

Point of Sale System

- Alex Hawryschuk, 2021-05-07

Introduction

This application serves to broker the exchange between buyer and seller. Sellers publish their store information and buyers peruse the stores, their menus, and purchase the inventory.

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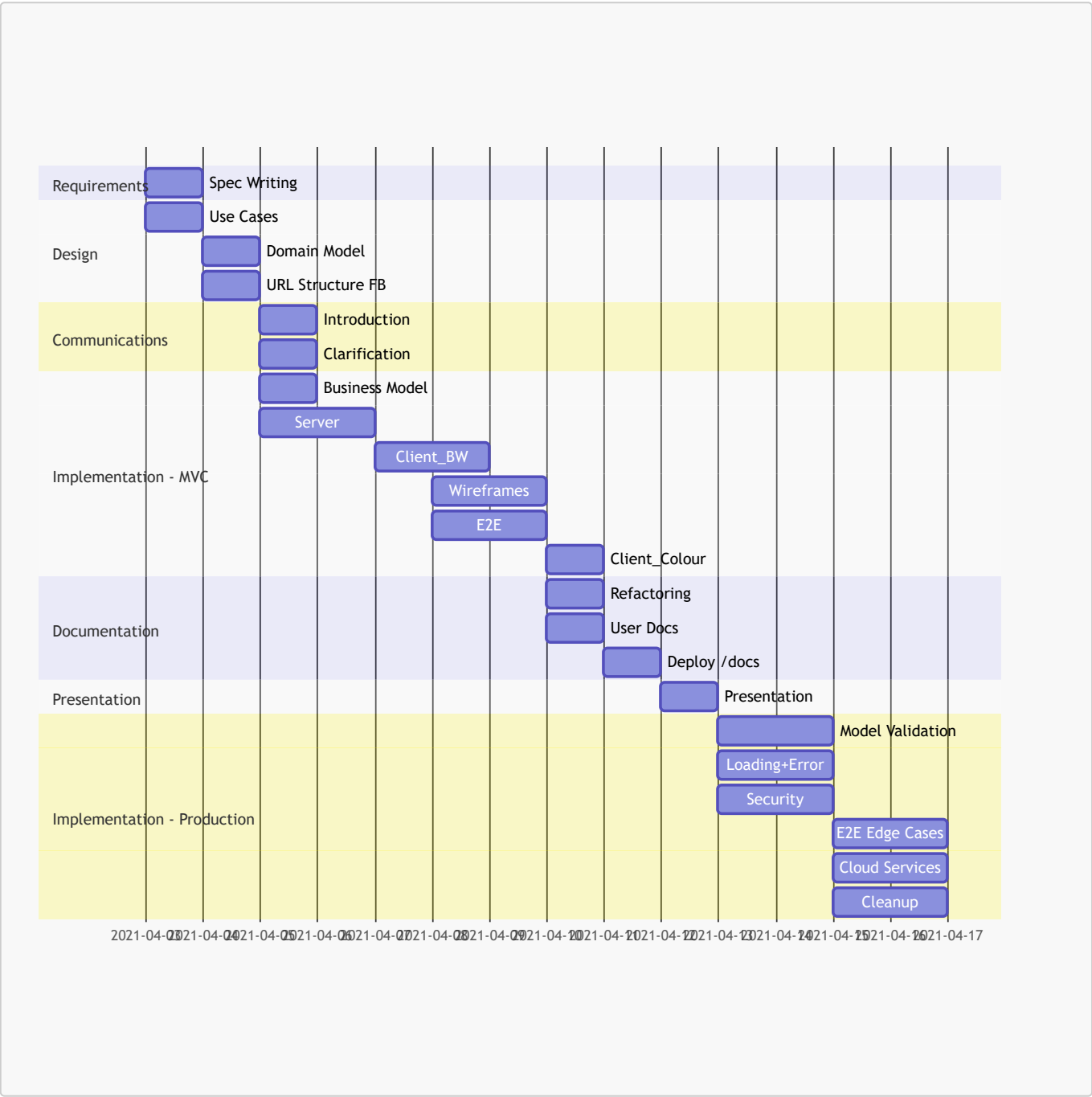
Functional Requirements

- Sign Up: First time visitors can sign up and immediately login
- Log In
- User role based access
 - Buyer:
 - View Stores
 - View Store Menu Items
 - View My Purchases
 - Create Purchase Order
 - StoreOwner:
 - Add Store
 - View My Stores
 - View Incoming Orders
 - Finish Incoming Order
 - Cancel Incoming Order
 - Replenish Inventory
 - Admin:
 - View Users
- View Stores will be displayed:
 - sorted by distance
- Store Details will display:
 - distance
 - top selling product
 - least selling product
 - menu items ordered by most recently modified
- A Menu Item will display:
 - name
 - price
 - photo
 - description
 - number of units sold
 - number of units in inventory

Technical Requirements

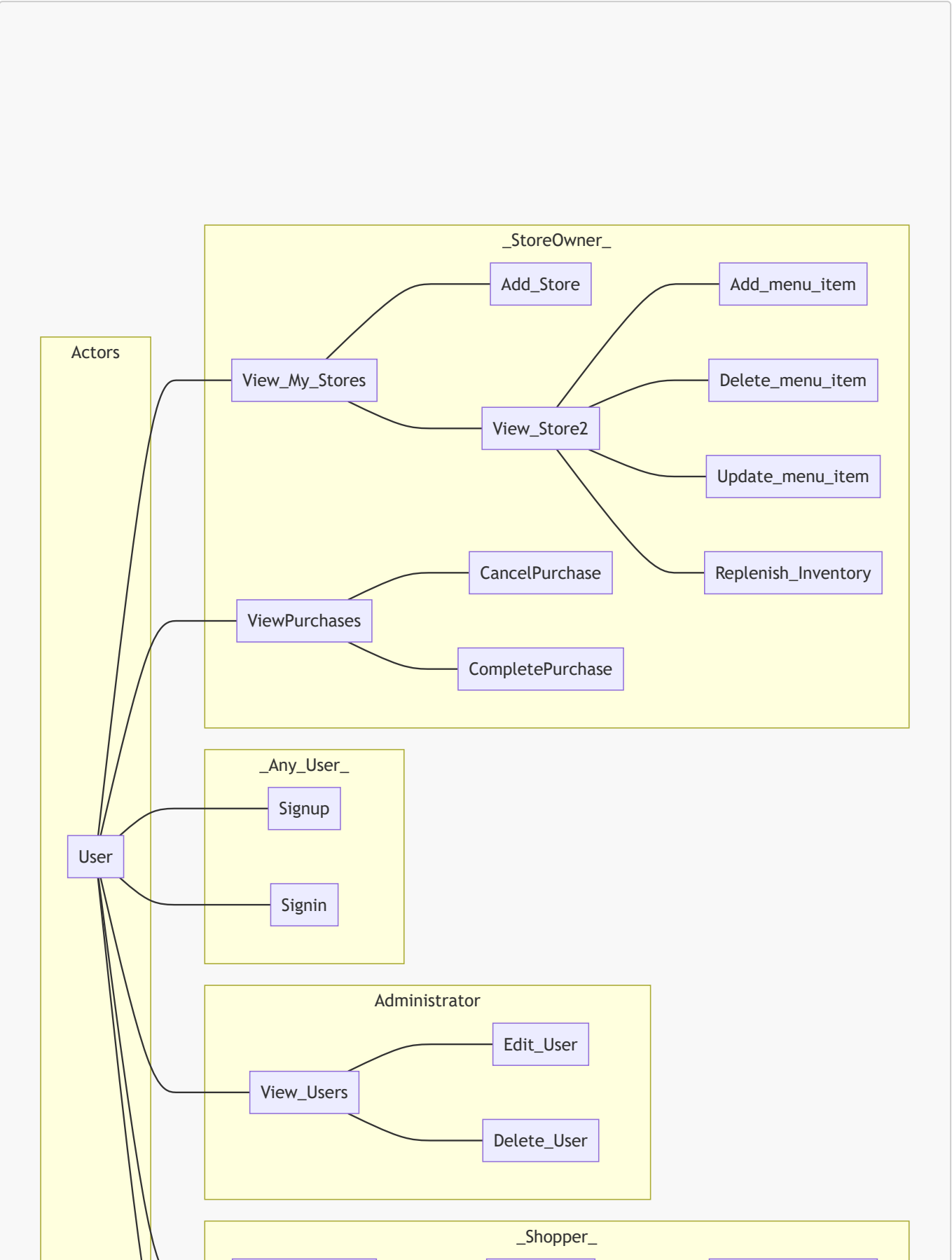
- A REST API that can perform all of the features above
- The REST API will authenticate the user and authorize the access

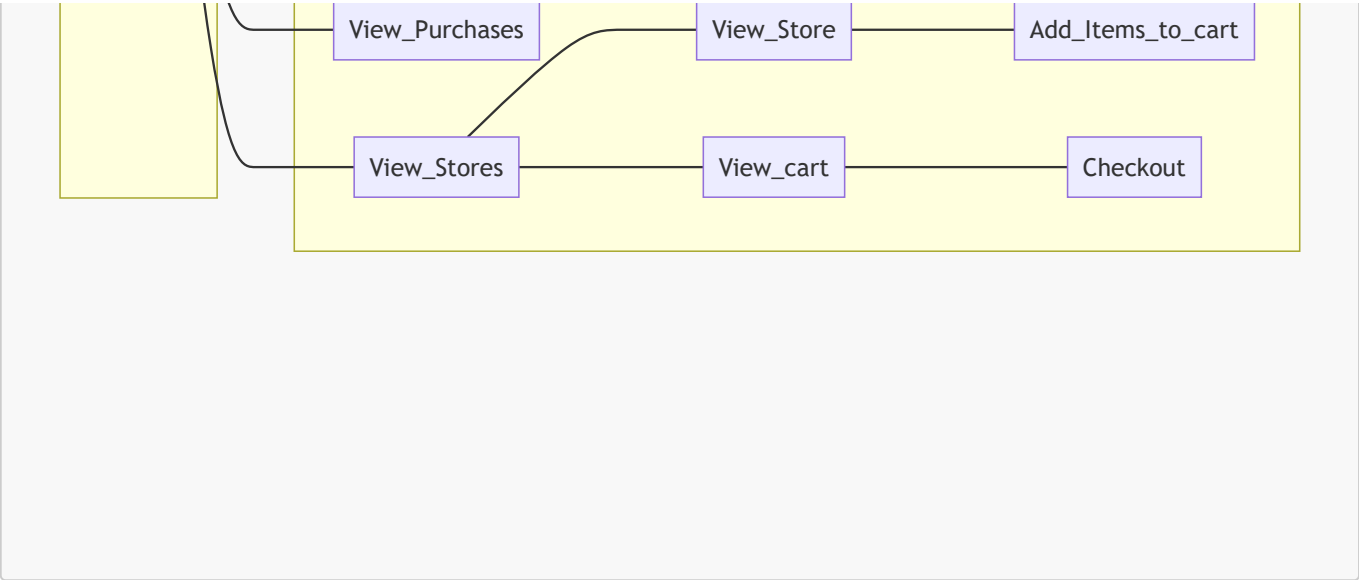
Development Plan



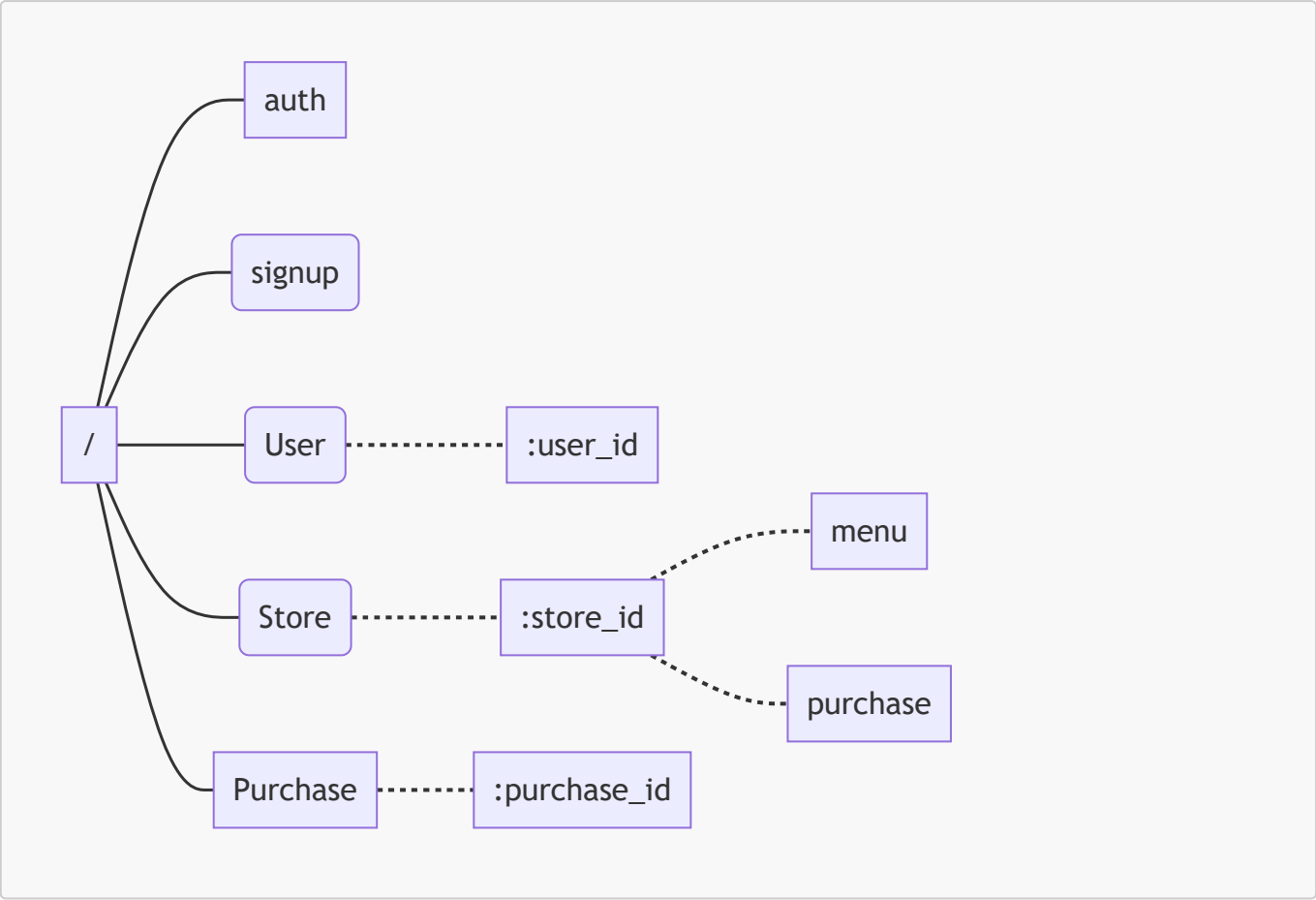
Design

Use Cases

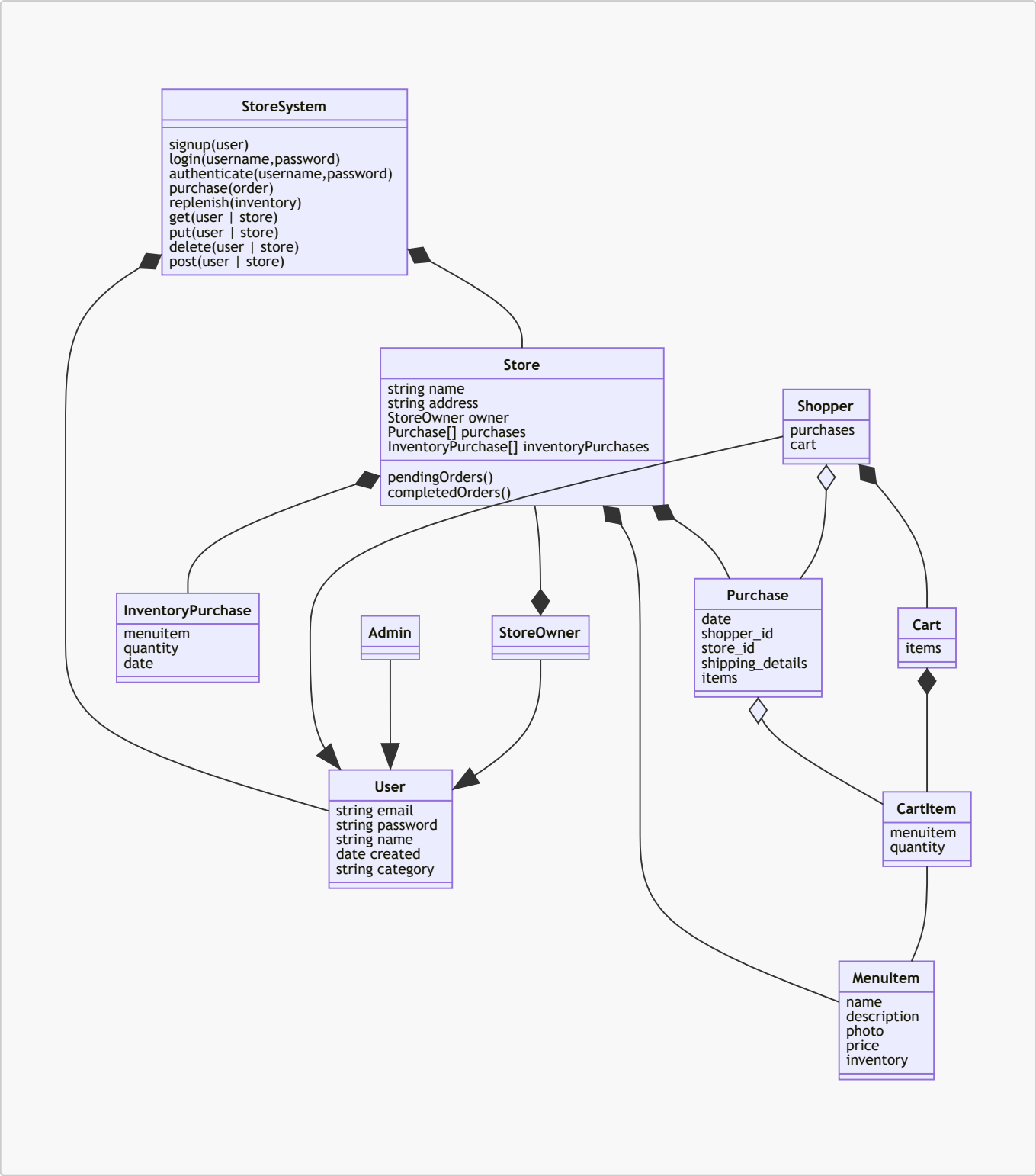




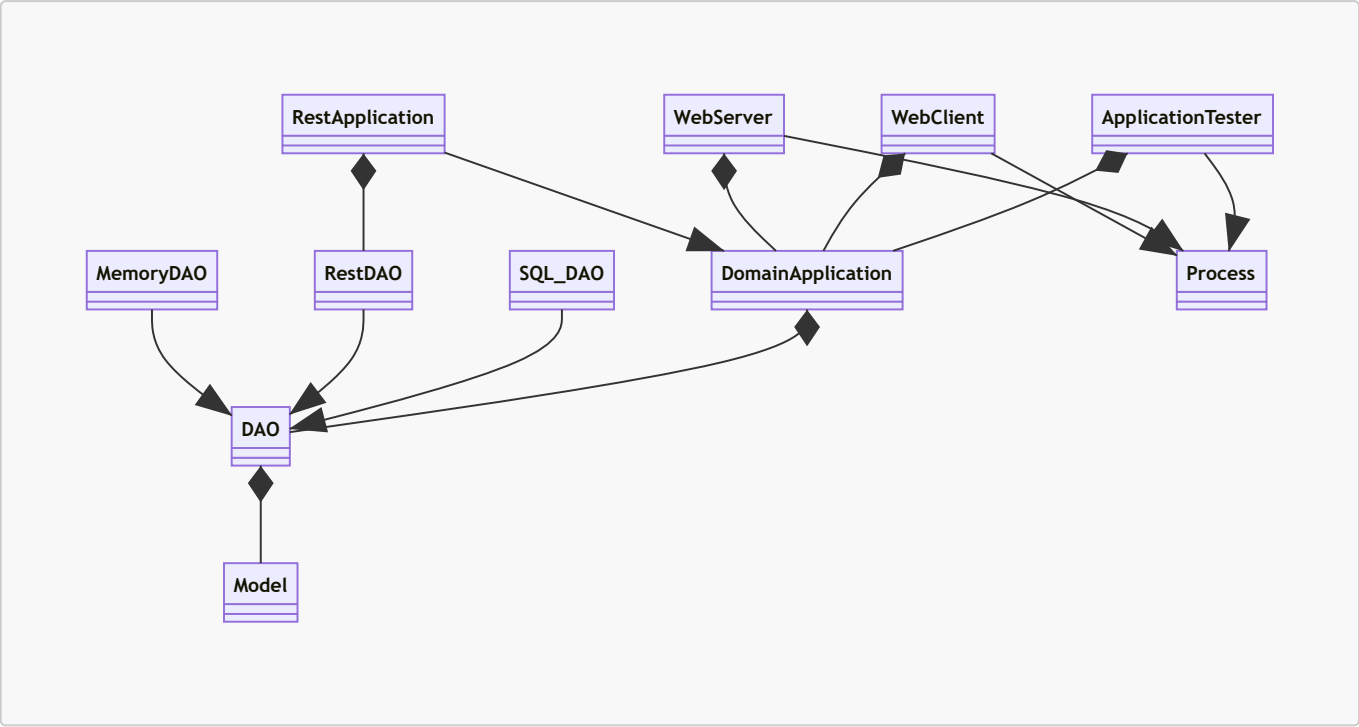
REST API



Business Model

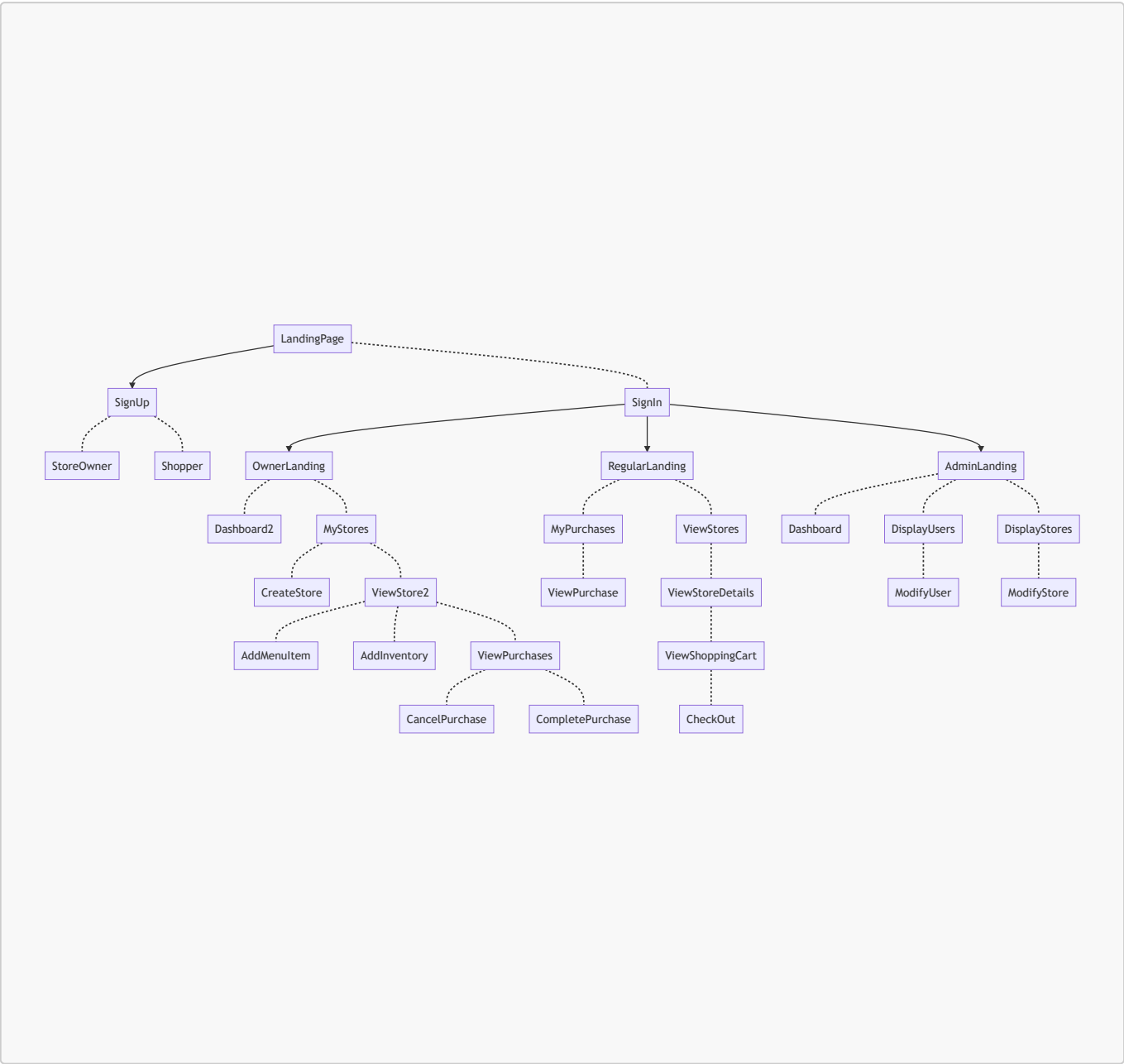


Logical Design

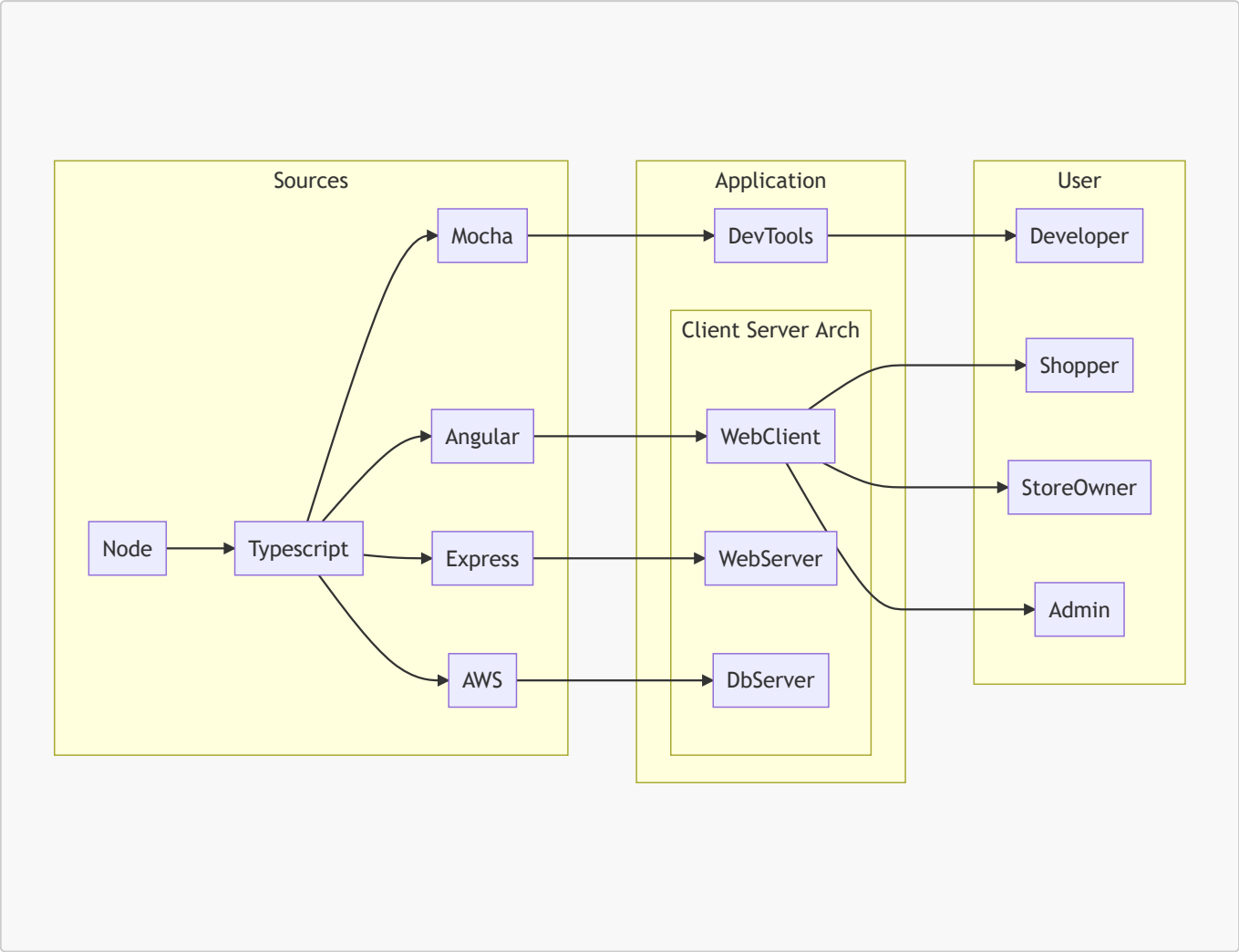


UI Design

UI Components



Physical Design

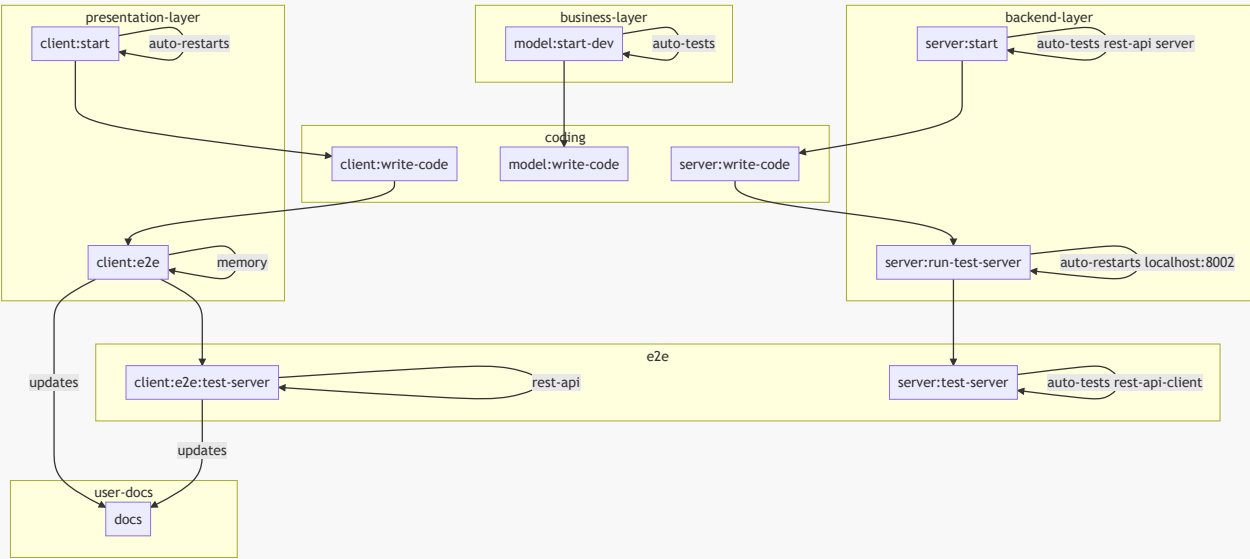


DevOps

Directory Structure

- business-model
- frontend-angular
- backend-server
 - backend-client
- abstract
 - common
 - dao
 - sqlite
 - cloud:*

Development Processes



Questions for Buyer

- Would you like to have graphic design work done? Do you have a logo or colour scheme?
- Where does the shopper and their purchases go when the user is deleted?

Standard Features Added

- Model validations
- Security
- Further error handling in the UI
 - Present backend errors
 - Present backend delays
 - Present model invalidations

Suggested Improvements

- Frontend
 - Email verification
 - Reset password
- Dev Process
 - Linting in the development processes
 - Semantic Release in the CI : Update the changelog automatically
- Backend
 - Choosing a hosting provider
 - IE: AWS w/ RDBMS|DynamoDB|S3
 - IE: Azure w/ CosmosDB
 - IE: Docker with Express/Mongo
 - IE: Server Host with Mysql
 - repository for npm packages
 - repository for build artifacts

TODO

- Consult with buyer to negotiate further milestones and agile iterations

Edge Case Tests

- admin cannot delete self account
- admin edit user with no name
- sign up with bad email
- sign up with no password
- non admins can not delete or edit users, stores, purchases
- create store with no name
- send an expired token
- server is down
- server responds slowly

sections that go into a README

- The scope and functionality.
- Directory structure.
- Instructions to get it up and running.
- The solution approach, and a brief story about it.
- Difficulties you encountered and how you tackle them.
- Performance and space requirements of the solution.
- List of dependencies
- List of supported browsers/platforms.
- Next steps to improve the solution.

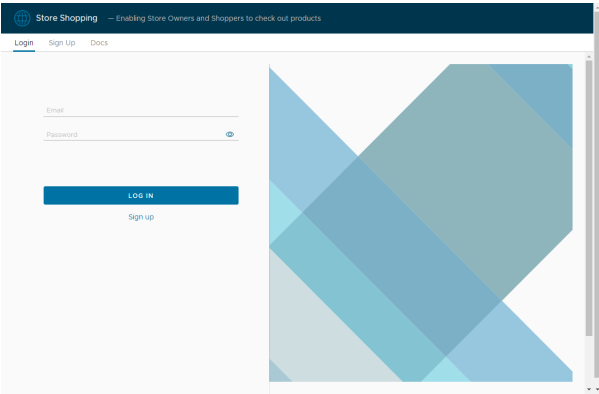
User Documentation

- visual walk-through of all the features, and their steps

Landing Page

As a user not logged in, they need to see the landing page with high-level details about the project (name,description)

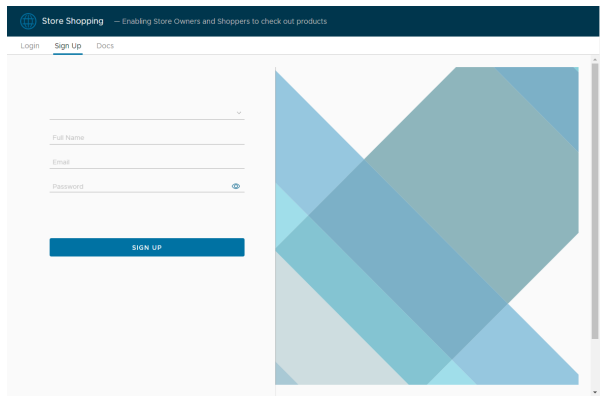
Open the website - We are not logged in, and are given the login form



Sign-Up

Starting from the "Landing" page, click on the "Sign Up" menu link

From the landing page, click on the sign up button

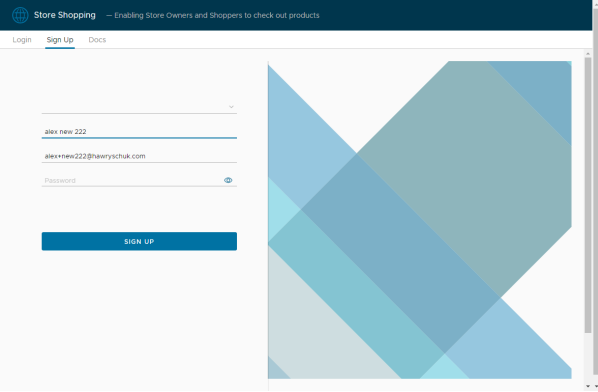
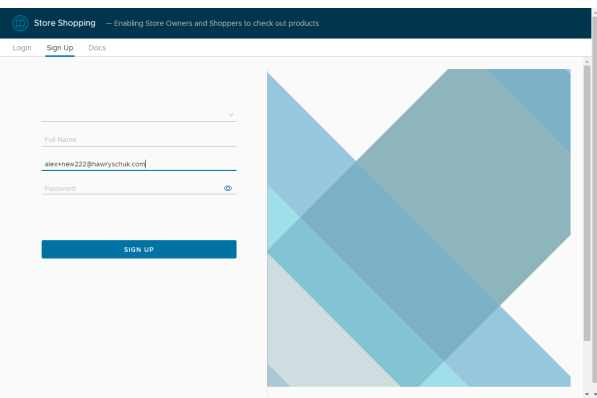


Sign Up as a Shopper

As a user not logged in, there shall be functionality to sign up as a Shopper

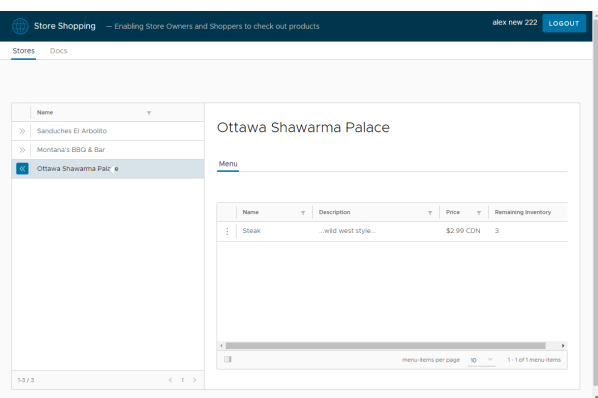
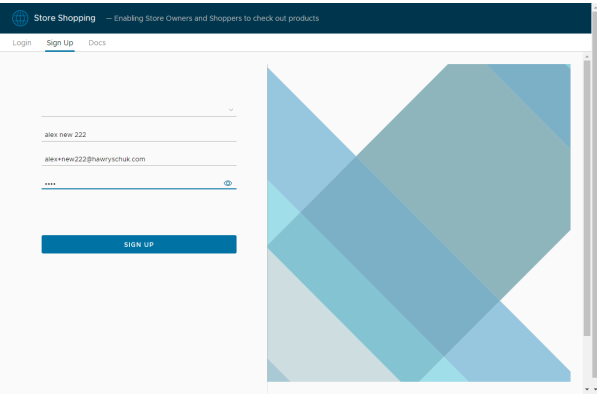
Starting from the "Sign Up" page, fill in your email,

...your name,



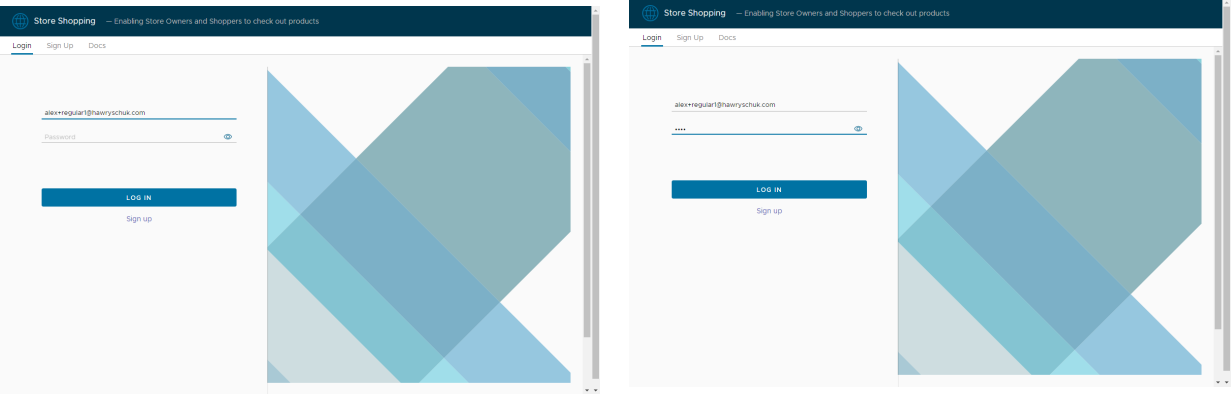
...and password.

To finish, clicking on "Sign Up" will have you signed up, and signed in.

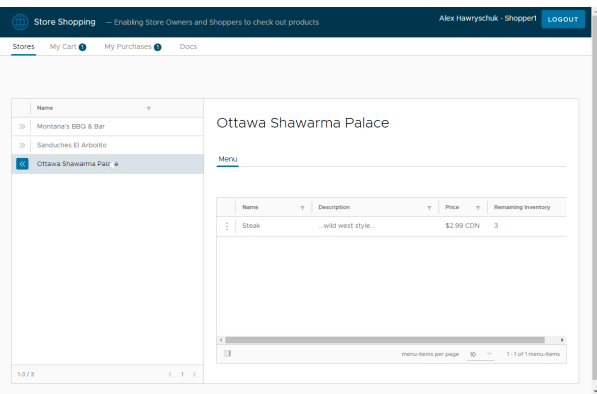


Log In as a Shopper

Starting from the "Log In" page, fill in your email address...your password,

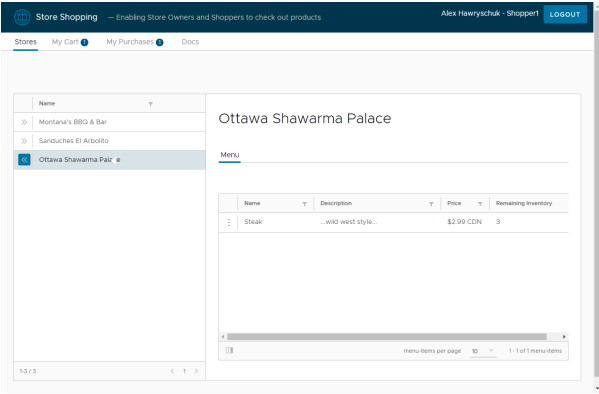


...and after clicking on the "Login" button, you will be logged into the home page



View Stores

As a signed in regular user, I will see the list of stores

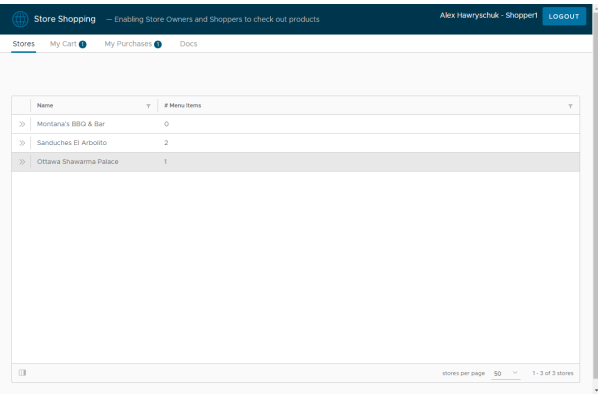
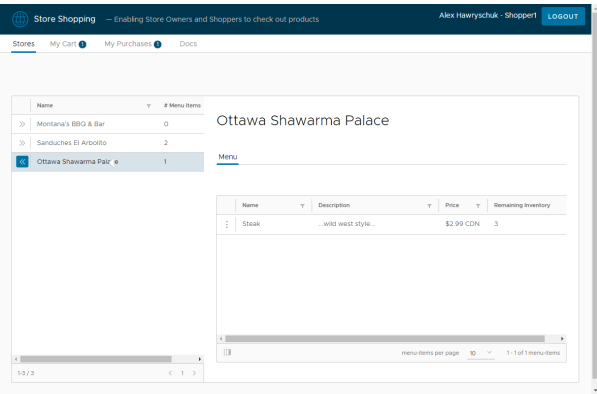


View Store Details

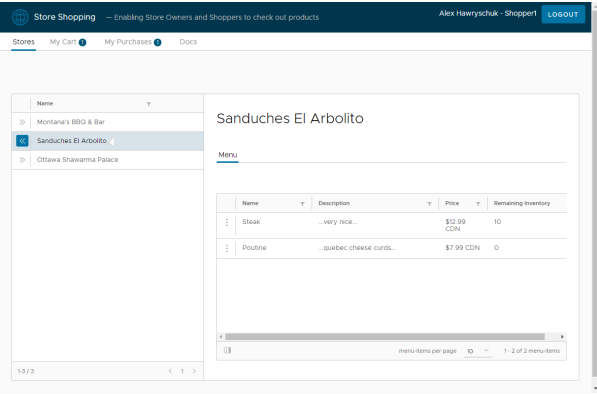
The "Store Details" includes the name, number of menu items, and a list of menu-items

Starting from the "stores" page, and then clicking on the store's row,

...you will see the "store details" view, including all the menu items



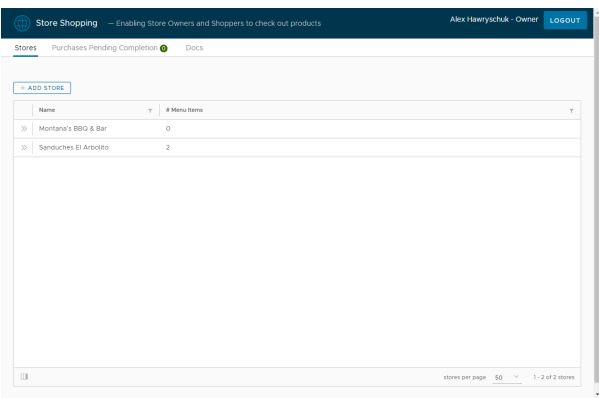
Note: When a store has no menu items, you may see the indication



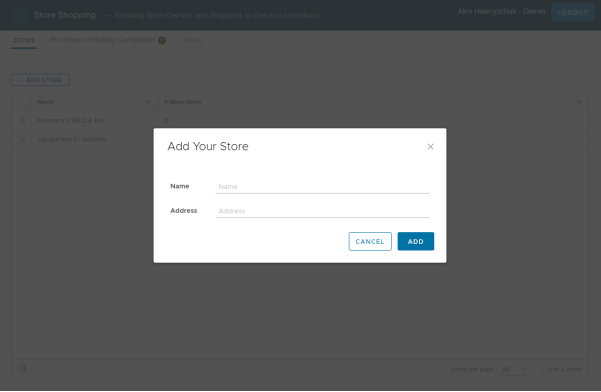
Add A Store

As a Store Owner, I am able to manage the list of stores I have, and can add another store

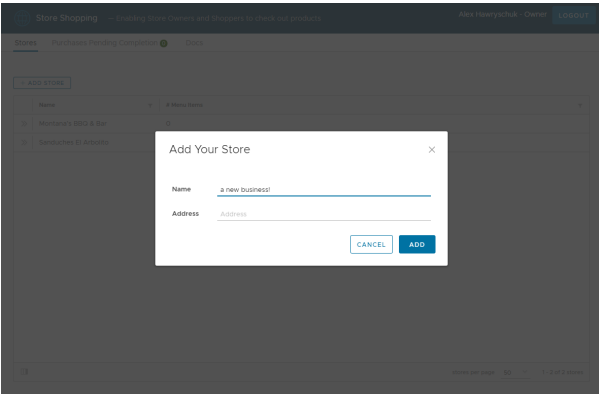
Having signed in, and seeing the list of "My Stores",



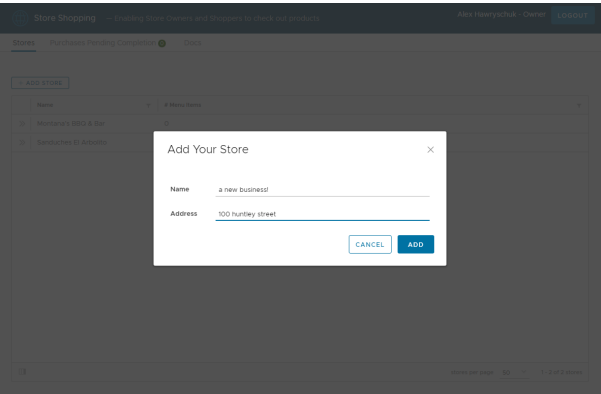
...click on "Add Store"



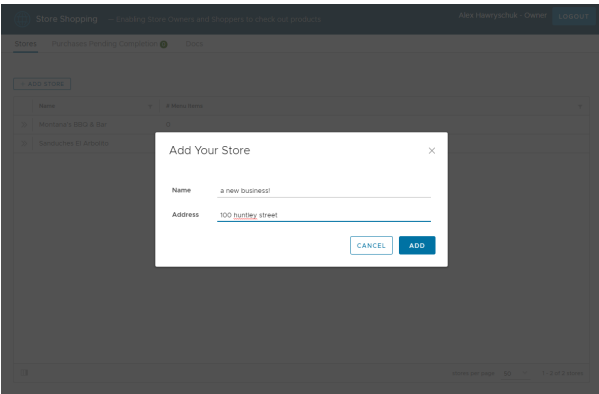
...and then fill in the name,



...and then the address,



...and finish by clicking on "Save"

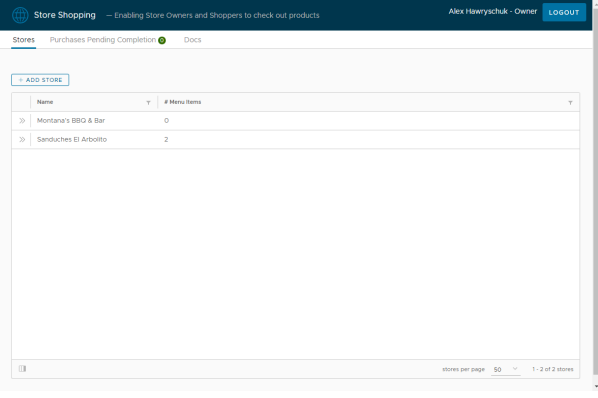
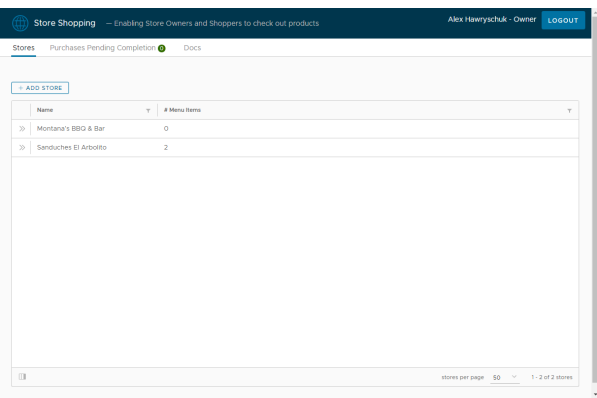


Add A New Menu Item

As a Store Owner, I am able to manage the list of menu items for each store (crud:name,price)

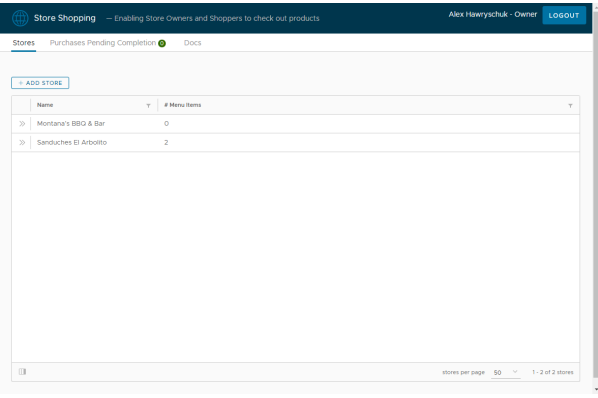
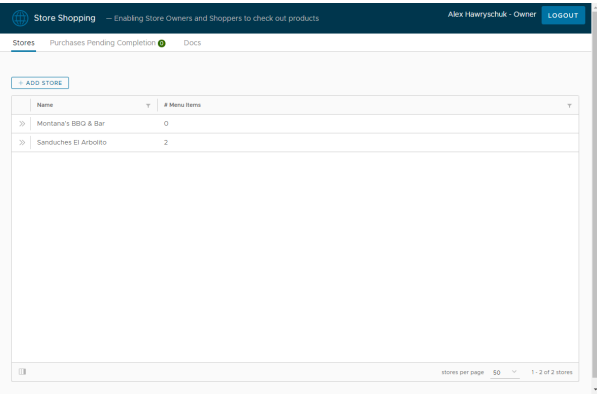
Having signed in, and seeing the list of "My Stores",

...click on the "Add Menu Item" button,



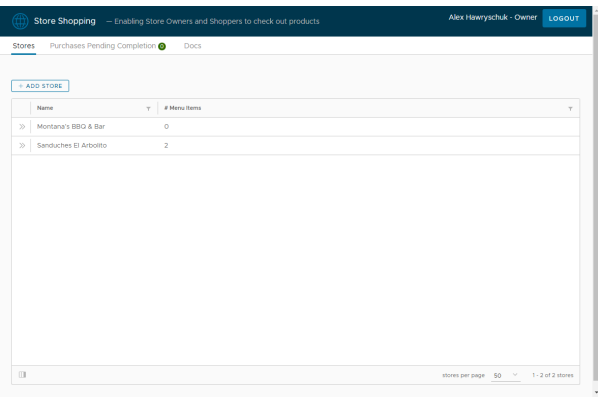
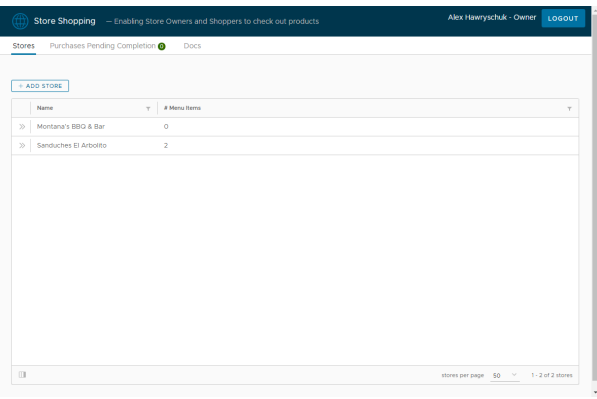
...fill in the name,

...the price,

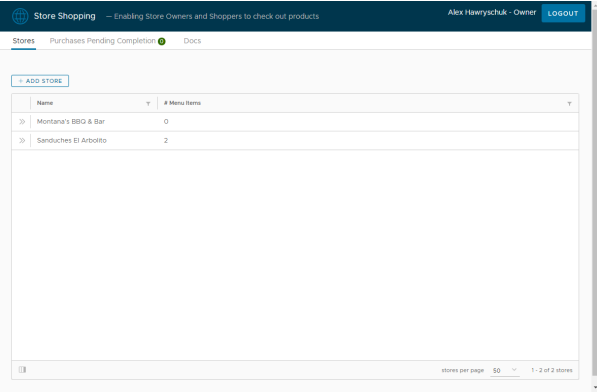


...the description,

...the amount of inventory (if any),



...and finally finish by clicking on the "Save" button

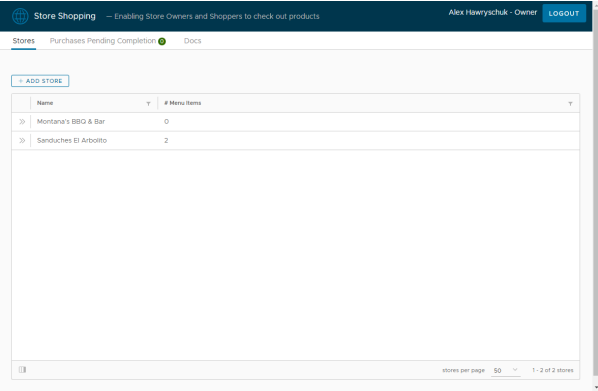
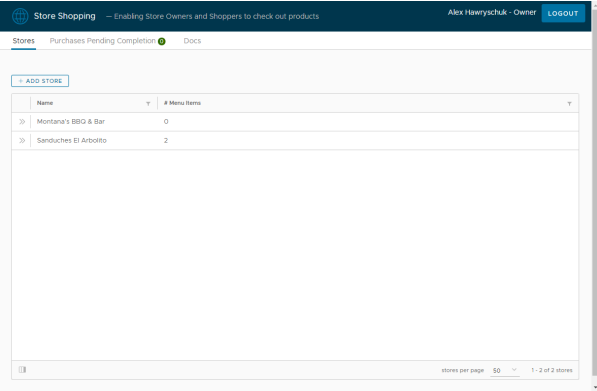


Delete a Menu Item

As a Store Owner, I can delete menu items

Having signed in, and seeing the list of "My Stores", click on the menu item,

...and then the "Delete Menu Item" button (from the dropdown that appeared).

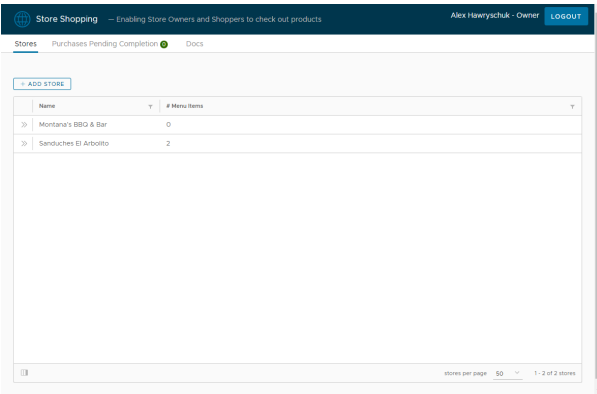
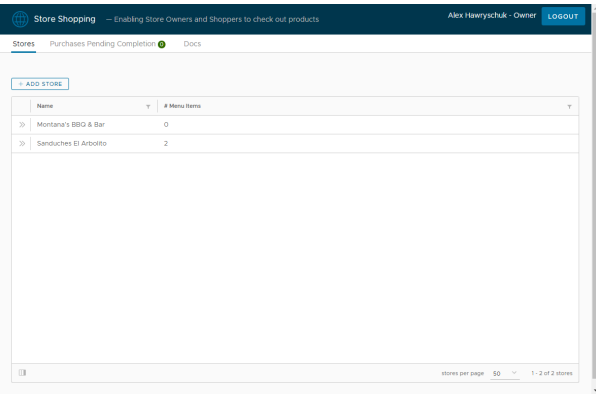


Edit a Menu Item / Replenish product inventory

As a Store Owner, I can update the inventory/menuitem details

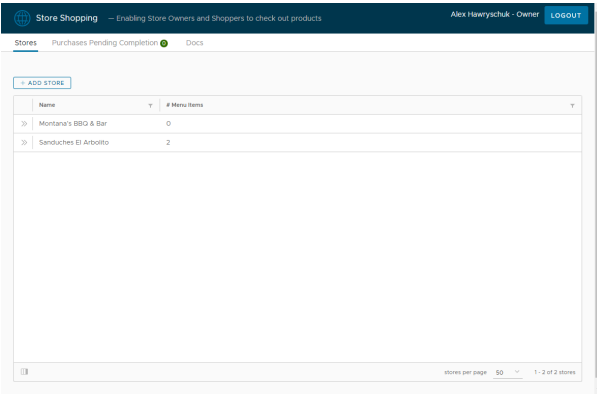
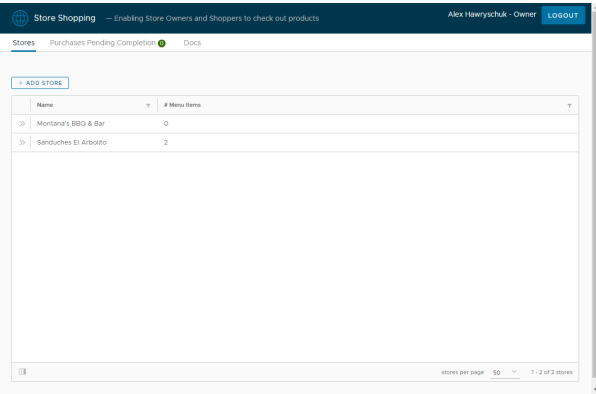
Having signed in, and seeing the list of "My Stores", click on the menu item,

...and then the "Edit Menu Item" button (from the dropdown that appeared).

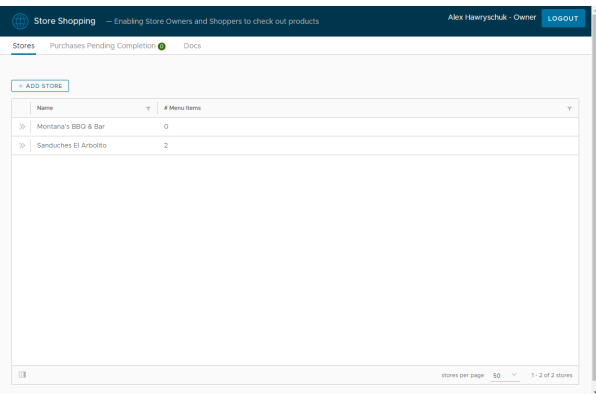


Update the description

And the new inventory adjustment



...and finish by clicking on the "Save" button



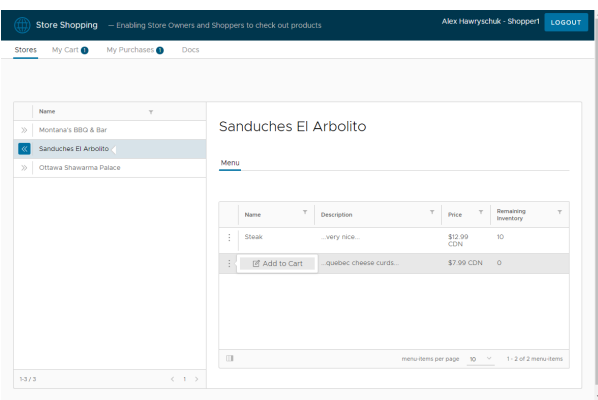
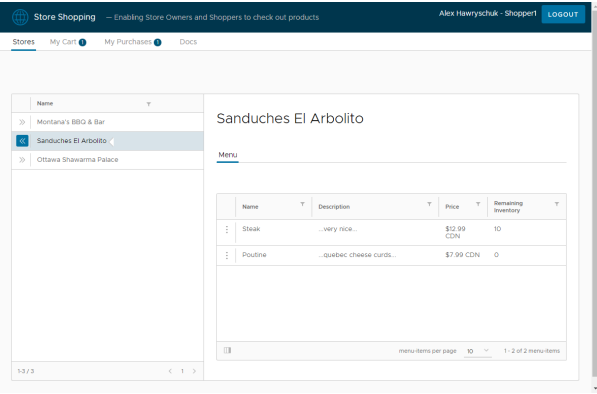
View My Purchases

As a shopper, I am interested in seeing the past purchases I've made, and the progress of my recent purchases.

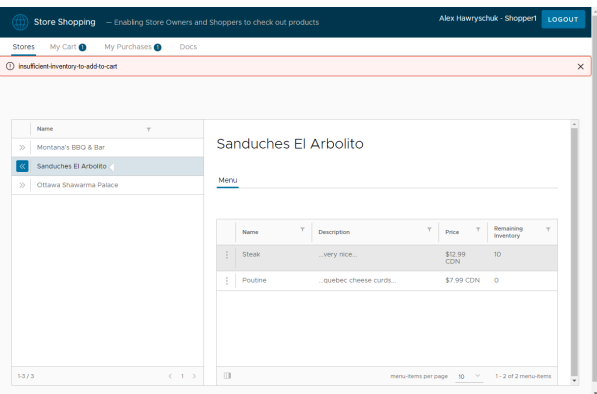
Add Items to Cart

As a regular user, you can add store menu items to your shopping cart

Starting from the "Store Details View" screen, ...click on the dropdown button (ellipses symbol) on the left side of the user row,



...and then click on "Add To Cart". Your shopping cart now has one item.

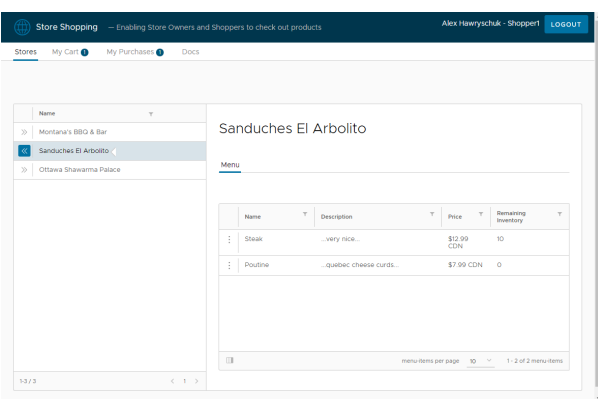
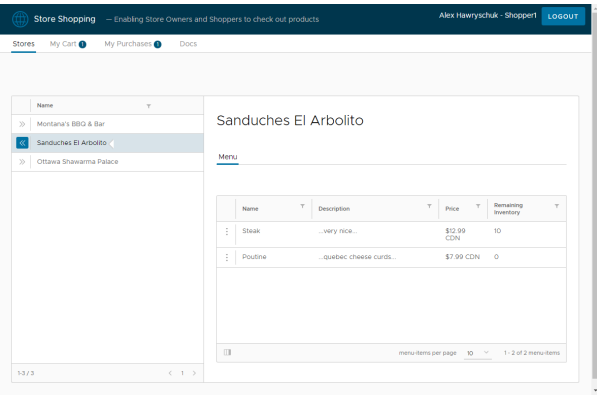


View My Cart

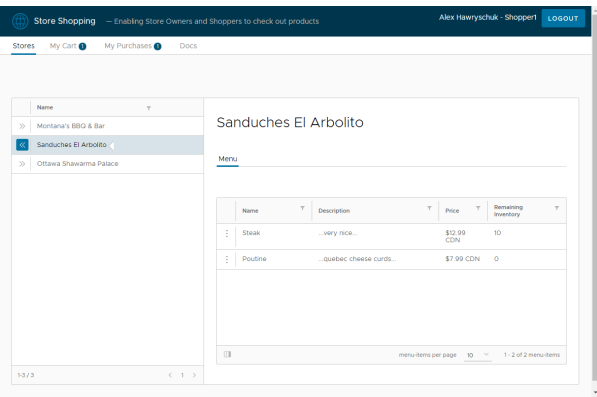
As a regular user, having items in the cart, you may view the "My Cart" page to see the total cost and check out

Starting from the "Store Details View" screen,

You may view your shopping cart by clicking on the "My Cart" link,



...and you may checkout by clicking on the "Check Out" button

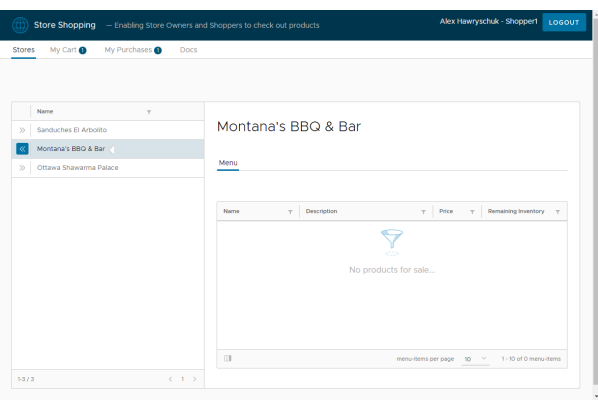
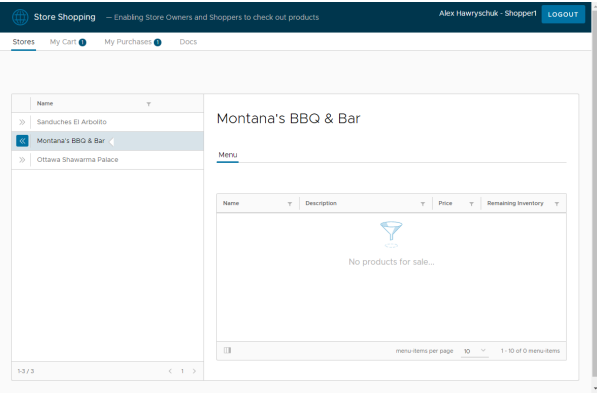


Purchase items in "My Cart" (Checkout)

As a regular user, having items in the cart, you may check-out the items and create a purchase

Starting from the "My Cart Page" screen,

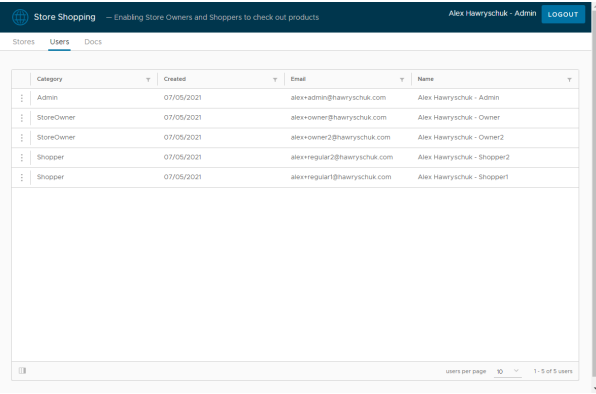
...and you may checkout by clicking on the "Check Out" button



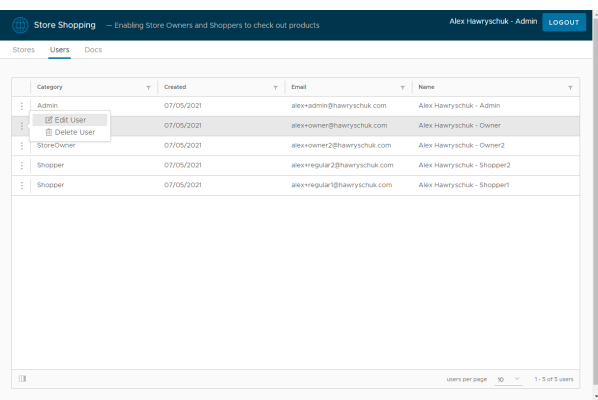
Delete a User

As an administrator user, I can delete users

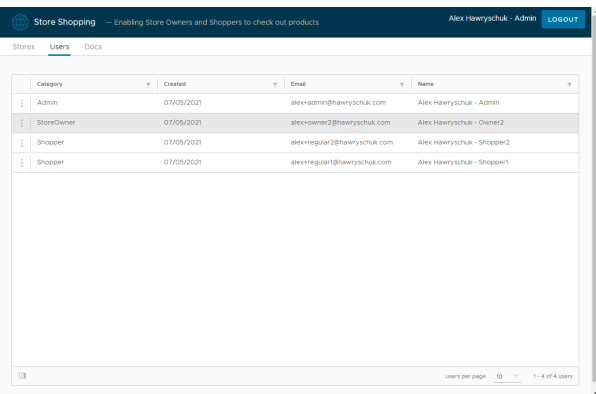
Starting from the "Users" page,



...click on the dropdown button (ellipses symbol) on the left side of the user row,



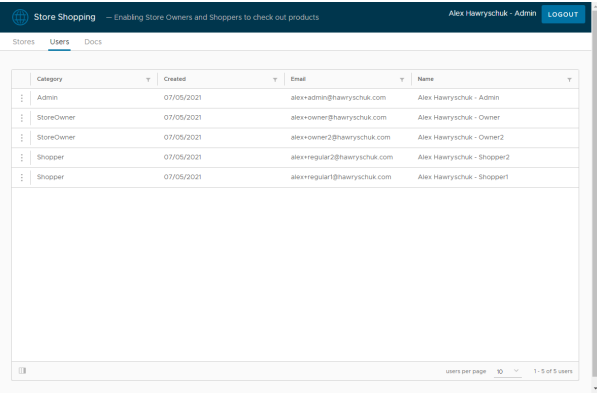
...and finally click on the "Delete User" button to delete the user.



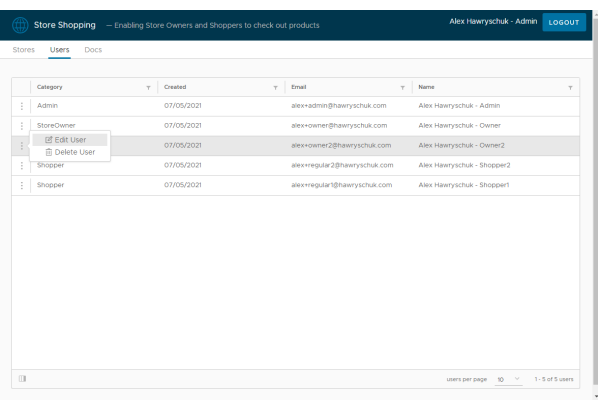
Edit a User

As an administrator user, I can edit users

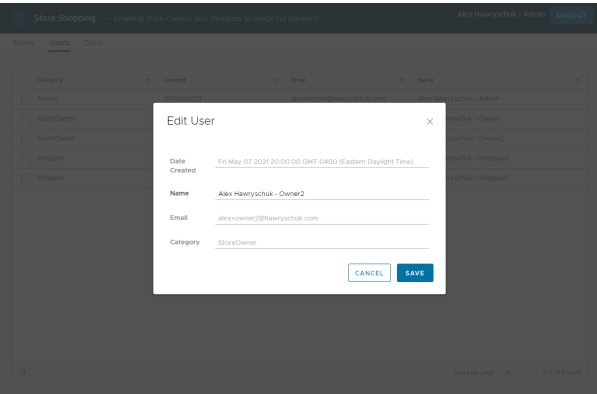
Starting from the "Users" page,



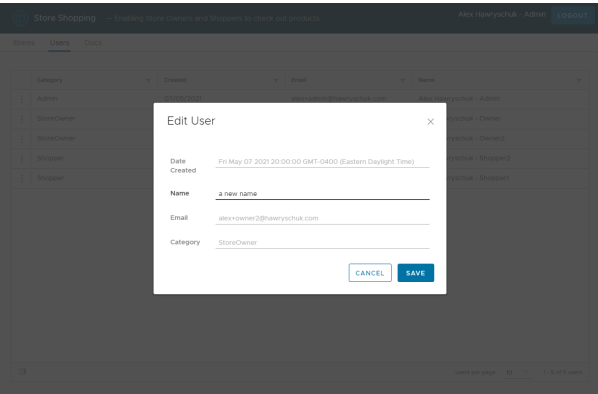
...click on the dropdown button (ellipses symbol) on the left side of the user row,



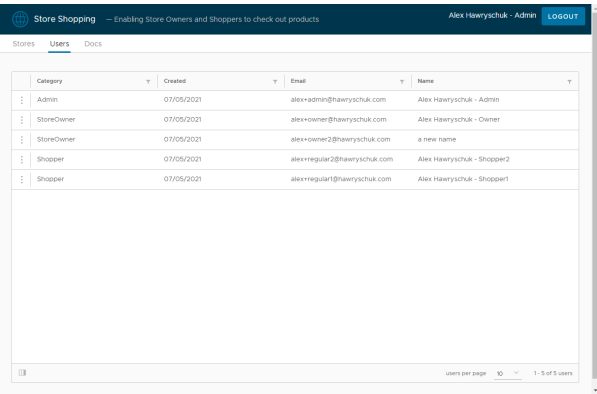
...and then click on the "Edit User" button,



...and then proceed to enter in your changes,



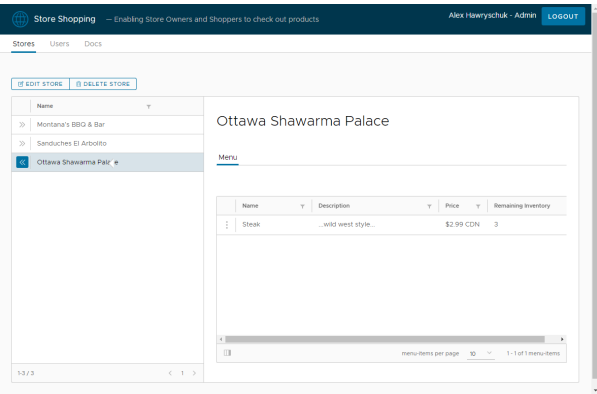
...and finally, click on the "Save" button.



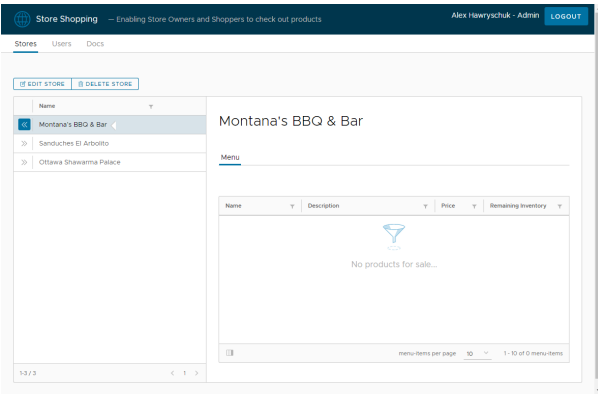
Delete a Store

As an administrator user, I can delete stores

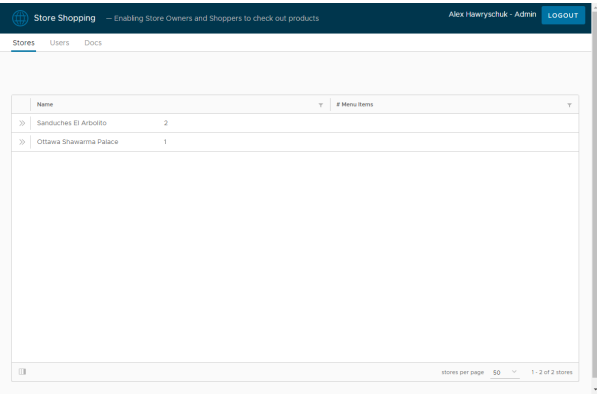
Having signed in as an admin user, I can see a list of stores



Click on the "view" button for the store you wish to remove



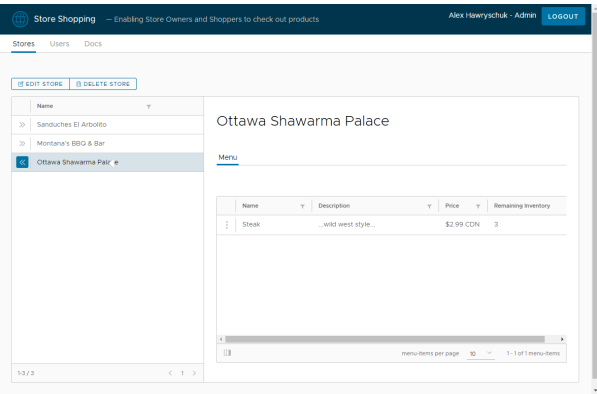
Click on the "delete" button



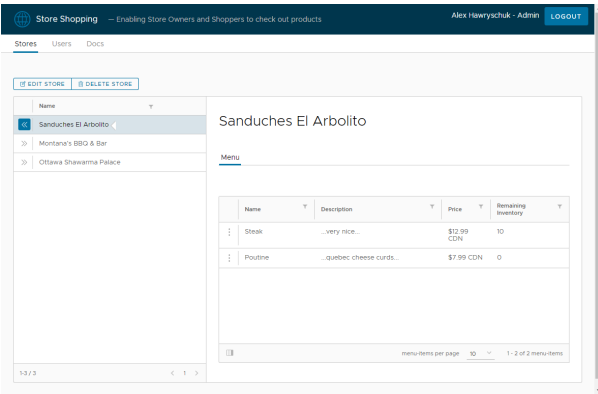
Edit a Store

As an administrator user, I can edit stores

Having signed in as an admin user, I can see a list of stores

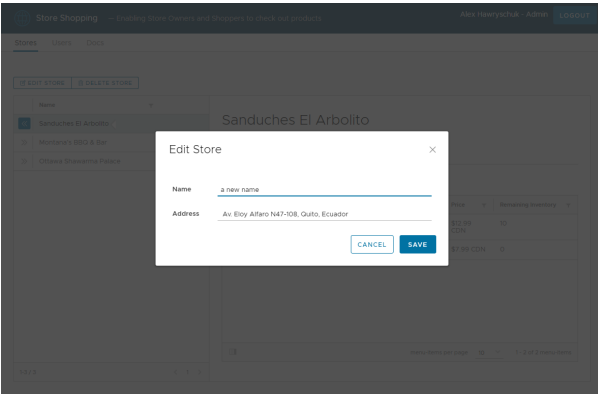
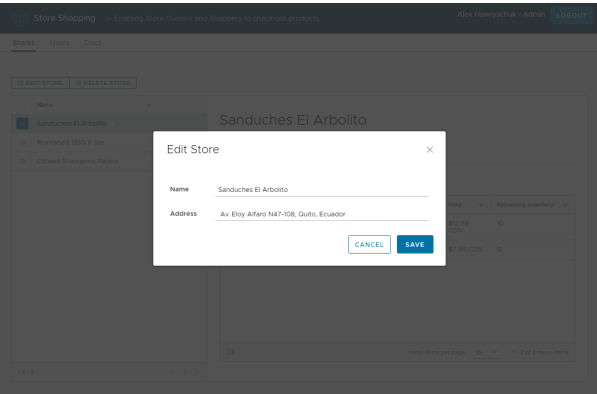


Click on the "view" button for the store you wish to edit

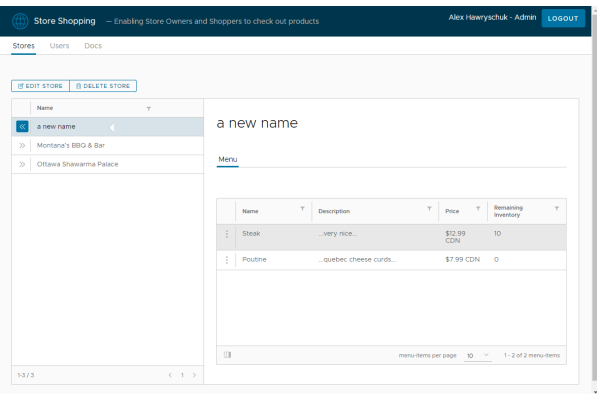


Click on the "Edit Store" button

Make changes, such as typing a new name



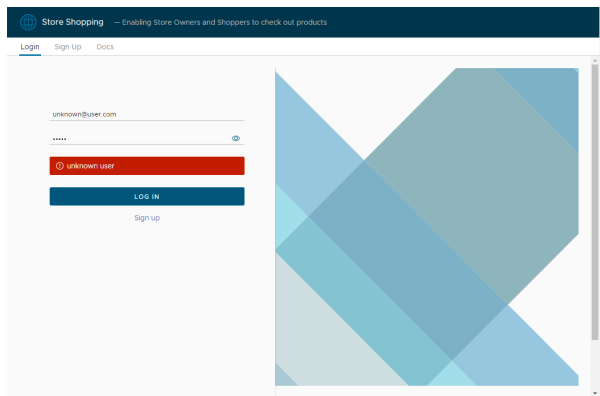
Click on the save button



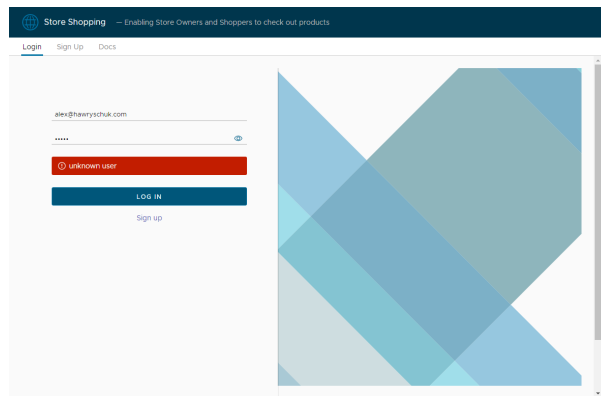
Error Detection: Log In

The username must exist, and the password must be correct

login-unknown-user



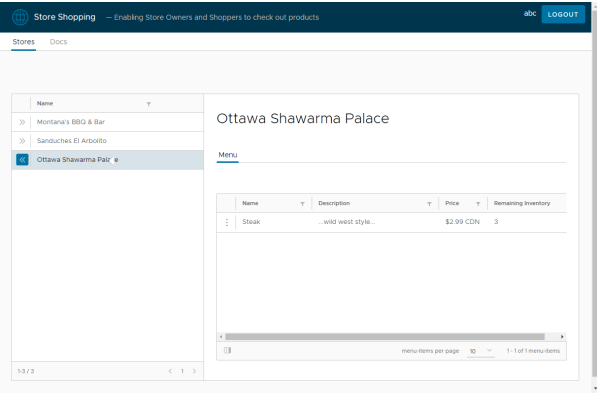
login-invalid-password



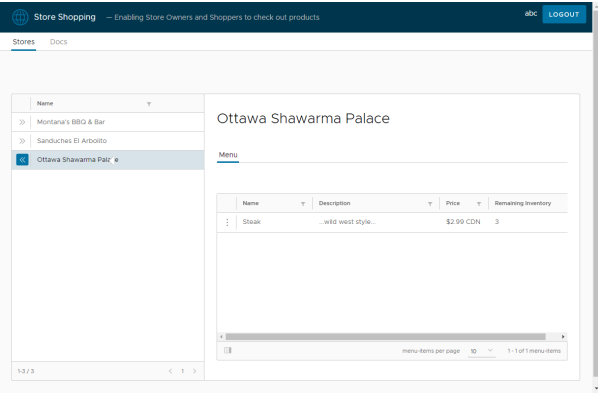
Error Detection: Sign up

The email must be valid, not already signed up, have a name, and a password.

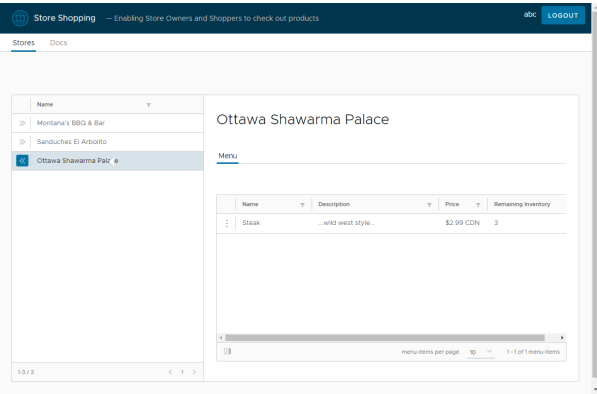
signup-user-exists



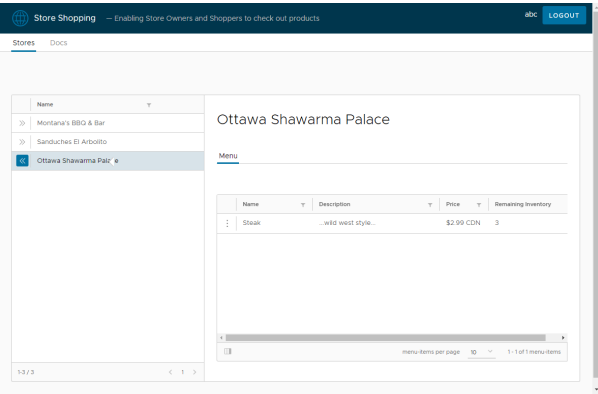
signup-invalid-email



signup-invalid-name



signup-invalid-password

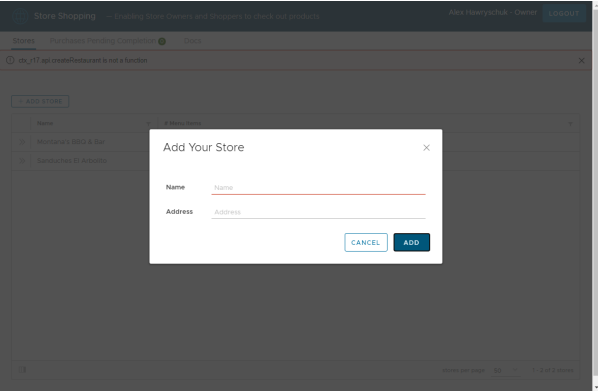
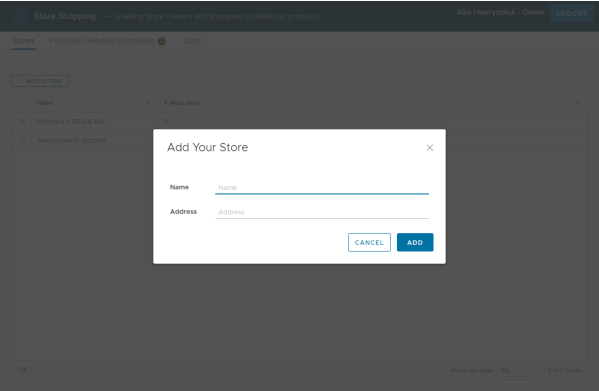


Error Detection: Create a store

Stores must have a name

Starting from after clicking on the "Create Store" button,

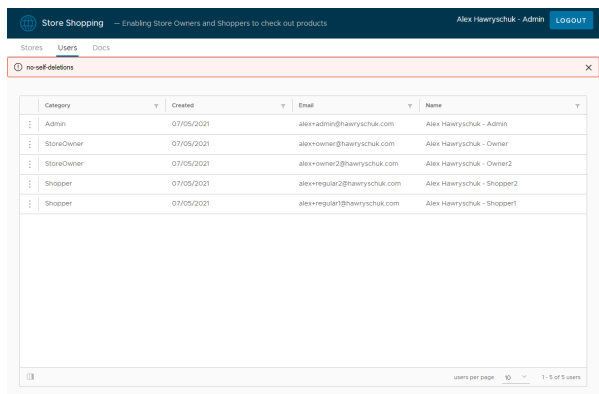
Without filling in the store name, and submitting...



Error Detection: Delete a User

The administrator cannot delete his own user account

Starting from the "Users" page, try to delete your account...

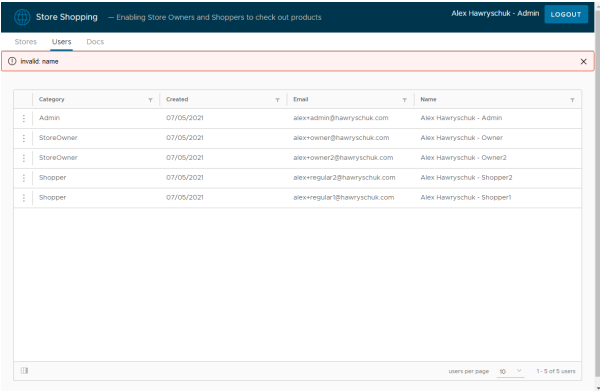
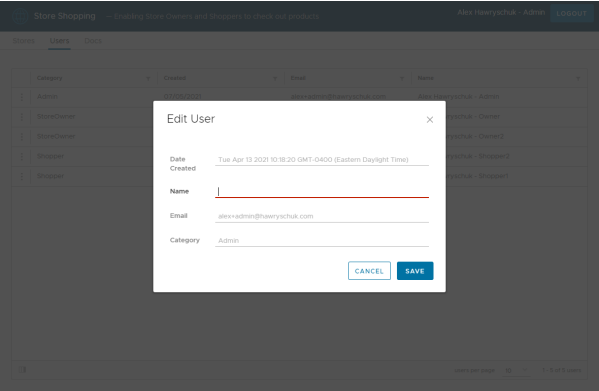


Category	Created	Email	Name
Admin	07/05/2021	alexadmin@hawryschuk.com	Alex Hawryschuk - Admin
StoreOwner	07/05/2021	alexowner@hawryschuk.com	Alex Hawryschuk - Owner
StoreOwner	07/05/2021	alexowner2@hawryschuk.com	Alex Hawryschuk - Owner2
Shopper	07/05/2021	alexregular2@hawryschuk.com	Alex Hawryschuk - Shopper2
Shopper	07/05/2021	alexregular1@hawryschuk.com	Alex Hawryschuk - Shopper1

Error Detection: Edit a User

A User must have a name

Starting from the "Users" page, having clicked ...and pressing save.



Error Detection: Edit Store

A store is required to have a name

Starting from the "Edit Store" dialog, ...once you click save, an alert will display.

