

Online Store

EzBuy

University of British Columbia Okanagan

COSC 304

Member List

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Introduction

ezBuy.ca is an online store that allows users to buy goods off the internet. It will allow the user to browse a wide variety of goods. This document gives an outline on the ezBuy online store. It gives a walk through of the features for both the users and the manager.

Executive Summary

ezBuy is a website that allows users to buy goods over the internet. The website deals in sales of all kinds of items. ezBuy allows access to unregistered guests, registered users and the store manager. The website is linked to the warehouse for efficient inventory management.

Users do not have to register to the website to start browsing items. Users may browse the website freely and view the entire catalog before registering. The catalog comes with the item name, description, price and an image of the item. The user can add item to their cart and view the total price. The cart page shows the total price of the products in the cart, along with that, the user can update the quantity of the items or delete them if they wish. The cart also tells the user if the product they added in their cart is in stock for that quantity. For example, if the user orders 20 of a certain product but only 12 are available, the cart will say it is not in stock. From there, the user can checkout. If the user does not have an account, they can register for one. The accounts asks for various mandatory details about the user. Once signed up, the user can checkout and their order will shipped.

While registering an account, the website has several checks to see if the data being entered is of the correct type. It will check if the email is of the right format and if all the data has been entered.

The manager gets their own account on ezBuy with special privileges. This account is special in the sense that it gives the manager options to reset the system, add new items, update items, delete items and generate a sales report. The add items option allows the manager to add new items to the database. These items are stored under a Products table and a Warehouse table. Adding an item to the database automatically put it on the website. The manager can also update the items on the website. This includes changing the product name, description, price, image and the quantity in the warehouse. The manager also has a delete option where they can remove any product from the website. The sales report option generates a sales report detailing the orders placed along with user information and the products they ordered.

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Walkthrough

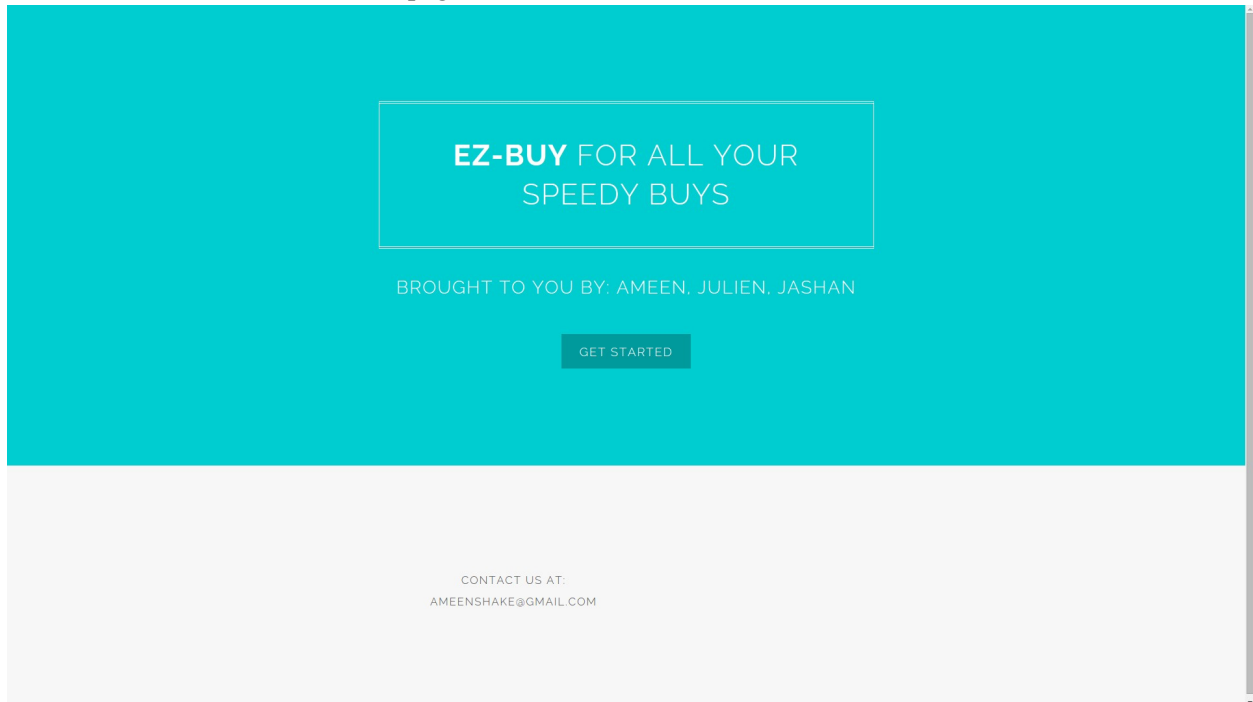
The url to ezBuy is:

<http://cosc304.ok.ubc.ca/53724126/tomcat/ez/index.html>

User Walkthrough

Front Page

The user is welcomed to the front page of the website.

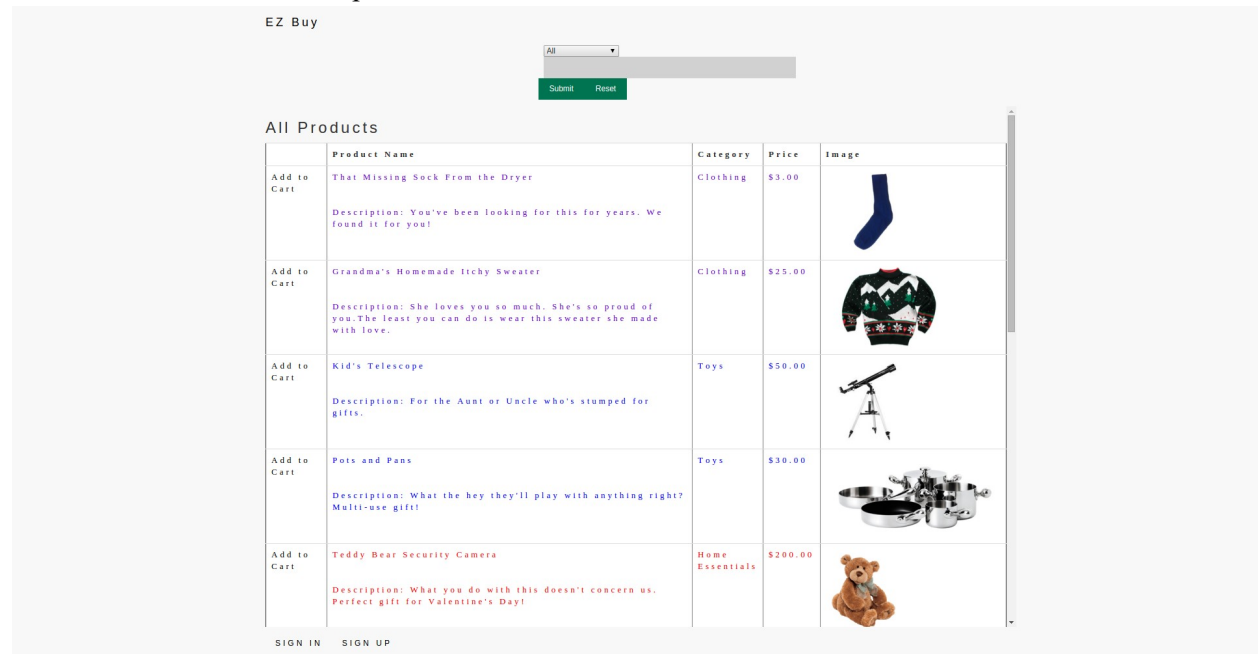


Here they may click the Get Started button to enter the website.

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Catalog

Here the user will see all the products for sale on the website.



There is a search bar on the top of the screen and above is drop down menu. This menu lists all the categories of products available. The users may search for any products using the search bar; they may even narrow the search by selecting a category from the drop down menu. If the user just wants to view items in certain category, they may select a category and hit search to view all items in that category.

This page lists all the products with names, prices and images. The user may click the add to cart option to add the item to cart.

The bottom of the page has options for Sign In and Sign Up.

Sign Up

Clicking on the Sign Up button will take the user to the Sign Up page.

Create a new Account	
User Name	<input type="text"/>
Password	<input type="password"/>
First Name	<input type="text"/>
Last Name	<input type="text"/>
Address	<input type="text"/>
City	<input type="text"/>
Postal Code	<input type="text"/>
Province	<input type="text"/>
Country	<input type="text"/>
Phone Number	<input type="text"/>

Here the user has to fill up all the fields to create an account. If a field is left empty, the user will be prompted to complete the field:

Create a new Account	
User Name	test
Password	****
First Name	John
Last Name	Doe
Address	Nowhere
City	Kelwona
Postal Code	V1V34V
Province	B.C.
Country	Canada
Phone Number	<input type="text"/>

Please fill out this field.

Likewise, it will check if the email is entered with the correct format:

Create a new Account	
User Name	test
Password	****
First Name	John
Last Name	Doe
Address	Nowhere
City	Kelwona
Postal Code	V1V34V
Province	B.C.
Country	Canada
Phone Number	12334456

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Cart

Clicking on the “add to cart” button will take the user to the Shopping Cart page.

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Your Shopping Cart

Product Id	Product Name	Quantity	Price	Subtotal			In Stock?
4	Pots and Pans	<input type="text" value="1"/>	\$30.00	\$30.00	Delete Item	Update Quantity	Yes
Order Total				\$30.00			

[Check Out](#)

This page will show the items the user has added to the cart, along with the Order Total. It will also show if the item is in stock for the quantity the user requested.

Ez-Buy

Your Shopping Cart

Product Id	Product Name	Quantity	Price	Subtotal			In Stock?
3	Kid's Telescope	<input type="text" value="1"/>	\$50.00	\$50.00	Delete Item	Update Quantity	Yes
4	Pots and Pans	<input type="text" value="200"/>	\$30.00	\$6,000.00	Delete Item	Update Quantity	No
Order Total				\$6,050.00			

[Check Out](#)

Checkout

Clicking on the checkout link will take the user to the following page:

Enter your Username and Password to continue:

Login Here	
UserName	<input type="text"/>
<input type="password"/>	

Here the user has to login to continue with their checkout.

An account has been created to test this feature:

Username: test

Password: test

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Order Summary

This page shows the summary of the order.

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Your Order Summary

Product Id	Product Name	Quantity	Price	Subtotal
1	That Missing Sock From the Dryer	1	\$3.00	\$3.00
Order Total				\$3.00

Order completed.

On its way to be shipped.

Your order reference number is: 2

Shipping to John at Nowhere

[Return Home](#)

It will show that the order has been shipped. The user's name along with the order destination will be displayed.

Manager Walkthrough

For the manager to login in, they have to go the catalog page and click on the Sign In button at the bottom of the screen. They will reach the following login page:

Sign In Here	
UserName	test
Password	***

They may login with the following credentials:

Username: admin

Password: admin

This will bring them the Manager Hub:

Welcome to the Manager Hub!



- Load Initial Data
- Add New Item
- Update Items
- Delete Items
- Sales Report

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This page has several options. Load Initial Data resets the database to its original state.

Add New Item

Clicking on the “Add New Item” button take the manager to the following page:






Add New item	
Product ID	21
Product Name	Drone
Category Name	Toy
Description	(Are these even legal?)

Here the Manager may add a new item to website and it will appear on the catalog page.

EZ Buy

All

Submit Reset

Add to Cart	Makeup Remover Description: Girl you don't need makeup, you're perfect when you wake up.	Beauty	\$9.00	
Add to Cart	Hand Sanitizer Description: Keep those hands clean!	Beauty	\$4.00	
Add to Cart	Lost Fish Pillow Description: Not in anyway associated with the works of Pixar.	Home Essentials	\$15.00	
Add to Cart	Gummy Bear Description: Tasty Gummy Bears that are healthy. I am a gummy bear, I am a yummy wummy little gummy bear.	Healthy candy	\$15.00	
Add to Cart	Drone Description: Are these even legal?	Toy	\$15.00	

SIGN IN SIGN UP

Update Item

Clicking on this option allows the manager to update any currently existing options:

The Product ID drop down menu will be populated by the items currently in the inventory.

Update item	
Product Id	21
Product Name	Toy Plane
Description	Fun for all ages
Price	99999

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Add to Cart	Toy Plane	Toy	\$99,999.00	
	Description: Fun for all ages			

The manger can change all the details about the product as well as update the inventory in the warehouse.

Delete Item

This page simply lets the manager delete any product from the website. However, deleting it on the website will also delete it from the Warehouse.

The manager can select the product from the drop down menu and hit delete.

Sales Report

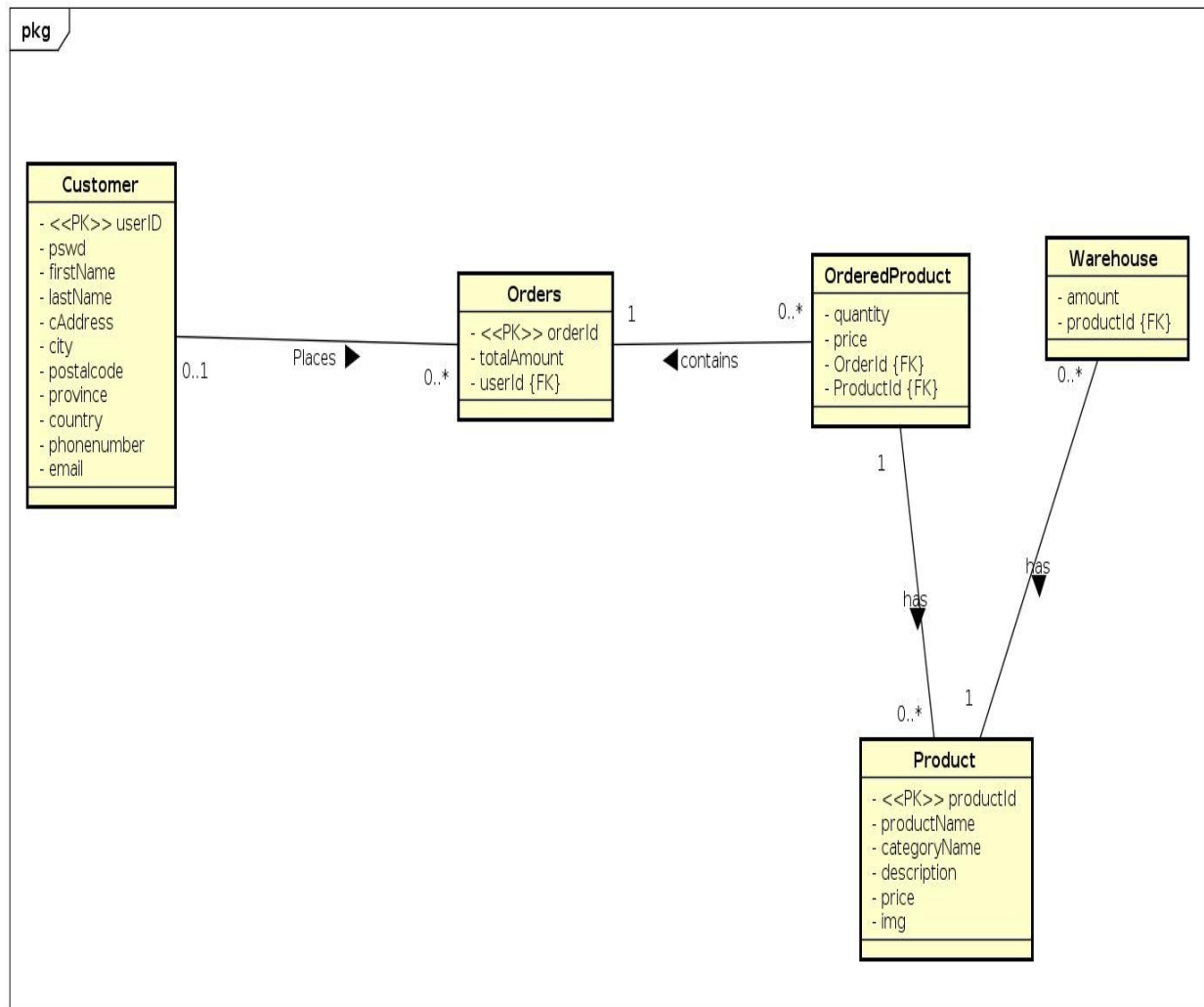
Clicking on the “Sales Report” button brings the manager to the following page:

Sales Report

Print This Page			
Order Id	Customer Id	Customer Name	Total Amount
1	test	John Doe	\$5.00
Product Id		Quantity	Price
8		1	\$5.00
Total:		1	\$5.00
2	test	John Doe	\$378.00
Product Id		Quantity	Price
1		1	\$3.00
2		1	\$25.00
3		1	\$50.00
4		10	\$30.00
Total:		13	\$378.00

This page generates a sales report of all the past orders along with the users who ordered them and the products they ordered. The manger may even print the report by clicking the “Print This Page” button.

Er Diagram



Relational Schema

```
CREATE TABLE Customer (  
  userID VARCHAR(10),  
  pswd VARCHAR(20),  
  firstName VARCHAR(10),  
  lastName VARCHAR(10),  
  cAddress VARCHAR(10),  
  city VARCHAR(10),  
  postalcode VARCHAR(6),  
  province CHAR(10),  
  country CHAR(10),  
  phonenumber INT,  
  email VARCHAR(25),  
  PRIMARY KEY(userID)  
);
```

```
CREATE TABLE Product (  
  productId INT NOT NULL,  
  productName VARCHAR(50),  
  categoryName VARCHAR(50),  
  description VARCHAR(200),  
  price Decimal(9,2),  
  img VARCHAR(500),  
  PRIMARY KEY (productId),  
  
);
```

```
CREATE TABLE Warehouse (  
  productId INT,  
  amount INT,  
  PRIMARY KEY(productId),  
  FOREIGN KEY(productId) REFERENCES Product (productId)  
  ON DELETE CASCADE ON UPDATE CASCADE  
);
```

```
CREATE TABLE Orders (  
  orderId int NOT NULL IDENTITY PRIMARY KEY,  
  userID VARCHAR(10),  
  totalAmount decimal(9,2),  
  FOREIGN KEY (userID) REFERENCES Customer (userID)  
  ON DELETE CASCADE ON UPDATE CASCADE  
);
```

```
CREATE TABLE OrderedProduct (  
  orderId int NOT NULL,
```

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```
productId  int      NOT NULL,  
quantity   int,  
price      decimal(9,2),  
PRIMARY KEY (OrderId, ProductId),  
Order FOREIGN KEY (OrderId) REFERENCES Orders (OrderId)  
ON DELETE CASCADE ON UPDATE CASCADE,  
Product FOREIGN KEY (ProductId) REFERENCES Product (ProductId)  
ON DELETE CASCADE ON UPDATE CASCADE  
);
```

Implementation

The following will describe the features of website, details about their implementation and their associated code.

Login

The feature allows the users with an account to login. This consists of two files:

- login.jsp – this file has the html code of the login fields. Its sends the form data to validateLogin.jsp
- validateLogin.jsp – accesses the database, uses DML to verify of the username and passwords exist in the database.

It has the username and password for the manager hard coded and it doesn't check the database for the account, instead it redirects to another page only available to the manager.

Catalog

This feature collects all the items in the database and lists them on this page. It consists of one file:

- listprod.jsp – This file is responsible for everything one sees on this page. It dynamically fills the categories menu with every category in the database. It also allows for searching the database for products in specific categories and displaying them. It dynamically generates all the html to account for any new products in the database.

Sign Up

This feature allows the user to Sign Up for a new account. It consists of two files:

- signUp.html – This file contain the html code for the forms on this page. The input fields on this form check to see if they are filled. It notifies the user if any of the fields are empty or if the email field does not contain an email of the right format. This verification is done on the front end and not the back end.
- Registration.jsp – This file processes the data it receives from the above page. It inserts a new entry in the database for the Customer table.

Cart

This feature allows the user to add items to the cart, view the total, and check if the item is available in the warehouse. It consists of several files:

- addcart.jsp – this file is called every time the user clicks on the “add to cart” link. It creates and stores the data in a certain data structure.
- Showcart.jsp – this file dynamically generates the html for each item in the cart, which it gets from data structure created in the previous file. It also checks the database if certain product is in stock.

Checkout

This feature allows the use to checkout with their current cart and have their orders shipped. It is made up of two files:

- checkout.jsp – this file generates a page which looks similar to the login page but it isn't. It severs an insurance that the user exists in the database and that it is that user who is willing to order.
- order.jsp – perhaps the most dense file of them all. This file takes the data entered into the previous file and first checks if that user exists in the database. Then it insert the order data into two different tables in the database. It then deducts the order quantity for each item from the warehouse so that the inventory always stays up to date. While doing this, it prints out an order summer for the user.

Manager's Hub

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This feature is a page designed only for the manager. It provides special access to website and allows for inventory management. It consists of several files:

- LoadData.jsp – this file essentially resets the database system and with it the website. It loads the default data to the website from an SQL file.
- addItem.html & addItem.jsp – takes the data from the addItem.html file and filters in through some SQL queries. These queries allow the manager to add new Products to the database and it turn, the website.
- UpdateItem.jsp & up.jsp – data from updateItem.jsp is passed down to up.jsp. This file allows for the update of items in the database.
- Delete.jsp & del.jsp – these files simply allow the manager to delete products from the database. The product ID's are automatically generated in the menu, therefore the manager only need to select the item and press the delete button.
- Listorder.jsp – this file generates a sales report of all previous purchases made on the website. There is also an option to print the page.

Limitations of the System

There are several limitations to the system, the biggest one being security. The website contains several forms whose data is usually attached to SQL DML and queried. Most of the queries don't use prepared statements, thus breaking the database would be very easy. The forms themselves don't check if the right type of data is being entered and if it is of the right length. For example, the “Phone Numbers” input in signUp.html does not verify if number are being input in the input fields.

The login feature has no use to the common user but the manager may use it to get the Manager's Hub. Even then, the Manager's Hub is not a protected page, it simply redirects to a certain page. There is no stopping someone with the url to get to that page.

The website needs better inventory management. It shows if the item is out of stock but it doesn't stop the user from proceeding to checkout even if the item is out of stock.