Faculty of Engineering & Applied Science

SOFE 3650U
Software Design & Architecture

Project Progress Report:
Smartshop

Group#: 8

Due Date: November 8th, 2021

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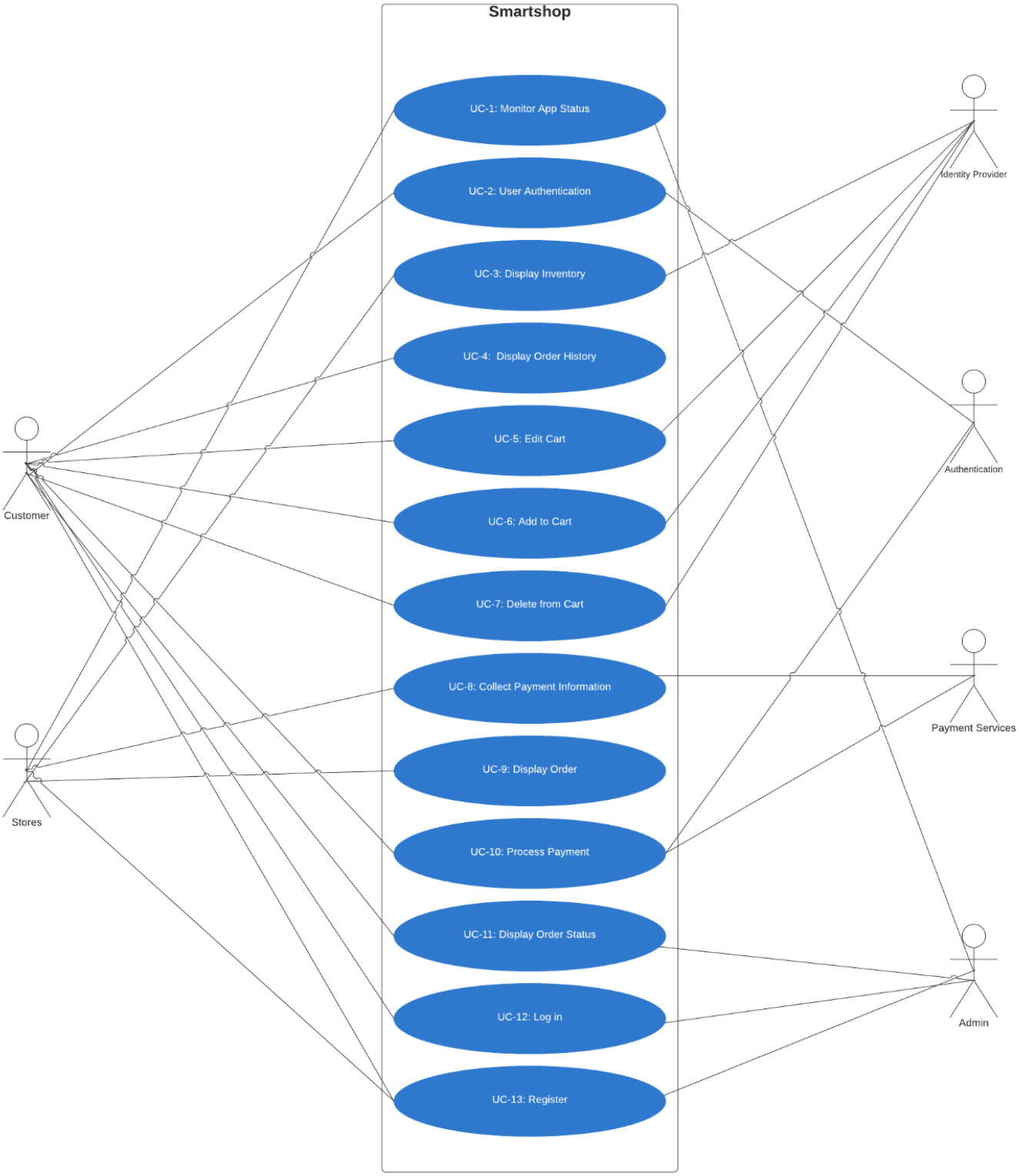
Use Case Model



Use Case	Description
UC-1: Monitor App Status	Admin monitors the app status to monitor the entire network and allow customers to be aware of any potential downtime on the network disallowing usage of the app. This representation is continuously monitoring any latency and bandwidth issues regarding them and repairing them when detected.
UC-2: User Authentication	User or store via app authenticates against the identity provider to establish a network for the customer to allow access to the app that acts as a way as a proxy for the stores to be displayed to the customer.
UC-3: Display Inventory	Stored inventory associated with a particular inventory item or several items and services are displayed. Can be filtered out by item type in inventory such as food or express delivery.
UC-4: Display Order History	Stored events associated with a previous order or several orders before are displayed. Can be filtered out by order type in history such as date or store name.
UC-5: Edit Cart	Edits highlighted inventory in cart.
UC-6: Add to Cart	Adds requested inventory to cart.
UC-7: Delete from Cart	Deletes highlighted items in inventory from cart.
UC-8: Collect Payment Information	Payment information (credit card, debit card, PayPal) is collected to confirm prior to purchase.
UC-9: Display Order	The user displays stored information regarding the inventory that has been purchased and other parameters such as taxes as well as delivery fees.
UC-10: Process Payment	With collected payment information, the locally stored information will then be processed to complete the purchase.
UC-11: Display Order Status	The app displays the order status that is made regarding the app status in a standard way that is made to analyze the performance and efficiency of the order.
UC-12:Log in	A user logs into the system through an authentication screen asking for username and password. When successfully logged in, the user is presented with different stores to browse through to make a purchase.

UC-13:Register	A new user registers into the system through an authentication screen using a unique username and password. When successfully registered, the user is taken to the app home page.

Quality Attribute Scenario

ID	Quality Attribute	Scenario	Associated Use Case
QA-1	Performance	Several users send requests to login or register a new account. 100% of these requests are processed.	UC-12, UC-13
QA-2	Usability, Performance	Users can easily navigate throughout the application. The system responds within seconds efficiently without any interruptions and displays customers requests.	All
QA-3	Modifiability	New components are easily integrated into the system without interrupting the users and the core of the application.	UC-1, UC-2
QA-4	Security	Secure system prevents malicious and unauthorized requests from altering the application. All user inputs and queries are secured in a database.	All
QA-5	Interoperability	Application system successfully interacts with the corresponding grocery stores system to display inventory.	UC-3
QA-6	Availability	A glitch can occur in the server database not processing any potential payment. The server will fix itself upon terminating the order and the application	All

		and then reopening it to clear cache, or will repair itself within 30 seconds.	
QA-7	Testability	Will process the payment, and test to make sure that all the payment information is accurate and valid before completing the payment process.	UC-8, UC-10

Constraints

ID	Constraints
CON-1	Application must be compatible with both ios and android devices.
CON-2	Application must be accessible to the public. This cannot interfere with existing users' security information.
CON-3	Decreased bandwidth for user convenience without affecting overall performance.
CON-4	System must be able to price match across multiple stores.
CON-5	Orders from the last 30 days must be stored.

Architectural Concerns

ID	Concerns
CRN-1	Establishing initial app breakdown and workflow
CRN-2	Having the app be suited to the customer in an available way using different devices that may be outdated so it can still be accessed without needing software updates
CRN-3	Divide the server load of busy to non busy across different time zones

Review Inputs

Scenario ID	Importance to the Customer	Difficulty of Implementation According to the Architecture
QA-1	High	High
QA-2	Medium	Medium
QA-3	High	Medium
QA-4	High	Low
QA-5	High	Medium
QA-6	High	High
QA-7	Medium	Low