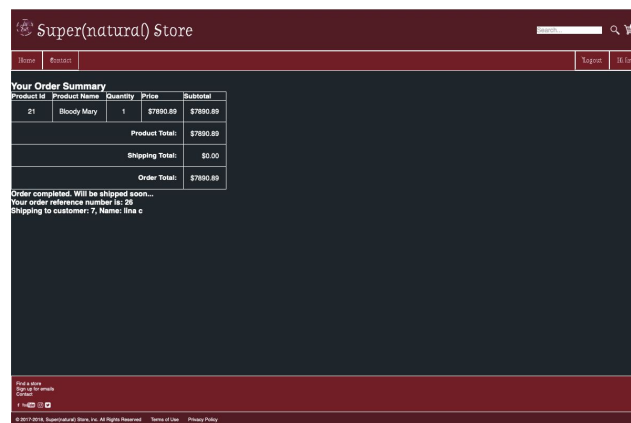
If you have all the desired products you'd like you can now check out. Click on the shopping cart and then checkout. This time you will be brought to the checkout page. From here you must fill out your shipping info and choose a shipping method. This page will show the products in your cart and a cost summary including delivery and tax.



Once you fill out the form click continue to payment.



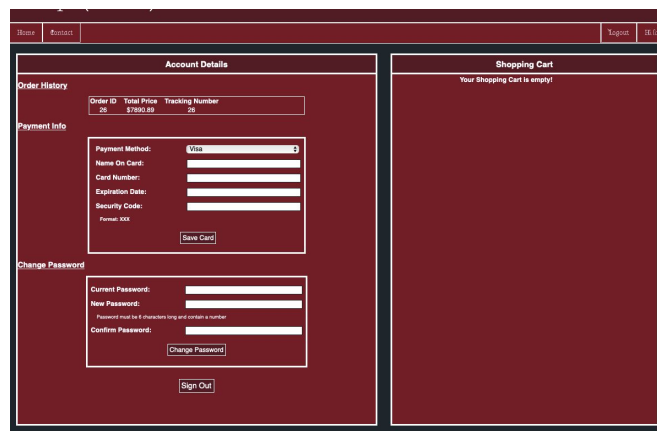
Now, fill out your payment information and confirm checkout. If you have added payment info to your account details clicking checkout with saved payment allows you to purchase with previous payment information.



You will be taken to an order summary page with details about your purchase including products, purchase total, a reference number and account name.

#### 4.9 Account Details

Now that we have completed an order, click on your name in the top right. Here a logged in user can find their order history, payment settings, change password, and sign out. If you have items in your cart currently they will also appear here. When sign out is hit it will go back to login page. Account details button is not available unless logged in, where login button becomes account details.



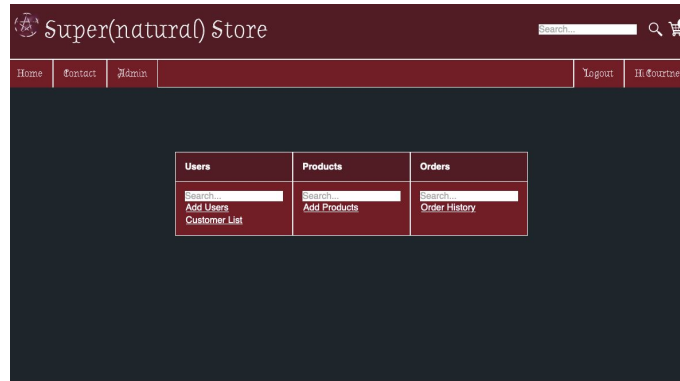
## 4.10 Administration

Our website also offers an administration page to edit the store. You need to log in using an administrator account in order to access the admin tab in the header. Log in using:

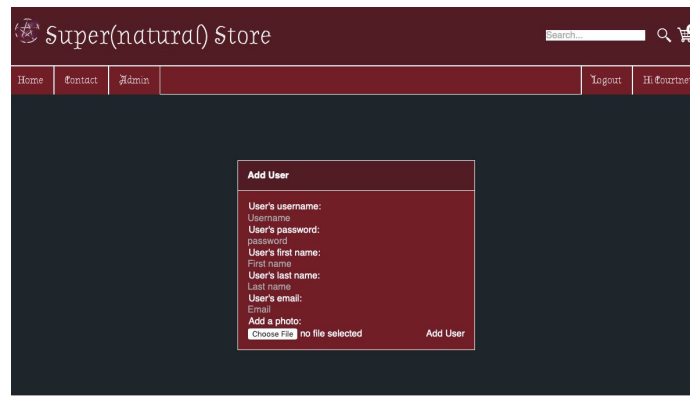
**Email:** *scott.fazackerley@ubc.ca*

**Password:** *Password1*

As an administrator you can click on admin on the header in the top left. This will bring up the main admin screen to edit users, products, and orders.



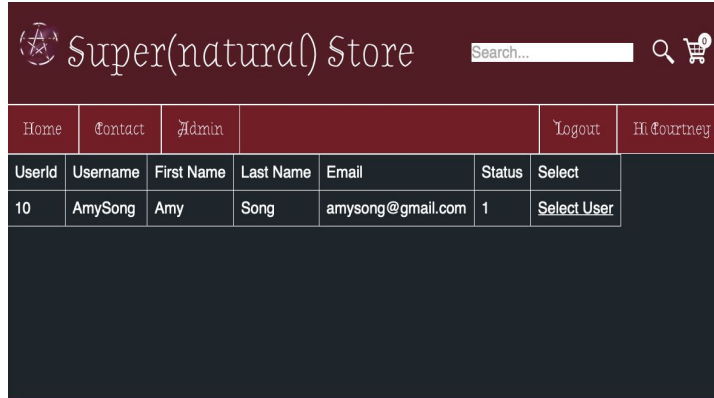
Click on Add Users under the users column. This brings up the option to add a user to the site by filling out all account details.



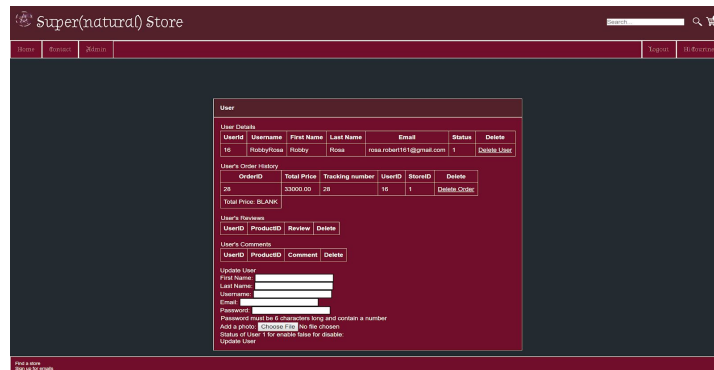
Now go back to the admin page and click on customer list. This will bring up a list of all users, and their account details, that have created an account on our site who are a customer.



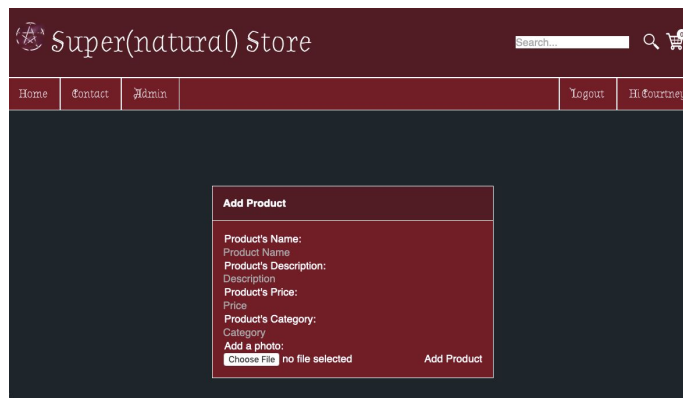
Go back to the admin page and search Amy under users. The search bar allows search of any users by username, first and last name, and email. Click Select User.



This page allows complete editing of the selected user. The admin can change any user details, view their order history, and remove any comments created by that user. You can also delete the user and if that customer attempts to login after it will not be allowed.



Return to the admin page and go to Add Product under products. From here you can add a product to the database which will then appear on the site. You can add all the details including name, description, price, and category. An image of the product can also be added.



Return to admin and under products search ghost. The search bar under products allows you to search for any products by name or category. You can then select a product and it will show all details for that product. Now click Select Product for Bloody Mary.

Home	Contact	Admin	Logout	Account	
Product ID	Product Name	Description	Price	Category	Select
15	Average Male Ghost	Ghosts, also called Spirits, are souls of deceased humans that did not go with their reaper to Heaven or Hell and are stuck on Earth.	2000.00	Ghost	Select Product
16	Average Female Ghost	Ghosts, also called Spirits, are souls of deceased humans that did not go with their reaper to Heaven or Hell and are stuck on Earth.	2000.00	Ghost	Select Product
17	Premium Male Ghost	Ghosts, also called Spirits, are souls of deceased humans that did not go with their reaper to Heaven or Hell and are stuck on Earth. Average ghosts are hard to control however our premium vampires have extensive training.	4987.00	Ghost	Select Product
18	Premium Female Ghost	Ghosts, also called Spirits, are souls of deceased humans that did not go with their reaper to Heaven or Hell and are stuck on Earth. Average vampires are hard to control, however our premium vampires have extensive training.	4987.00	Ghost	Select Product
19	Catper	Who needs a pet when you could have this sweet little guy as your companion.	5000.00	Ghost	Select Product
20	Beetle Juice	This mans speciality is haunting, if you need a good spook I believe you know what to say: Beetle Juice, Beetle Juice, ....	3456.00	Ghost	Select Product
21	Bloody Mary	Do not be fooled by the product image this is not an alcoholic beverage. We could not show an image as we did not have a mirror as she only appears when her name is chanted repeatedly in a mirror.	7890.89	Ghost	Select Product
22	Slimer	This is the one and only slimer from the Ghostbusters original series!	3456.67	Ghost	Select Product
23	Women in White	A female ghost dressed in all white reportedly seen in rural areas and associated with some local legend of tragedy	10987.00	Ghost	Select Product

You will be shown all details for that product and can fully edit it. You can update any details, remove reviews from the product and even completely delete the product from the site with Delete Product.

Product

Product Details

Product ID	Product Name	Description	Price	Category	Delete
90	Lambo Blood	Lamb blood is the blood of a lamb	23.00	Gear	Delete Product

User's Reviews of Product

UserID	ProductID	Review	Delete

Update Product

Product Name:

Description:

Price:

Category:

Add a photo:

On the admin page click on Order History. This displays all orders that have ever been purchased on the site including a sum of the total revenue. Finally, in the search bar under orders you can search for any orders by user or order ID.

OrderID	Total Price	Tracking number	UserID	StoreID
1	2256.93	1	4	1
2	50.99	2	4	1
3	1001.49	3	4	1
4	1002.48	4	4	1
5	0.99	5	4	1
6	1991.98	6	4	1
7	22.97	7	4	1
8	500.99	8	4	1
9	52.48	9	4	1
10	1000.00	10	4	1
11	1550.99	11	4	1
12	1500.99	12	4	1
13	501.49	13	4	1
14	1050.99	14	4	1
15	3205.95	15	4	1
16	86893.00	16	4	1
18	1678.00	18	4	1
19	6912.59	19	4	1
20	11345.99	20	4	1
25	7890.89	26	7	1
27	0.50	27	16	1
28	33000.00	28	16	1
Total Revenue: 163002.38				

## 5. Schema

### 5.1 Assumptions

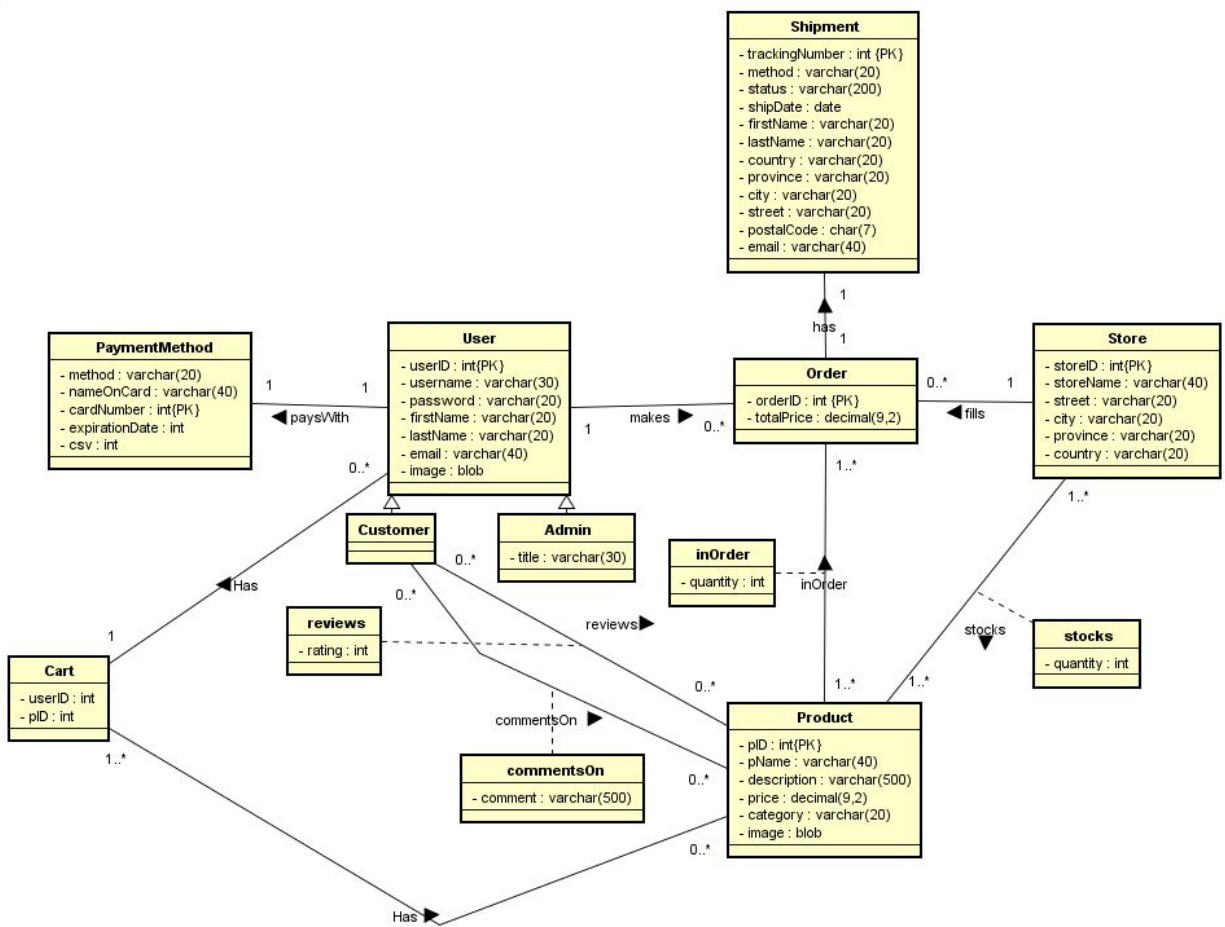
<b>Relationship</b>	<b>Description</b>
Orders has Shipment	Every order will be shipped as a whole, and a shipment consists of one order.
User paysWith PaymentMethod	User can have at most one payment method. A payment method can be associated with numerous users.
User makes Order	A user can have zero to many orders, but an order can only be made by one user.
Store fills Order	An order is filled by only one store and a store could have no orders or many orders at a time.
Store stock Product	A store can have one to many products and will store the quantity of each product. A product can be at multiple stores at a time.
Product inOrder Order	An order can have one to many different products within it and a product can be in multiple different orders at a time
Customer reviews Product	A customer may leave one review of their experience with a product on a scale of 1 to 5. A product can have no reviews or reviews from numerous different customers.



Customer commentsOn Product

A customer may leave numerous comments on their experience with a product. A product can have zero to numerous reviews from the same or different customers.

## 5.2 UML Diagram



## 5. Relational Schema: SQL DDL

```
CREATE TABLE Reviews(  
    userID int,  
    pID int,  
    comment VARCHAR(500) NOT NULL,  
    PRIMARY KEY (userID, pID),  
    FOREIGN KEY (userID) REFERENCES  
    Customer (userID),  
    FOREIGN KEY (pID) REFERENCES  
    Product (pID)  
);
```

```
CREATE TABLE PaymentMethod (  
    userID int NOT NULL  
    method VARCHAR(20) NOT NULL,  
    nameOnCard VARCHAR(40) NOT NULL,  
    cardNumber int NOT NULL,  
    expirationDate int NOT NULL,  
    csv int NOT NULL,  
    PRIMARY KEY (cardNumber)  
    FOREIGN KEY (userID) REFERENCES  
    User (userID)  
);
```

```
CREATE TABLE Orders (  
    orderID int AUTO_INCREMENT,  
    totalPrice DECIMAL(9,2) NOT NULL,  
    trackingNumber int,  
    userID int,  
    storeID int,  
    PRIMARY KEY (orderID),  
    FOREIGN KEY (trackingNumber)  
    REFERENCES Shipment (trackingNumber),  
    FOREIGN KEY (userID) REFERENCES  
    User (userID),  
    FOREIGN KEY (storeID) REFERENCES  
    Store (storeID)  
);
```

```
CREATE TABLE Product (  
    pID int AUTO_INCREMENT,  
    pName VARCHAR(40),  
    description VARCHAR(500),  
    price DECIMAL(9,2) NOT NULL,
```

```
CREATE TABLE Shipment (  
    trackingNumber int AUTO_INCREMENT,  
    method VARCHAR(20) NOT NULL,  
    status VARCHAR(200),  
    shipDate DATE NOT NULL,  
    firstName VARCHAR(20) NOT NULL,  
    lastName VARCHAR(20) NOT NULL,  
    country VARCHAR(20) NOT NULL,  
    province VARCHAR(20) NOT NULL,  
    city VARCHAR(20) NOT NULL,  
    street VARCHAR(20) NOT NULL,  
    postalCode CHAR(7) NOT NULL,  
    email VARCHAR(40) NOT NULL,  
    PRIMARY KEY (trackingNumber)  
);
```

```
CREATE TABLE User (  
    userID int AUTO_INCREMENT,  
    username VARCHAR(30) NOT NULL,  
    password VARCHAR(20) NOT NULL,  
    firstName VARCHAR(20) NOT NULL,  
    lastName VARCHAR(20) NOT NULL,  
    email VARCHAR(40) NOT NULL,  
    cardNumber int,  
    PRIMARY KEY (userID),  
);
```

```
CREATE TABLE Store (  
    storeID int AUTO_INCREMENT,  
    storeName VARCHAR(40),  
    street VARCHAR(20),  
    city VARCHAR(20),  
    province VARCHAR(20),  
    country VARCHAR(20),  
    PRIMARY KEY (storeID)  
);
```

```
CREATE TABLE Customer (  
    userID int,  
    PRIMARY KEY (userID)  
);
```

```
CREATE TABLE InOrder (  
    orderID int,
```

```

        category VARCHAR(20),
        PRIMARY KEY (pID)
);

CREATE TABLE Admin (
    userID int,
    title VARCHAR(30) NOT NULL,
    PRIMARY KEY (userID),
    FOREIGN KEY (userID) REFERENCES
    User (userID)
);

CREATE TABLE CommentsOn (
    userID int,
    pID int,
    comment VARCHAR(500) NOT NULL,
    PRIMARY KEY (userID, pID),
    FOREIGN KEY (userID) REFERENCES
    Customer (userID),
    FOREIGN KEY (pID) REFERENCES
    Product (pID)
);

CREATE TABLE Cart (
    userID int,
    pID int,
    quantity int,
    PRIMARY KEY (userID, pID),
    FOREIGN KEY (userID) REFERENCES
    User (userID),
    FOREIGN KEY (pID) REFERENCES
    Product (pID)
);

        pID int,
        quantity int NOT NULL,
        PRIMARY KEY (orderID, pID),
        FOREIGN KEY (orderID) REFERENCES
        Orders (orderID),
        FOREIGN KEY (pID) REFERENCES
        Product (pID)
);

CREATE TABLE Stock (
    pID int,
    storeID int,
    quantity int NOT NULL,
    PRIMARY KEY ( pID, storeID),
    FOREIGN KEY (pID) REFERENCES
    Product (pID),
    FOREIGN KEY (storeID) REFERENCES
    Store (storeID)
);

```

### 5.4 Sitemap

