

USER MANUAL

CSE 412 : Database Management

Group 27

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GENERAL INFORMATION

1.1 Application Overview

The team has created an application that allows users to select available products from an extensive catalog and purchase them by adding those products into their respective shopping cart. Replicating the core fundamentals of an online retail system such as Amazon. The application features synthetically generated data containing valuable product information such as the product name, the product's supplier, the price of the product and the quantity available for purchase. In order for any purchase to be made on the application, the buyer must either create an account or sign in to their preexisting account which contains their basic information of their name, address, phone number and email address in order to complete the orders. Furthermore, the application is also able to display critical information about the order such as its current status and whether it was canceled by the user.

1.2 Application Infrastructure

For the application, the team primarily utilized Node.js to manage the JavaScript libraries and maintain the connection to the PostgreSQL database. This was accomplished through the use of postgres npm package that also granted the convenience to host the database locally and start the application on the teams' local machines whenever desired. This allowed a smooth interaction between the web application and the manipulation of data on the PostgreSQL database. Furthermore, the team utilized GitHub for version control, monitoring any code changes that were made for the application and any changes of the database in PostgreSQL. The team purposely kept the project stack as lightweight as possible focusing primarily on the vital parts needed to deliver the core functionality of the application.

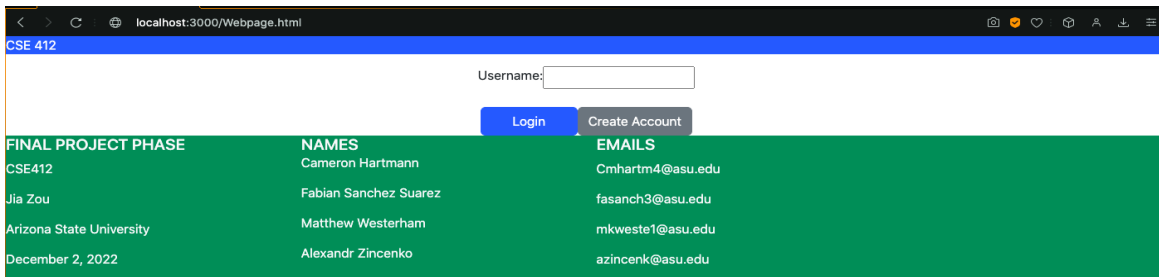
1.3 Application Developers

The application was created by Group 27 which consisted of Cameron Hartmann, Fabian Sanchez Suarez, Matthew Westerham and Alexandr Zincenko.

APPLICATION FEATURES

2.1 Login

When launching the application, the user is greeted with a Login Screen that has two options to either create a new account or login into their existing account within the application.



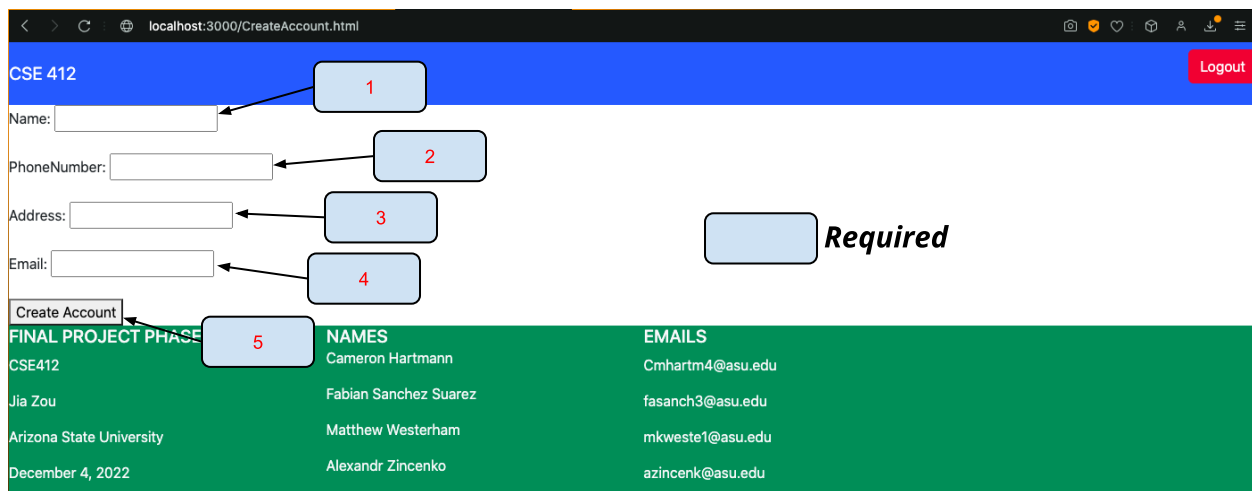
The screenshot shows a web browser window with the URL `localhost:3000/Webpage.html`. The page has a blue header with "CSE 412" on the left. Below the header, there is a "Username:" label followed by a text input field. To the right of the input field are two buttons: "Login" (blue) and "Create Account" (grey). Below these elements is a green table with three columns: "FINAL PROJECT PHASE", "NAMES", and "EMAILS".

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 2, 2022	Alexandr Zincenko	azincenk@asu.edu

2.1.1 Creating a new account

Should the user select the Create Account option, they will be redirected to a separate page where they can create their new account by filling out all the necessary information required:

- 1) Write the name of the account
- 2) Write their active phone number
- 3) Write their residential address
- 4) Write their active email address
- 5) Click the Create Account button



The screenshot shows a web browser window with the URL `localhost:3000/CreateAccount.html`. The page has a blue header with "CSE 412" on the left and a "Logout" button on the right. Below the header, there are four text input fields labeled "Name:", "PhoneNumber:", "Address:", and "Email:". To the right of these fields is a blue box with the word "Required" in white. Below the input fields is a "Create Account" button. At the bottom of the page is a green table with three columns: "FINAL PROJECT PHASE", "NAMES", and "EMAILS".

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

If the user inputs all the required information, then the application successfully creates the account and *displays the following message*.

The screenshot shows a web browser at localhost:3000/CreateAccount.html. The page has a blue header with 'CSE 412' on the left and a 'Logout' button on the right. A dark grey modal box in the center displays 'localhost:3000 says' and 'Your account has been created!' with an 'OK' button. Below the header, there are input fields for Name (filled with 'Foo Bar'), PhoneNumber (filled with '6369552669'), Address (filled with '1234 Test E. Avenue'), and Email (filled with 'test@gmail.com'). A 'Create Account' button is below these fields. At the bottom, there is a green table with project information.

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

After the account has successfully been created, please click the Logout button to return back to the Login screen to sign into the newly created account.

2.1.2 Common Errors

This section represents some of the common errors that the user may encounter during account creation. If the user does input all of the required information for their account, then the application will not create the account and instead notify the user of the error encountered.

The screenshot shows the same web browser at localhost:3000/CreateAccount.html. The 'Name' input field is empty. A dark grey modal box in the center displays 'localhost:3000 says' and 'Please fill out your name' with an 'OK' button. The other input fields (PhoneNumber, Address, Email) and the 'Create Account' button are present. The green table at the bottom is also visible.

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

Figure 2: Missing Phone Number

localhost:3000/CreateAccount.html

CSE 412

localhost:3000 says
Please input a phone number

Logout

Name:

PhoneNumber:

Address:

Email:

Create Account

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

Figure 3: Missing Address Information

localhost:3000/CreateAccount.html

CSE 412

localhost:3000 says
Please fill out your address

Logout

Name:

PhoneNumber:

Address:

Email:

Create Account

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

Figure 4: Missing Email Address

localhost:3000/CreateAccount.html

CSE 412

localhost:3000 says
Please fill out your email

Logout

Name:

PhoneNumber:

Address:

Email:

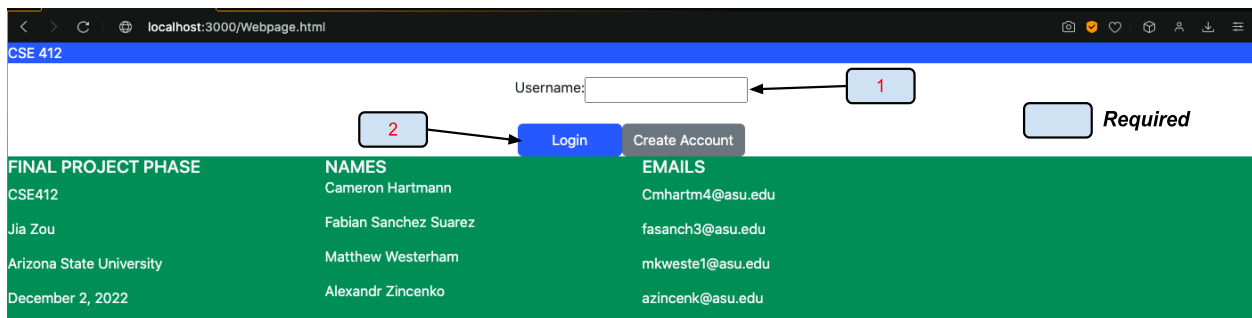
Create Account

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
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2.1.3 Signing into an account

If a user has already registered an account within the application, they have to simply input their name/username within the Login screen. The following steps demonstrate how to sign into an account:

- 1) Enter the name of the account
- 2) Click the login button



For demonstration purposes, the previously created account “Foo Bar” will be used to demonstrate that the application correctly created the account and that the user is able to sign into it. Figure 2 demonstrates the application correctly stored the account information that the user previously inserted during their account creation (Please refer to Section 2.1.1).

Figure 1: Sign in Screen

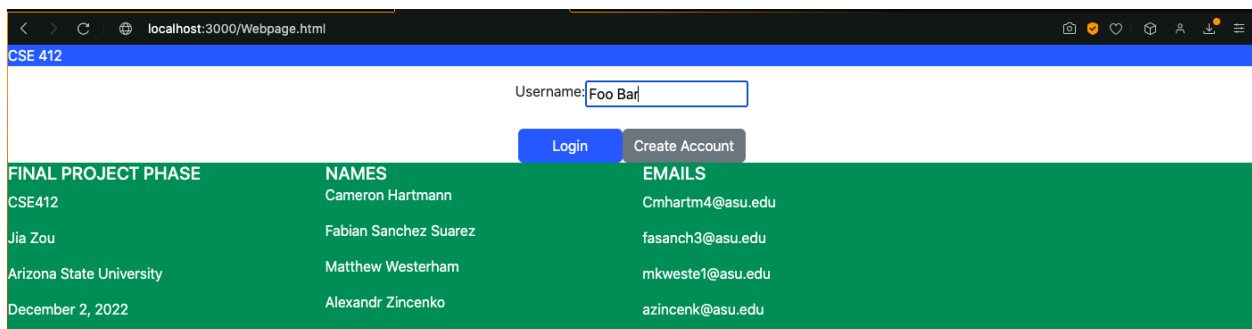


Figure 2: Verifying that the application stored the correct information

The screenshot shows a web browser at localhost:3000/cart.html. The page has a blue header with 'CSE 412' and buttons for 'Return To Catalog' and 'Logout'. Below the header is a 'Shopping Cart' section with a 'Clear Cart' button. A table lists items in the cart, with the first item 'Foo Bar' highlighted by a red box. Below the cart is a 'Contact Information' section with a table containing user details. At the bottom is a green section titled 'FINAL PROJECT PHASE' with a table of project members.

Product Name	Brand	Delivery Time	Price	Status
Foo Bar			0	

Name	Phone Number	Address	Email	Total Price	Purchase
Foo Bar	6369552669	1234 Test E. Avenue	test@gmail.com	0	<button>Purchase</button>

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
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If the user has never created an account and attempts to sign into the application with an unknown account, their login will be denied and will be greeted with the following message.

Figure 3: Missing/Invalid Account

The screenshot shows a web browser at localhost:3000/Webpage.html. A modal dialog box is displayed in the center of the screen, indicating a login error. The background shows the same 'FINAL PROJECT PHASE' table as in Figure 2.

localhost:3000 says
Sorry, this is not an account we have on file

OK

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

2.2 Product Catalog

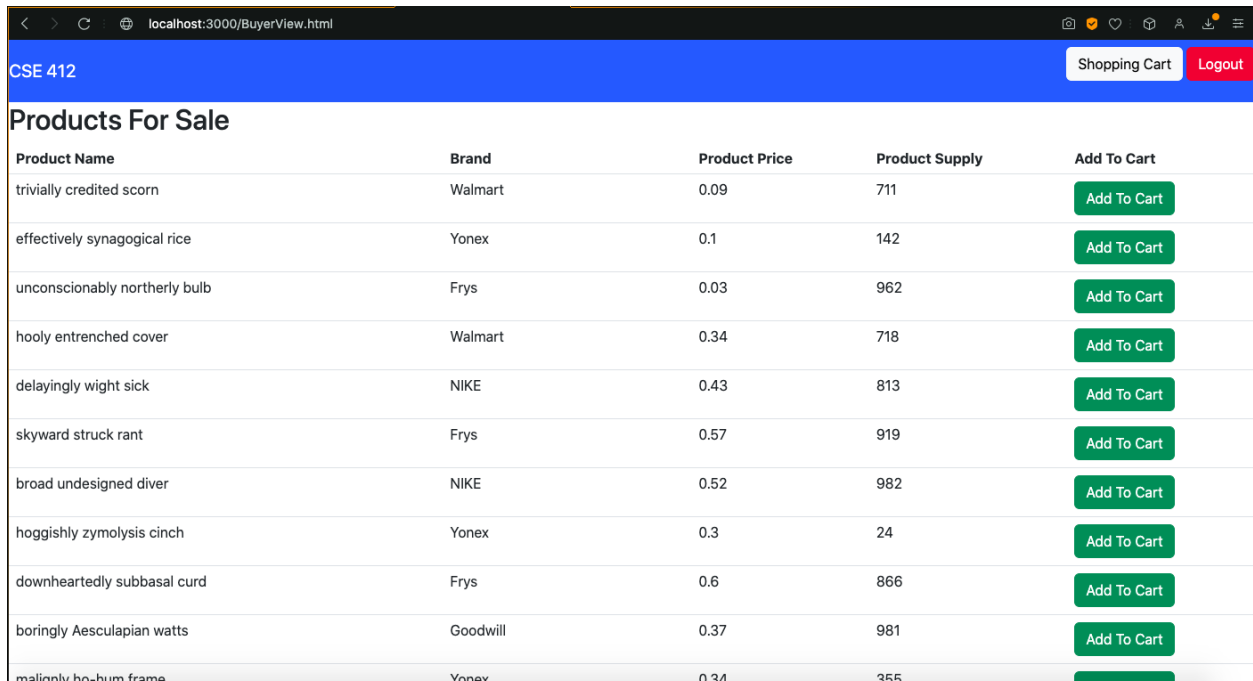
Proceed from 2.1 Login Section

In order to access the extensive catalog of the application, it is vital that the user logs into an existing or newly created account. This will grant the user access to browse through the application's catalog and be able to add any product that they wish to purchase into their shopping cart.

1) Click Add to Cart on any product you wish to purchase

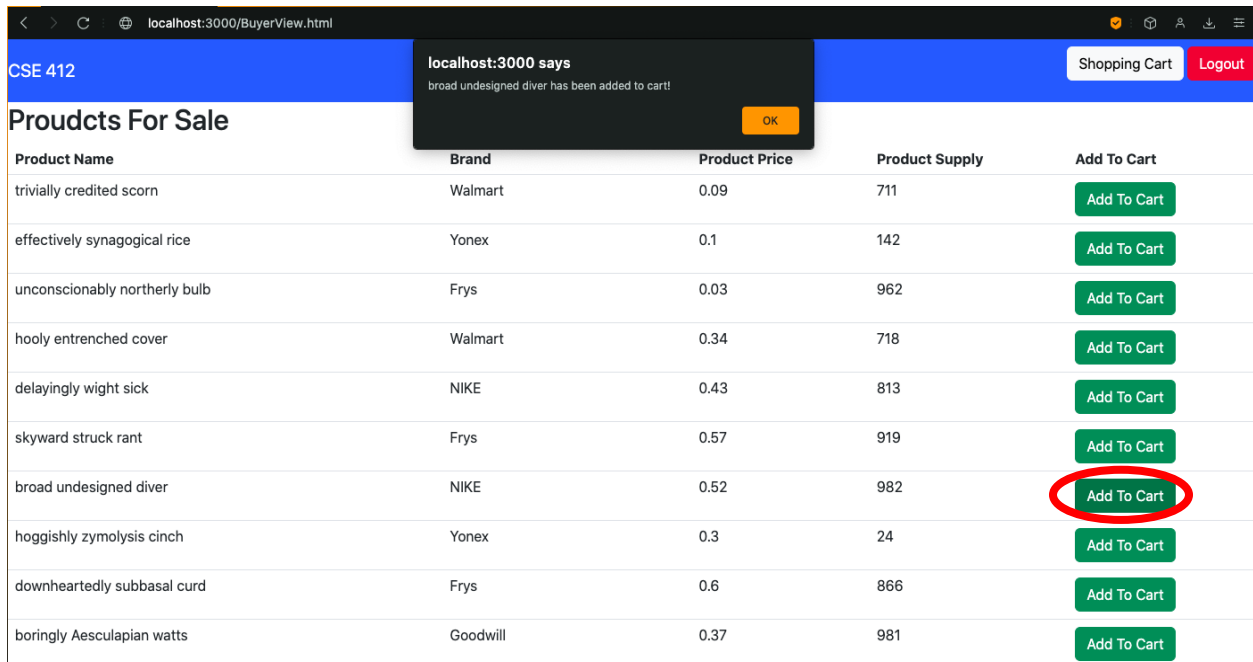
For continuity purposes, the account “Foo Bar” will be utilized to illustrate the process of how to add a product from the catalog into Foo Bar’s shopping cart.

Figure 1.1: Logged into Foo Bar account



Product Name	Brand	Product Price	Product Supply	Add To Cart
trivially credited scorn	Walmart	0.09	711	Add To Cart
effectively synagogical rice	Yonex	0.1	142	Add To Cart
unconscionably northerly bulb	Frys	0.03	962	Add To Cart
hooly entrenched cover	Walmart	0.34	718	Add To Cart
delayingly wight sick	NIKE	0.43	813	Add To Cart
skyward struck rant	Frys	0.57	919	Add To Cart
broad undesigned diver	NIKE	0.52	982	Add To Cart
hoggishly zymolysis cinch	Yonex	0.3	24	Add To Cart
downheartedly subbasal curd	Frys	0.6	866	Add To Cart
boringly Aesculapian watts	Goodwill	0.37	981	Add To Cart
maliciously hockum frame	Yonex	0.34	355	Add To Cart

Figure 1.2: Adding an Item to Foo Bar’s Cart



Product Name	Brand	Product Price	Product Supply	Add To Cart
trivially credited scorn	Walmart	0.09	711	Add To Cart
effectively synagogical rice	Yonex	0.1	142	Add To Cart
unconscionably northerly bulb	Frys	0.03	962	Add To Cart
hooly entrenched cover	Walmart	0.34	718	Add To Cart
delayingly wight sick	NIKE	0.43	813	Add To Cart
skyward struck rant	Frys	0.57	919	Add To Cart
broad undesigned diver	NIKE	0.52	982	Add To Cart
hoggishly zymolysis cinch	Yonex	0.3	24	Add To Cart
downheartedly subbasal curd	Frys	0.6	866	Add To Cart
boringly Aesculapian watts	Goodwill	0.37	981	Add To Cart

2.3 Shopping Cart

Proceed from 2.2 Product Catalog Section

After the user has selected and added the product into their cart, they will be brought into another screen which will contain important information regarding the status of their current/previous orders made within the application. If the user is ready to purchase, their current order, they have to do the following:

- 1) Click the Shopping Cart button
- 2) Click the Purchase button

For continuity purposes, the account “Foo Bar” will be utilized to illustrate how to purchase the newly added item from previous section 2.2 which is now located inside the shopping cart.

Figure 1.3: Click the Shopping Cart button

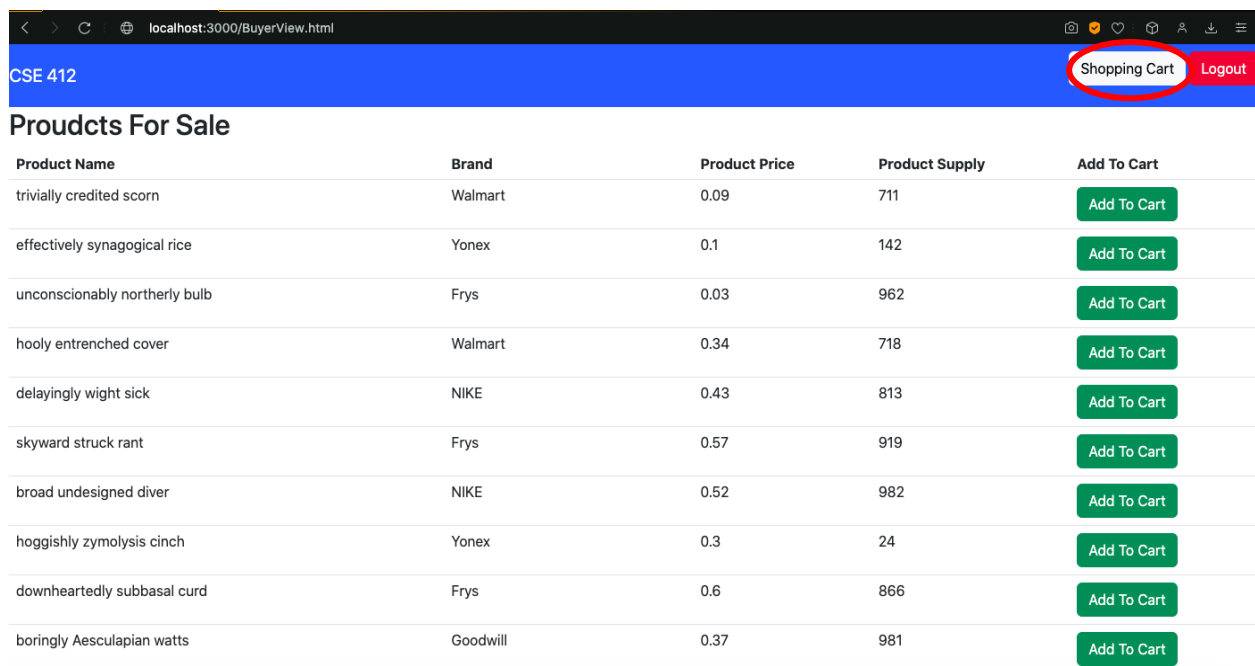


Figure 1.4: Check the Item has been added in the Shopping Cart Screen

The screenshot shows a web application interface for a shopping cart. At the top, there's a blue header with 'CSE 412' and buttons for 'Return To Catalog' and 'Logout'. Below the header, the 'Shopping Cart' section is highlighted. It contains a table with the following data:

Product Name	Brand	Delivery Time	Price	Status
broad undesigned diver	NIKE	2022-12-06T07:00:00.000Z	0.52	In Cart

Below the cart table, there's a 'Contact Information' section with a table:

Name	Phone Number	Address	Email	Total Price	Purchase
Foo Bar	6369552669	1234 Test E. Avenue	test@gmail.com	0.67	<button>Purchase</button>

At the bottom, there's a green section titled 'FINAL PROJECT PHASE' with a table of names and emails:

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

**** Please note that the Total Price includes the Sales Tax ****

Figure 1.5: Click the Purchase button

This screenshot is similar to Figure 1.4, but with a red circle around the 'Purchase' button in the 'Contact Information' table. Additionally, a black toast notification is displayed in the center of the screen, reading: 'localhost:3000 says Your Items have been purchased!'. The notification has an 'OK' button.

After the purchase has been made, the application will now display the changes of the order status from “In Cart” to “Ordered” as demonstrated in the figure below.

Figure 1.6: Verifying the order status

The screenshot shows a web application interface. At the top, there's a blue header with 'CSE 412' on the left and 'Return To Catalog' and 'Logout' buttons on the right. Below the header, there's a 'Shopping Cart' section with a 'Clear Cart' button. The cart contains one item: 'broad undesigned diver' by 'NIKE' with a delivery time of '2022-12-06T07:00:00.000Z', a price of '0.52', and a status of 'Ordered' (circled in red). Below the cart is a 'Contact Information' section with a table containing fields for Name, Phone Number, Address, Email, Total Price, and Purchase. The table has one row with the following data: Name: 'Foo Bar', Phone Number: '6369552669', Address: '1234 Test E. Avenue', Email: 'test@gmail.com', Total Price: '0', and a 'Purchase' button. At the bottom, there's a green section titled 'FINAL PROJECT PHASE' with a table containing columns for NAMES and EMAILS. The table has four rows of data: Cameron Hartmann (Cmhartm4@asu.edu), Fabian Sanchez Suarez (fasanch3@asu.edu), Matthew Westerham (mkweste1@asu.edu), and Alexandr Zincenko (azincenk@asu.edu).

2.3.2 Clearing the Shopping Cart

After adding a number of products into the shopping cart, should a user need to clear their cart, they can simply do so by the following action:

- 1) Click the Clear Cart button

Figure 2.1: Clearing the Cart

The screenshot shows the same web application interface as Figure 1.6, but with a different shopping cart. A black modal box is displayed in the center, saying 'localhost:3000 says Cart has been cleared!' with an 'OK' button. The 'Clear Cart' button in the shopping cart section is circled in red. The cart now contains four items: 'effectively synagogical rice' (Yonex, 0.1), 'skyward struck rant' (Frys, 0.57), 'downheartedly subbasal curd' (Frys, 0.6), and 'displeasingly bromic hooks' (Dicks sporting goods, 0.81). The 'Contact Information' section and the 'FINAL PROJECT PHASE' table remain the same as in Figure 1.6.

Figure 2.2: Empty Cart after clearing it

The screenshot shows a web browser at localhost:3000/cart.html. The header is blue with 'CSE 412' on the left and 'Return To Catalog' and 'Logout' buttons on the right. Below the header, there's a 'Shopping Cart' section with a 'Clear Cart' button. The cart is empty, showing columns for Product Name, Brand, Delivery Time, Price, and Status. Below the cart is a 'Contact Information' section with a table containing Name, Phone Number, Address, Email, Total Price, and Purchase buttons. The table has one row with data: Foo Bar, 6369552669, 1234 Test E. Avenue, test@gmail.com, 0, and a Purchase button. At the bottom, there's a green section titled 'FINAL PROJECT PHASE' with columns for NAMES and EMAILS, listing project members and their emails.

Product Name	Brand	Delivery Time	Price	Status	
Contact Information					
Name	Phone Number	Address	Email	Total Price	Purchase
Foo Bar	6369552669	1234 Test E. Avenue	test@gmail.com	0	<button>Purchase</button>

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

2.4 Admin Privileges

The administrator role is only reserved for sellers which allows them to add new products into the Product Catalog for users to select from. In order to access the administrator role, the seller must perform the following actions:

- 1) Enter “admin” into the username
- 2) Click the Login button

The screenshot shows a web browser at localhost:3000/Webpage.html. The header is blue with 'CSE 412' on the left. Below the header, there's a login form with a 'Username:' label, a text input field containing 'admin', and a 'Login' button. A red box labeled '1' points to the input field, and a red box labeled '2' points to the 'Login' button. To the right of the input field is a 'Create Account' button. Below the login form is a green section titled 'FINAL PROJECT PHASE' with columns for NAMES and EMAILS, listing project members and their emails. A red box labeled 'Required' points to the 'Create Account' button.

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 2, 2022	Alexandr Zincenko	azincenk@asu.edu

2.5 Updating Product Catalog

Proceed from 2.4 Admin Privileges Section

In order for sellers to be able to add products into the Product catalog, it is vital that they are logged in as administrators otherwise they will not be granted access to the add a product page. To add a new product, the administrator has to do the following actions:

- 1) Enter the Product Name
- 2) Enter the Product Quantity [*Has to be greater than 0*]
- 3) Enter the Product Brand
- 4) Enter the Product Price [*Has to be greater than 0*]
- 5) Click the Add Item button

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 2, 2022	Alexandr Zincenko	azincenk@asu.edu

If the administrator inputs all the required information, the application will successfully add the new product and display the following message.

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 2, 2022	Alexandr Zincenko	azincenk@asu.edu

After the application added the product to the product catalog, all users will now be able to add that new product to their cart.

territorially splashy sushi	Dicks sporting goods	0.45	217	Add To Cart
sobbingly undiscordant fog	Dicks sporting goods	0.09	600	Add To Cart
unphilosophically intact snow	Walmart	0.02	426	Add To Cart
funnily balking one	Yonex	0.61	226	Add To Cart
wearisomely loose-jointed eyes	NIKE	0.06	596	Add To Cart
lief anthropoidal valor	Dicks sporting goods	0.59	729	Add To Cart
weak-kneedly ichthyological land	Walmart	0.58	257	Add To Cart
saleably jingoism wilt	Goodwill	0.54	25	Add To Cart
Test	Test Store	4.99	123	Add To Cart

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

2.5.1 Adding the New Item into Cart

To add the newly added product into cart, simply find the new product from the catalog and follow the exact same steps as listed in section 2.2 and 2.3.

territorially splashy sushi			217	Add To Cart
sobbingly undiscordant fog			600	Add To Cart
unphilosophically intact snow	Walmart	0.02	426	Add To Cart
funnily balking one	Yonex	0.61	226	Add To Cart
wearisomely loose-jointed eyes	NIKE	0.06	596	Add To Cart
lief anthropoidal valor	Dicks sporting goods	0.59	729	Add To Cart
weak-kneedly ichthyological land	Walmart	0.58	257	Add To Cart
saleably jingoism wilt	Goodwill	0.54	25	Add To Cart
Test	Test Store	4.99	123	Add To Cart

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CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

localhost:3000/cart.html

CSE 412

localhost:3000 says
Your items have been purchased!

Return To Catalog Logout

Shopping Cart

Product Name	Brand	Delivery Time	Price	Status
Test	Test Store	2022-12-05T07:00:00.000Z	4.99	In Cart

Clear Cart

Contact Information

Name	Phone Number	Address	Email	Total Price	Purchase
Foo Bar	6369552669	1234 Test E. Avenue	test@gmail.com	6.39	Purchase

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CSE412	Cameron Hartmann	Cmhartm4@asu.edu
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Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 4, 2022	Alexandr Zincenko	azincenk@asu.edu

2.5.2 Common Errors

This section represents some of the common errors that the administrator may encounter while adding a product. If the administrator does not fill out all of the required information (or enters a value of less than or equal to 0) then the application will not add the product and instead will notify the administrator of the error encountered.

Figure 1: Missing Product Name

localhost:3000/AddProduct.html

CSE 412

localhost:3000 says
Please fill out the Product Name

Logout

ProductName:

ProductSupply:

ProductBrand:

ProductPrice:

Add Item

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 2, 2022	Alexandr Zincenko	azincenk@asu.edu

Figure 2: Missing Product Supply or Invalid input

The screenshot shows a web browser at localhost:3000/AddProduct.html. The form has four input fields: ProductName (filled with 'Test'), ProductSupply (empty), ProductBrand (empty), and ProductPrice (empty). A modal dialog box is displayed with the title 'localhost:3000 says' and the message 'Please input a digit greater than 0 for Product Supply'. An 'OK' button is at the bottom right of the dialog. A 'Logout' button is in the top right corner. Below the form is a table with project data.

FINAL PROJECT PHASE	NAMES	EMAILS
CSE412	Cameron Hartmann	Cmhartm4@asu.edu
Jia Zou	Fabian Sanchez Suarez	fasanch3@asu.edu
Arizona State University	Matthew Westerham	mkweste1@asu.edu
December 2, 2022	Alexandr Zincenko	azincenk@asu.edu

Figure 3: Missing Product Brand

The screenshot shows the same web browser and form as Figure 2, but with ProductSupply filled with '123'. The modal dialog box now displays the message 'Please fill out the Product Brand'. The 'OK' button is still present. The 'Logout' button and the table below the form remain the same.

Figure 4: Missing Product Price or Invalid input

The screenshot shows the same web browser and form as Figure 3, but with ProductBrand filled with 'Test Store'. The modal dialog box now displays the message 'Please input a digit greater than 0 for Product Price'. The 'OK' button is still present. The 'Logout' button and the table below the form remain the same.