Covid Commerce

Requirements Specifications

Lucky 13

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Course: CptS 322 - Software Engineering Principles I

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TABLE OF CONTENTS

I. Introduction

Our project will be an online store. Users who want to sell products can set up their page with information about their selling for customers to see, post products to their account for customers to view, purchase, and get reviewed by those who purchase their products. Users who are looking to buy items can browse the store's homepage to view the categories of items for sale, search for a particular item, browse sellers' pages, add items to a shopping cart to purchase later, checkout what's in their cart to purchase items, and leave reviews on the items that they've purchased. The store will provide a simple way to browse and exchange goods.

Section I of this document displays general information about the project and this document itself.

Section II of this document will include environmental factors, functional requirements in the form of use cases, as well as non-functional requirements.

Section III of this document will include a rough draft of what the project should look like for users viewing the interface.

Section IV of this document will include any sources or references that were used in the making of this document or this project.

Document Revision History
Rev 1.0 10-11-2020 Initial version
Rev 1.1 10-12-2020 Created some git issues, requirement specification, use cases
Rev 1.2 10-13-2020 Added all use cases, user interface, and nonfunctional requirements

II. Requirements Specification

The product is an ecommerce website that allows users to buy and sell merchandise. There will be two types of users: a buyer user (1) and a seller user (2). Both types of users will have an account, and the ability to login and logout of the website. The account will contain fields that can be edited, such as a name, email, password, contact number, address, payment information, and order history. From there, the website will allow users to search and sort items. Every seller user will have a store page, which displays all available merchandise and information, such as price, rating, etc…. Seller users may post items to their store, view their store, update item details, and report users. Buyer users may browse the main store or the store of a seller, add items to an online cart, and make a purchase. After a purchase, buyers can give items a rating, and report a seller. Sellers can also report buyers.

II.1.   Customer, Users, and Stakeholders

The customers of our software will be anyone that wants to buy or sell products including individuals or companies. The stakeholders of our software will be people who want to sell items, buy items, other companies that sell products online, and of course Covid Commerce. The users of our software will include multiple different groups. An average person who is looking for a particular product will be able to view the store to attempt to find and purchase it. A person who does not have a particular idea of what they want can browse categories of items to gain ideas of what they want and possibly purchase something that they find interest in. Someone who does not desire anything can also browse the store for fun similarly to window shopping. The software will also be usable to a person who has extra belongings that they do not wish to have anymore and want to sell. They can decide what price they want for their items, and how to display them to any buyers on the store. Small businesses can also make use of the software by setting up their page to be visible to customers with information about their business and the products that they are selling.

II.2.   Use Cases

The actors involved in our online store include buyers and sellers. The uses cases for both users include creating an account (seller, buyer), login, logout, search, sort, edit user profile, report users. The uses cases specific for buyers only include add item to shopping cart, give review, view order history, access shopping cart, and checkout. The uses cases specific for sellers only include post item to sell, access to seller page, and edit item to sell.

Use case # 1

Name	Create seller account
Users	Sellers
Rationale	People and businesses want to be able to sell their products to consumers through many different channels. In order to sell their products in the online store sellers must create a seller account. This is to protect sellers and buyers from any bad transaction on either side by having the seller's information.
Triggers	The user selects the "Register seller" option
Preconditions	Account not already existing, user is not logged into another account.
Actions	1. The user indicates that the software is to register a seller account 2. The software responds by requesting seller information (name, email, address, etc.) 3. The user inputs their information in all the required fields and clicks register when complete. 4. The software registers the user as a new seller.
Postconditions	The seller account will be placed in the database.
Acceptance Tests	Make sure that all the required fields are correctly filled out, and the account is added to the database.
Iteration	Iteration-1

Use case # 2

Name	Create buyer account
Users	Buyers
Rationale	People like to be able to find products that they desire conveniently. The online store will allow people to buy products from people and businesses from the comfort of their home. In order to buy products in the online store buyers must create a buyer account. This is to protect sellers and buyers from any bad transaction on either side by having the buyer's information.
Triggers	The user selects the "Register buyer" option
Preconditions	Account not already existing, user is not logged into another account.
Actions	1. The user indicates that the software is to register a buyer account 2. The software responds by requesting buyer information (name, email, address, billing info, etc.) 3. The user inputs their information in all the required fields and clicks register when complete. 4. The software registers the user as a new buyer.
Postconditions	The buyer account will be placed in the database.
Acceptance Tests	Make sure that all the required fields are correctly filled out, and the account is added to the database.
Iteration	Iteration-1

Use case # 3

Name	Login
Users	All users
Rationale	Each user will need a way to store what they specifically are buying and selling while having those items associated with themselves. Having an account that must be logged into to buy and sell items will give a level of privacy to buyers so that they can store what they want to buy and their customer information to their own account to be accessed only when logged in, and a level of privacy to sellers who want to make sure that what they sell is only accessible by logged in users.
Triggers	The user selects the "Login" option
Preconditions	Account already exists, user is not logged into another account.
Actions	1. The user indicates that the software is to login a user 2. The software responds by requesting user information (username and password) 3. The user inputs their login information in all the required fields and clicks login

	when complete. 4. The software registers the user as the current user on the site.
Postconditions	The user is not already logged into a different account and the user has an existing account with the specific username and password associated with the username.
Acceptance Tests	Make sure that all the required fields are correctly filled out, and the account is found in the database, and the user is recognized on their account page and shopping cart as the correct user.
Iteration	Iteration-1

Use case # 4

Name	Logout
Users	All users
Rationale	In order to maintain privacy, each user should be able to log out of their account so that the information in their account is hidden from anyone without the proper log in credentials. This way when a user has finished on a device, no one using that device after them will be able to access their store information.
Triggers	The user selects the "Logout" option
Preconditions	The user is currently signed in.
Actions	1. The user indicates that the software is to logout 2. The software responds by making the user no longer registered as the current user on the site.
Postconditions	The user will not be logged in to the site.
Acceptance Tests	Make sure that the site appears as if no one has logged in on the device.
Iteration	Iteration-1

Use case # 5

Name	Edit user profile
Users	All users
Rationale	Information does not always stay the same, so both buyers and sellers should be able to edit their profile information at any time in order to be as accurate as possible to their current information.
Triggers	The user selects "Edit Profile" option
Preconditions	The user is logged in and makes changes to data fields of their profile legally
Actions	1. The user has logged in 2. The user indicates that they want to edit their profile

	3. The software retrieves the current user's profile.
	4. The user changes information in the profile fields legally.
	5. The software responds by changing the user's profile in the database
Postconditions	The user's profile is updated in the data base to reflect the most recent changes.
Acceptance Tests	Make sure that the information shown after an edit matches the changes made during the edit.
Iteration	Iteration-1

Use case # 6

Name	Seller page
Users	Buyers and sellers
Rationale	A seller may want to have a place to display all their items so that users who are browsing can see all their inventory from the same seller. Also, users may have a seller that they prefer and with a seller page, they can view content from that seller. The seller page will provide a place to share and view that content.
Triggers	The user selects the "Seller" option
Preconditions	The seller whose page is being viewed exists in the database
Actions	1. The user indicates that they want to see the seller's page.
	2. The software responds by finding the seller in the data base and then routing to the seller's page.
Postconditions	The page shows the seller's information (name, contact information, reviews, etc.) and the items the seller has for sale.
Acceptance Tests	Make sure that the correct seller is being displayed and the items of that seller are being displayed.
Iteration	Iteration-1

Use case # 7

Name	Post Item to sell
Users	Sellers
Rationale	For an item to be available for purchase, someone must be selling that item. By posting an item, a seller makes their merchandise available for other users to view information about the item in question and possibly buy the item.
Triggers	The user selects the "Post item" option
Preconditions	The current user is logged in as a seller, the current user does not already have an item with the same name for sale.

	1. The user indicates that the software is to register a new item
Actions	2. The software responds by requesting item information (name, type/category, description, condition, etc.) 3. The user inputs the item information in all the required fields and clicks post when complete. 4. The software adds the item to the data base and posts the item as a new item for sale associated with the seller.
Postconditions	The item can be viewed on the store and purchased by buyers.
Acceptance Tests	Make sure that the new item is visible on the seller's page and when browsing the store. Make sure the item can be added to a shopping cart.
Iteration	Iteration-2

Use case # 8

Name	Add item to shopping cart
Users	Buyers
Rationale	The point of a store is to be able to obtain items and purchasing one item at a time and immediately after discovering that one item may be inconvenient. Buyers should be able to purchase more than one item at a time if they wish, and they can do so by adding multiple items to a shopping cart. The items from the shopping cart can be checked out later once the user is ready for purchasing.
Triggers	The user selects the "Add to cart" option
Preconditions	The current user is logged in as a buyer. The user attempts to add an existing item to the cart.
Actions	1. The user indicates that the software is to add a selected item to the cart 2. The software responds by adding the item to the current users shopping cart
Postconditions	The item can be seen within the shopping cart.
Acceptance Tests	Make sure that the new item is visible in the buyer's shopping cart and when checking out, make sure that the new item is included in the total being purchased.
Iteration	Iteration-2

Use case # 9

Name	Order History
Users	Buyers and sellers
Rationale	Buyers may want to look back at what they have purchased for multiple reasons. They may have purchased an incorrect item, receive an item that they do not

	remember ordering, want to return an item, and need to find its exact listing, and more. It is important that there is some record of what someone has purchased. Sellers must also be able to track what they have sold for inventory purposes.
Triggers	A buyer purchases a seller's item
Preconditions	The user must be logged in. The user has purchased an item in the past with their account or has had an item purchased from their account.
Actions	1. The user indicates that the software is to display their past orders by selecting the Order History option 2. The software responds by routing to a page displaying the products that have been purchased by or purchased from the user in the past
Postconditions	The items previously purchased by/from the user are shown.
Acceptance Tests	Make sure that items shown in the order history have been purchased by/from the user, no extra items, no items missing.
Iteration	Iteration-2

Use case # 10

Name	Shopping cart
Users	Buyer
Rationale	Buyers may wish to view the items that they have added to their shopping cart. The shopping cart stores items for a user to look back at or purchase and its content can be edited by the buyer in case they change their mind or circumstances change.
Triggers	The user selects the "Shopping Cart" option
Preconditions	The user is logged in.
Actions	1. The user indicates that the software is to display the contents of the shopping cart. 2. The software responds by redirecting to a page to display products that have been added to the user's shopping cart.
Postconditions	The page shows the current user's shopping cart.
Acceptance Tests	Make sure that the items shown in the cart are the current user's items that they have requested to place in their shopping cart previously.
Iteration	Iteration-2

Use case # 11

Name	Checkout
Users	Buyer
Rationale	Once they have found everything they want to purchase, a buyer will want to make their purchases. Checking out will allow a user to place the order for all the items currently in their shopping cart.
Triggers	The user selects the "Checkout" option
Preconditions	The user has logged in. The user has items in their shopping cart.
Actions	1. The user indicates that the software is to place the order for the contents of the shopping cart 2. The software responds by placing the order for the items in the shopping cart, adding the contents of the shopping cart to order history, and emptying the shopping cart.
Postconditions	The user's shopping cart is empty, the items that were ordered are now in order history.
Acceptance Tests	Make sure that the shopping cart has been emptied and its previous contents can be found under order history.
Iteration	Iteration-2

Use case # 12

Name	Remove from cart
Users	Buyer
Rationale	Buyers may wish to remove the items that they have added to their shopping cart. The shopping cart stores items for a user to look back at or purchase and its content can be edited by the buyer in case their mind has been changed or circumstances change.
Triggers	The user selects the "Remove Item" option
Preconditions	The user is logged in. The user is viewing their shopping cart. There is an existing item in the shopping cart.
Actions	1. The user indicates that the software is to remove an item from the shopping cart 2. The software responds by removing the item from the contents of the shopping cart.
Postconditions	The page shows the current user's shopping cart with the removed item no longer present.

Acceptance Tests	Make sure that the items shown in the cart are the current user's items that they have requested to place there without the item that the user wanted removed.
Iteration	Iteration-2

Use case # 13

Name	Click on item
Users	Buyer
Rationale	Buyers may wish to view an item more closely or see more information about an item that they are interested in. By clicking on an item, a user will be brought to that item's page to see more information about it.
Triggers	The user clicks on an item.
Preconditions	A user is browsing, has searched for, or is looking at a seller's page and has found an existing item.
Actions	1. The user indicates to the software that they are interested in an item by clicking on it. 2. The software responds by redirecting to a page showing that item and its information.
Postconditions	The page shows the item that the user had clicked on.
Acceptance Tests	Make sure that all the information being displayed on the item's page is accurate to the item that the user had clicked on.
Iteration	Iteration-2

Use case # 14

Name	Give review
Users	Buyers
Rationale	Buyer and seller relations are important, and those relations can be built through interaction. Buyers will be able to leave reviews on seller's items to either boost that seller's credibility or warn other buyers of an untrustworthy or bad seller.
Triggers	The user selects the "Leave review" option
Preconditions	The user is logged in as a buyer. The user has purchased the item they want to review.
Actions	1. The user indicates that they want to leave a review on an item that they have purchased 2. The user inputs their information in all the required fields and clicks review when complete.

	3. The software adds the review to the database and posts the review associated with the item.
Postconditions	The review is visible with the item it pertains to.
Acceptance Tests	Make sure that the new review is visible with the item it is for and that the buyer who left the review is associated with it.
Iteration	Iteration-3

Use case # 15

Name	Search
Users	All users
Rationale	Browsing a store when one wants a particular item can take a long time. Both buyers and sellers should be able to find products based on a search to speed up the process. Sellers may want to see competing products that are like their own, and buyers may be searching for a particular type of product.
Triggers	The user selects fills in the search bar and selects the "Search" option
Preconditions	The user has filled out the search criteria.
Actions	1. The user indicates that the software is to search for certain products 2. The software responds by retrieving and displaying products that match the user's search from the database
Postconditions	The items displayed match what the user has searched for.
Acceptance Tests	Make sure that the items shown after the search match the search conditions that the user has entered.
Iteration	Iteration-3

Use case # 16

Name	Sort
Users	All users
Rationale	Both buyers and sellers should be able to find products based on a search and that will be made easier with the ability to sort search results. Sellers may want to see competing products based on price or reviews, and buyers may be searching for a product while on a specific budget or may want to find products that have performed the best. Sorting will allow for users to find products meeting certain criteria that matter most to the user.

Triggers	The user selects the sort criteria
Preconditions	The user filled in the required sorting criteria fields.
Actions	1. The user indicates that the software is to display products in an order 2. The software responds by displaying products in an order that matches the user's input sort criteria
Postconditions	The items displayed order match what the user has chosen to sort by.
Acceptance Tests	Make sure that the items shown after the search match the sort conditions that the user has requested.
Iteration	Iteration-3

Use case # 17

Name	Edit item
Users	Sellers
Rationale	A seller may want to edit information about an item that is being sold. The information may be outdated, or the seller may desire to portray the item in a different way. Markets often change, so sellers should be able to update their items for sale to reflect any changes.
Triggers	The user selects the "Edit Item" option
Preconditions	The user is logged in as a seller. The user has posted an item previously.
Actions	1. The user indicates that they want to edit an item 2. The software responds by retrieving the item of the current user in the data base. 3. The user edits the information fields of the item legally. 4. The software updates the item's information in the data base.
Postconditions	The item's information in the data base is updated to reflect the most recent changes the seller of that item has made.
Acceptance Tests	Make sure that the correct changes have been made to the item that was edited.
Iteration	Iteration-3

Use case # 18

Name	Report User
Users	All users
Rationale	A user may have a negative experience with another user. This experience may not revolve around the purchasing of an item and so leaving a review may not

	suffice for action to be taken. A user can report another user for inappropriate behavior in order to resolve an altercation.
Triggers	The user selects the "Report User" option
Preconditions	The user is logged in.
Actions	1. The user indicates that they want to report a user 2. The software responds by retrieving the user to report. 3. The user fills out the report to tell why they are reporting a user. 4. The software records the report in the data base.
Postconditions	The report of the user is recorded in the data base.
Acceptance Tests	Make sure that the correct user was associated with making the report and the correct user was associated with the subject of the report. Make sure that the content of the report is accurate.
Iteration	Iteration-3

II.3.   Non-Functional Requirements

1. Login Attempts: after 3 failed login attempts, a user should contact staff to have it reset.
2. Ratings: products with more than 20% "1 Star" ratings must be removed by the seller.
3. Reports: Users who have been reported more than 2 times should contact staff to resolve altercations.
4. Account: Users cannot have an account if there is a field (name, email, password, contact number, address, payment information) that they are unwilling to provide.
5. The website can support having up to 5,000 user accounts total.
6. The system should be compatible with all major browsers (Chrome, Firefox, Safari, etc.)
7. The project will be delivered over three iterations using the agile process.
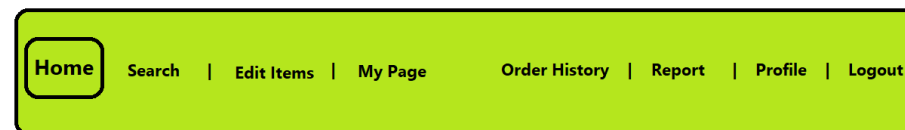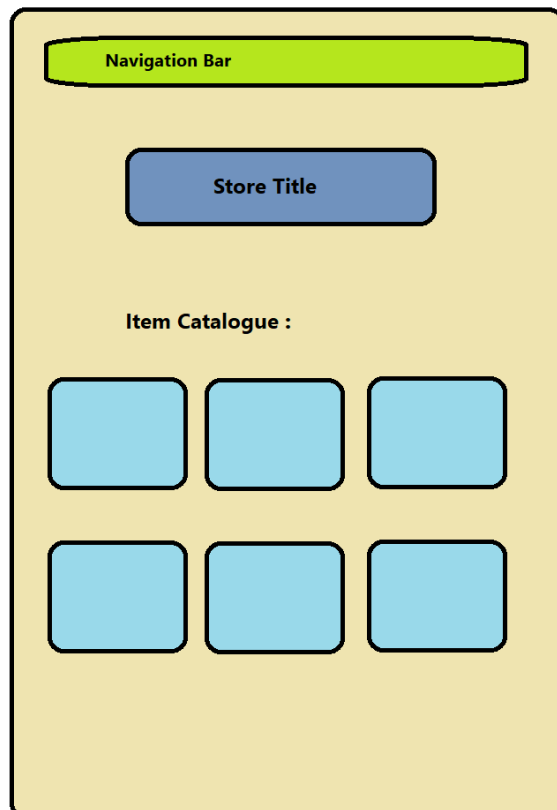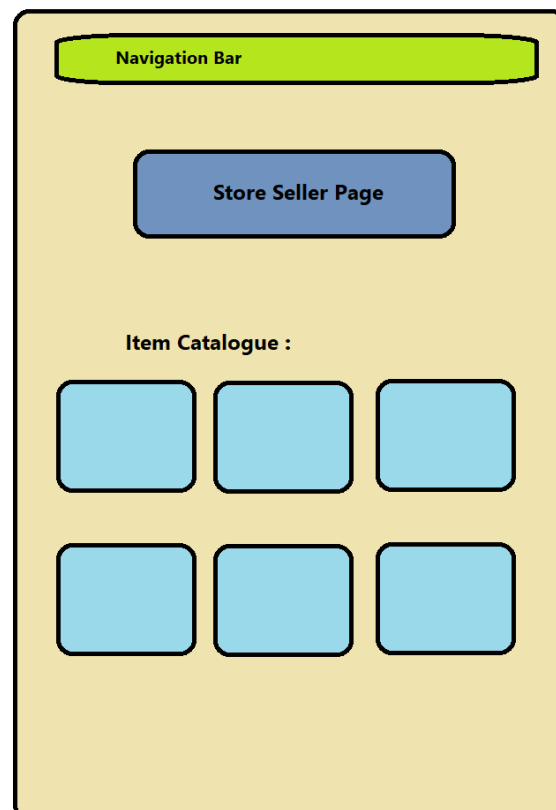
III. User Interface

Navigation Bar

Guest User

| Home | Search | Cart | Checkout | Create Account | Login |

User: Buyer

| Home | Search | Cart | Checkout | Order History | Reviews | Profile | Logout |
| Report |

User : Seller

| Home | Search | Edit Items | My Page | Order History | Report | Profile | Logout |

Main Store Page

Navigation Bar

Store Title

Item Catalogue :

Store Seller Page

Navigation Bar

Store Seller Page

Item Catalogue :

Nav Bar

Register New Users

Name

Email

Username

Password

Address

Payment

Select User Type:

☒ Buyer   ☐ Seller

Submit

Nav Bar

Login

username

password

submit

Nav Bar

Item Page

Item Picture

Item Description:
-Price
-Ratings
- Availability

Buyers ➡ Add Item to Cart   Edit Item ⬅ Sellers

Nav Bar

Cart

Item   Remove Item

Item   Remove Item

Total : $$

Checkout

Nav Bar

User Profile

| Name | Edit | | Email | Edit |

| Username | Edit | | Password | Edit |

| Address | Edit | | Payment | Edit |

Update

Nav Bar

Order History

Order	Date	Total
Order # : ... - item list - price		
Order # : ... - item list - price		
Order # : ... - item list - price		

Report   **Review**

Nav Bar

Report User

User Name

Order #

Reason

Date

Submit

Nav Bar

Review Item

Item Name

Order #

Stars: 1-5

Details

Submit

Nav Bar

Add Item

Item Name

Stock Quantity

Price

Category

Description

Images

Submit

Nav Bar

Edit Item

Item Name   Edit

Stock Quantity   Edit

Price   Edit

Category   Edit

Description   Edit

Images   Edit

Update

IV. References