

## CSC 510 Project 1B1 - Fall 2025

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#### Reflection

For project 1b1, we compared Llama 3 (using Ollama) and Qwen 2.5-7B (using Hugging Face Chat). Both options are free. With zero-shot prompting, Qwen would give lengthy and generic outputs that ignored our constraints (returned paragraphs instead of subflows). Llama 3 wasn't perfect but it showed us a stronger understanding using the traffic light example we gave it from the lecture slides.

With careful prompting, we would feed the LLM examples and constraints on what to write about. Also I added an extra step where I would first use the LLM to discover what the documents were about and report back to me the top 10 most prevalent and important topics from the index. Llama 3 outperformed Qwen in this case. It generated better use cases with more consideration for edge cases (ex) "[Flag Critical] Require photo if fridge >40°F". Qwen improved but still used generic alternatives ("System shows error") and required multiple prompts to reduce hallucinations. Even when RAG's context was thin from the topics I would ask them, Llama 3 would keep it consistent, while Qwen would continue to be vague.

We chose Llama 3 for three reasons:

1. More consistent and professional format
2. More reliable when context wasn't as great from RAG
3. Faster, higher precision and completely free

#### Cost

Free

#### Selfmade Use Cases

##### 1. Create Item/Recipe (Staff)

**Preconditions:** Staff member is logged in and authorized to edit the menu. All required data to create item/recipe (eg. inventory location, units) are present in the system.

**Main flow:**

- a. Staff selects *Create Item / Create Recipe*
- b. System shows the form to create recipe (eg. name, duration, ingredients, relevant media, price)
- c. Staff completes required fields and adds required ingredient
- d. Staff adds any optional fields such as images of the dish/item.
- e. Staff hits *Preview* and is shown the preview of the recipe to be added to the system
- f. Staff confirms details and Submits
- g. System confirms to staff with success message

**Subflows:**

- h. If ingredient is not present in system and staff needs it to finish creating recipe, they may be able to create it inline and attach it in the current running workflow
- i. When uploading images, system will validate size, file type and store image

**Alternate flows:**

- j. Invalid or empty required fields: do not continue, prompt user to re-enter
- k. Failed to upload image: do not continue, prompt to re-enter
- l. User role/Permissions denied: return 403 Forbidden

**2. Add Inventory (Staff)**

**Preconditions:** Staff member is logged in and authorized to edit the menu. All required data to create item/recipe (eg. inventory location, units) are present in the system.

**Main flow:**

- a. Staff goes to Inventory section and selects *Add*
- b. Staff selects an existing Inventory unit (or creates new one) and enters details (eg. quantity, location, price, expiration, etc)
- c. Staff confirms inventory form
- d. System creates a receipt of newly created inventory and displays to staff
- e. System returns success code and updates inventory in DB

**Subflows:**

- f. Create inventory unit: Create metadata for the inventory slot to use
- g. Unit of measurement creation: Add UOM enum and store in system (eg. in, lb, gal)

**Alternate flows:**

- h. Invalid or empty required fields (including negative quantities): do not continue, prompt user to re-enter
- i. Invalid Inventory unit or UoM: 400 Bad Request
- j. User role/Permissions denied: return 403 Forbidden

**3. Purchase Item/Recipe (Customer)**

**Preconditions:** Item/Recipe has been created and submitted. Item is mapped to inventory and there is one or more available.

**Main flow:**

- a. Customer selects the item and chooses modifications, quantity, and time window for pickup
- b. Customer checks out their items
- c. System calculates price, tax, and displays order summary for user
- d. Customer inputs payment information and confirms order
- e. System process payment and creates order record, displaying success

- f. System sends message/event of order to staff
- g. System sends customer ETA and relevant information

**Subflows:**

- h. Apply discount: validate code and recalculate before payment
- i. Pay-at-store: skip payment authorization, prompting to staff that the customer will pay in cash/at store

**Alternate flows:**

- j. Inventory insufficient: show substitution or suggest later pickup
- k. Payment failure: prompt retry or alternate payment

#### **4. Create/Edit Staff User (Admin)**

**Preconditions:** Admin has been authenticated and has the proper user roles.

**Main flow:**

- a. Admin opens Users page and clicks on *Create/Edit Staff*
- b. If Create: Admin fills in required details (name, email, phone number, user role, position, username, etc)
- c. If Edit: Admin selects a staff user from the dropdown and updates the fields on the Edit User pop up
- d. System records the entry and updates users in DB

**Subflows:**

- e. Password reset: Admin is prompted to confirm whether staff's password should be reset. Once confirmed, an OTP email will be sent to staff members.

**Alternate flows:**

- f. Invalid role/station: 400 Bad Request
- g. Attempt to delete last admin: 403 Forbidden
- h. Authorization failure: 403 Forbidden for non-admin attempts.

#### **5. Create/Edit/Delete Customer User (Admin)**

**Preconditions:** Admin is authenticated and authorized to manage customers. Required fields and validation rules are configured.

**Main Flow:**

- Admin selects create customer
- Enter profile data
- System validates inputs
- System checks the uniqueness constraints
- System creates customer record
- System shows confirmation and the profile of customer

**Subflows:**

- Display empty form set to customer
- Enter data

- Validate and ensure correct formats
- Check user/email is unique
- Create a persistent record, hash the password and set timestamps.
- Show success.

**Alternate flows:**

- To edit a customer, the admin finds the existing customer, updates the data, the system validates the input, and then updates the record before showing the updated profile.
- The admin finds the customer, confirms the action, and the system marks the account as inactive before returning to the list view. Validation Error: The input fails validation, so the system highlights errors and the admin corrects them before retrying.
- Cancels operation nothing is saved.

## **6. Place Order with Multiple Items + Tip (Customer)**

**Preconditions:** Menu item and inventory exist, tax rate and tip options are configured. The payment service is online and reachable.

**Main Flow:**

- Customer looks at items
- Customer adds items to cart
- System computes cart subtotal tax and tip
- Customer chooses tip amount
- Customer goes to checkout
- Customer enters details for payment
- System authorizes payment
- System creates order and reserves the inventory and then pushes to staff queue.
- System confirms to customer

**Subflows:**

- Find items, search and browse catalog
- Choose modifiers and options for item
- Find the totals including tax and tip
- Customer picks the preset tip or custom tip
- Customer enters a pickup name time
- Provide payment method
- Save order send order to queue and show on screen confirmation

**Alternate Flows:**

- If the customer is signed in, saved profile and payment information are used. If the customer is a guest, they provide only the minimum required information.
- The payment fails, so the system shows an error and allows the customer to retry or use a different method. Out-of-Stock Item: At checkout, the system flags an

unavailable item and either suggests a substitution or asks the customer to remove it.

- Before payment, the customer adjusts the tip amount, and the system immediately updates the total.
- The customer cancels the order before payment, so no order is created and the cart is either discarded or saved temporarily.

## 7. View Orders (Staff)

**Preconditions:** Staff is authenticated as staff and orders exist in the system.

**Main Flow:**

- Staff opens the orders dashboard
- System shows orders by status, is it incoming, in progress ready completed etc.
- Staff applies filters or sorts
- Staff selects an order to view the details
- Staff updates the order status
- When an order is ready system will notify customer
- Order transitions to completed once its handed to customer

**Subflows:**

- Default view for staff
- Show order status focus on overdue orders
- Filter by attributes of orders
- Expand details on items within the order
- Transition the order status
- Notify customers on ready.

**Alternate Flows:**

- The system shows an empty state if no orders are available.
- If the connection is lost, the system displays an offline banner and refreshes the queue once the connection is restored.
- Staff assigned to specific stations see only the orders relevant to their role.
- The system encounters a load error, so it displays a retry option and logs the issue.
- If the order is already fulfilled or canceled, the system shows a conflict message and prompts the staff to refresh the queue.

## 8. Fulfill Order (Staff)

**Preconditions:** Authenticated as staff, order exists and is OPEN, items are ready (ops) and services are reachable.

**Main flow:**

- Open Orders Queue → see OPEN orders
- Select order → Fulfill

- System validates role/state → sets FULFILLED, writes fulfilledBy/fulfilledAt (atomic)
- Emit status change (websocket/poll) → pickup display shows Ready
- Return 200 OK; order leaves OPEN list (or appears under Fulfilled)

**Subflows :**

- Confirm action (lightweight)
- Audit trail (fulfilledBy, fulfilledAt, prior status)
- Notify via event/poll flag
- Idempotent: repeat clicks don't double-fulfill

**Alternate flows:**

- No open orders: show empty state
- Stale state: already fulfilled/cancelled → 409 (refresh UI, disable Fulfill)
- Auth failure: not staff → 403
- Invalid request: bad/missing ID → 400, reselect and retry.

## 9. Order Pickup Notification (Customer)

**Preconditions:** Order exists, identified by login or pickup code, staff has FULFILLED the order, pickup screen (public board or “My Orders”) and connectivity available.

**Main flow:**

- Customer opens pickup screen / “My Orders.”
- System subscribes (websocket) or polls for status.
- Fulfillment event detected → UI shows Ready for Pickup with code/location.
- Customer taps Got it; entry auto-hides after a short TTL.

**Subflows:**

- Privacy masking: show code/initials, not names or item details on public boards.
- Accessibility: live regions, keyboard focus, adequate contrast.
- If a customer has more than one order, show each with its own code/status and update them independently.

**Alternate flows:**

- Wrong code: show not found / retry.
- Cancelled: show Cancelled with help cue.
- Notification/display failure: fallback to polling; show small retry banner.
- Duplicate/out-of-order events: treat idempotently; keep latest status.
- Display offline: personal “My Orders” still updates; staff can call the code.

## 10. Set Tax Rate (Admin)

**Preconditions:** Authenticated as admin, settings UI/API available, current tax rate is retrievable.

**Main flow:**

- Admin opens Settings and selects Tax Rate.

- Enter a new rate and click Save.
- System validates input (numeric, 0–100%, precision/format).
- Persist change atomically, set updatedBy/updatedAt and new version.
- Invalidate caches; subsequent new orders use the new rate; system returns 200 OK and shows confirmation.

**Subflows:**

- Audit & versioning: Record updatedBy, updatedAt, previous value; keep a change log.
- Precision & rounding: Enforce allowed decimals (e.g., two); document rounding rules for order totals.
- Effective timing: Change applies immediately to new orders only; existing orders are not recalculated.

**Alternative flows:**

- Authorization failure: Non-admin throws 403 Forbidden.
- Validation error: Non-numeric, out of range, too many decimals throws 422 Unprocessable with inline hint.

**Use Cases suggested by LLMs**

**11. Prepare & Store Sandwich (Food Safety)**

**Preconditions:** The café has implemented a food safety program and staff have been trained on proper handling and preparation of food.

**Main Flow:**

- A customer orders a sandwich at the counter.
- The barista receives the order and prepares the sandwich.
- The barista places the sandwich in a container with a date label and stores it in the refrigerator.

**Subflows:**

- [Prepare Sandwich] The barista washes their hands [Wash Hands], puts on gloves [Put On Gloves], and assembles the sandwich [Assemble Sandwich].
  - + [Wash Hands] The barista washes their hands for at least 20 seconds with soap and water.
  - + [Put On Gloves] The barista puts on a pair of clean, disposable gloves to prevent cross-contamination.
  - + [Assemble Sandwich] The barista assembles the sandwich using ingredients stored at the correct temperatures.
- [Label Container] The barista labels the container with the date it was prepared and stores it in the refrigerator.
- [Store Refrigerator] The barista stores the container in the refrigerator at a temperature of 40°F (4°C) or below.

**Alternative Flows**

- [Staff Illness] A staff member calls in sick due to illness. The café notifies customers of the delay and reschedules orders as needed.
- + The café follows RCW 43.20.145, which requires food establishments to notify customers of any delays or changes in service that may affect the safety of their food.

## **12. Report Foodborne Illness**

**Preconditions:** A customer reports a foodborne illness after consuming food from the café.

### **Main Flow:**

- A customer reports a foodborne illness to the café.
- The café staff member receives the report and documents it [Document Report].
- The café staff member investigates the incident [Investigate Incident] and notifies local health authorities as required.

### **Subflows:**

- [Document Report] The café staff member documents the report, including the customer's name, order details, and symptoms.
- [Investigate Incident] The café staff member reviews food handling and preparation procedures to identify any potential causes of the illness.
  - + [Review Procedures] The café staff member reviews procedures for receiving, storing, preparing, and serving food to ensure compliance with food safety regulations.
- [Notify Health Authorities] The café staff member notifies local health authorities as required by RCW 43.20.145.

### **Alternative Flows:**

- [Multiple Reports] Multiple customers report similar symptoms after consuming food from the café. The café investigates and takes corrective action to prevent further incidents.
  - + The café may need to conduct a thorough investigation, including sampling of food products and environmental surfaces, to identify the source of the contamination.

## **13. Checkout: Review & Nutrition**

**Preconditions:** The customer has added items to their order and is ready to proceed to checkout.

### **Main Flow:**

- The system prompts the customer to review their order [Review Order].
- The customer reviews their order and selects a payment method [Select Payment Method].



- The system displays nutrition information for each item in the order, including calories, allergens, and macros [Display Nutrition Info].

**Subflows:**

- [Review Order] The system displays the items in the order, with options to edit or remove items [Edit/Remove Items][Cancel Order].
- [Select Payment Method] The customer selects a payment method (cash, card, etc.) and provides any necessary payment information [Enter Payment Info].
- [Display Nutrition Info] The system displays detailed nutrition information for each item in the order, including calories, allergens, and macros, as required by OFD guidelines [Validate Nutrition Info].

**Alternative Flows:**

- [Edit/Remove Items] The customer edits or removes an item from their order. The system updates the order total and recalculates nutrition information [Recalculate Total][Display Updated Nutrition Info].
- [Cancel Order] The customer cancels their order. The system prompts them to confirm cancellation [Confirm Cancellation].

#### **14. Allergen Alert & Ingredient Review**

**Preconditions:** A customer with a food allergy is ordering and requires detailed nutrition information to ensure their safety.

**Main Flow:**

- The customer selects an item from the menu that contains allergens they are sensitive to [Select Allergenic Item].
- The system alerts the customer to potential allergen concerns and prompts them to review the ingredient list [Alert Customer][Review Ingredient List].
- The customer reviews the ingredient list and confirms their order, with the system providing detailed nutrition information for each item in the order [Display Nutrition Info].

**Subflows:**

- [Select Allergenic Item] The customer selects an item from the menu that contains allergens they are sensitive to.
- [Alert Customer] The system alerts the customer to potential allergen concerns and prompts them to review the ingredient list [Review Ingredient List][Cancel Order].
- [Review Ingredient List] The customer reviews the ingredient list for their selected item, with options to edit or remove items [Edit/Remove Items].
- [Display Nutrition Info] The system displays detailed nutrition information for each item in the order, including calories, allergens, and macros, as required by OFD guidelines [Validate Nutrition Info].

**Alternative Flows:**

- [Cancel Order] The customer cancels their order due to concerns about allergen exposure. The system prompts them to confirm cancellation [Confirm Cancellation].
- [Edit/Remove Items] The customer edits or removes an item from their order. The system updates the order total and recalculates nutrition information [Recalculate Total][Display Updated Nutrition Info].

## 15. Healthy Menu Filters

**Preconditions:** The café has implemented a healthier options menu labeling system to promote low-sugar and healthy food choices.

### **Main Flow:**

- A customer opens the café's ordering app and browses the menu.
- The customer selects a category (e.g., "Healthy Picks") or uses the search function to find specific ingredients (e.g., "low sugar").
- The system displays a list of relevant menu items with their nutritional information.

### **Subflows:**

- [Filter Menu] The system filters the menu based on the customer's selection, showing only items that meet the criteria.
- [Display Nutritional Info] The system displays the nutritional information for each item, including calories, sugar content, and other relevant details.
- [Highlight Healthy Options] The system highlights the healthier options with a special icon or label to make them stand out.

### **Alternative Flows:**

- [No Filter Applied] The customer doesn't apply any filters. The system shows all menu items with nutritional information.
- [Invalid Input] The customer enters an invalid filter term (e.g., "junk food"). The system prompts the customer to try again or displays a message indicating that no results were found.

## 16. Low-Sugar Customization

**Preconditions:** A customer orders a custom-made sandwich from the café's ordering app and requests modifications to reduce sugar content.

### **Main Flow:**

- A customer places an order for a custom-made sandwich through the café's ordering app.
- The customer specifies modifications to reduce sugar content, such as "hold the honey" or "use whole wheat bread".
- The system validates the request and updates the order accordingly.

### **Subflows:**

- [Validate Request] The system checks if the requested modifications are possible (e.g., checking if the sandwich already contains honey).
- [Update Order] The system updates the customer's order to reflect the modifications, including any necessary substitutions or adjustments.
- [Notify Kitchen] The system sends a notification to the kitchen staff about the modified order.

**Alternative Flows:**

- [Invalid Modification] The customer requests an invalid modification (e.g., "add more sugar"). The system prompts the customer to try again or displays a message indicating that the modification is not possible.
- [Kitchen Error] The kitchen staff makes an error in preparing the modified sandwich. The system sends a notification to the customer and offers a replacement or refund option.

## **17. Employee Symptom Check**

**Preconditions:** The employee has been assigned to work at the café and is required to complete daily symptom checks.

**Main Flow:**

- The employee arrives at the café and logs into their workstation [Login].
- The employee completes their daily symptom check [Symptom Check] and reports any symptoms or illnesses.
- If the employee is asymptomatic, they proceed with their duties as normal [Normal Duties].

**Subflows:**

- [Symptom Check] The employee checks for fever, cough, sore throat, etc. [Check Temperature], and reports any symptoms to management [Report Symptoms].
- [Check Temperature] Take the employee's temperature using a thermometer.
- [Report Symptoms] Notify management of any reported symptoms or illnesses.
- [Normal Duties] Perform usual duties as assigned by management.

**Alternative Flows:**

- [Restricted Duty] If the employee is experiencing symptoms, they are restricted from performing certain duties and must follow isolation protocols [Isolation Protocol].
- [Handwashing Log] The employee logs their handwashing activities throughout the day to ensure proper hygiene practices [Log Handwashing].

## **18. Employee Isolation Protocol**

**Preconditions:** An employee has reported an illness or symptom and is required to follow isolation protocols.

**Main Flow:**

- The employee reports their symptoms or illness to management [Report Symptoms].
- Management determines the employee's duties should be restricted due to the reported symptoms or illness [Determine Restricted Duties].
- The employee follows isolation protocols, including handwashing logs and restricted duties [Isolation Protocol].

**Subflows:**

- [Report Symptoms] Notify management of any reported symptoms or illnesses.
- [Determine Restricted Duties] Determine which duties the employee should be restricted from performing due to their illness.
- [Isolation Protocol] Follow isolation protocols, including handwashing logs and restricted duties.
- [Handwashing Log] Log handwashing activities throughout the day.

**Alternative Flows:**

- [Return to Work] If the employee's symptoms have subsided and they are cleared by management to return to work, they may resume their normal duties [Resume Normal Duties].
- [Extended Isolation] If the employee's illness persists or worsens, extended isolation protocols may be necessary [Extended Isolation].

## **19. Peanut Allergy Cross-Contact Controls**

**Preconditions:** The customer has ordered a menu item that contains peanuts.

**Main Flow:**

- The customer declares their peanut allergy at order time [Declare Allergy].
- The kitchen staff flags the cross-contact risk [Flag Cross-Contact] due to shared equipment.
- The staff uses dedicated tools and equipment for preparation [Use Dedicated Tools].

**Subflows:**

- [Declare Allergy] The customer informs the cashier of their peanut allergy [Inform Cashier]. The cashier alerts the kitchen staff [Alert Kitchen].
- [Flag Cross-Contact] The kitchen staff checks the menu item's ingredients [Check Ingredients] and identifies potential cross-contamination risks [Identify Risks].
- [Use Dedicated Tools] The staff prepares the menu item using dedicated tools and equipment to minimize cross-contact risk [Minimize Risk].

**Alternative Flows:**

- [Incorrect Declaration] The customer incorrectly declares their peanut allergy. The kitchen staff re-prepares the menu item using dedicated tools and equipment [Re-Prepare].

- [No Allergy Flagged] The customer does not declare their peanut allergy at order time. The kitchen staff flags the cross-contact risk [Flag Cross-Contact] due to shared equipment.

## **20. Gluten-Free Out Of Stock Handling**

**Preconditions:** A customer orders a gluten-free menu item, but the café's inventory system indicates that the ingredient is out of stock.

### **Main Flow:**

- The customer orders a gluten-free menu item [Order Gluten-Free].
- The kitchen staff checks the inventory system [Check Inventory] and finds that the gluten-free ingredient is out of stock [Out of Stock].
- The staff offers an alternative gluten-free option or substitutes with a different ingredient [Offer Alternative].

### **Subflows:**

- [Order Gluten-Free] The customer orders a gluten-free menu item [Order Item]. The cashier checks for availability [Check Availability].
- [Check Inventory] The kitchen staff checks the inventory system to confirm availability [Confirm Availability].
- [Out of Stock] The inventory system indicates that the gluten-free ingredient is out of stock [Indicate Out of Stock].

### **Alternative Flows:**

- [Gluten-Free Available] The gluten-free ingredient is available in stock. The kitchen staff prepares the menu item as ordered [Prepare Item].
- [No Alternative Available] No alternative gluten-free option is available. The customer is notified and offered a refund or substitution with a different menu item [Notify Customer].

## **21. Cart: Nutrition & Sourcing**

**Preconditions:** The customer has accessed the café's online ordering system and added items to their cart.

### **Main Flow:**

- The customer views their cart [View Cart].
- The customer reviews the nutritional summary for each item in their cart [Review Nutritional Summary].
- The customer proceeds to checkout [Proceed to Checkout].

### **Subflows:**

- [View Cart] Display a list of ordered items with prices and quantities.
- [Review Nutritional Summary] For each item, display the serving size, calories, fat content, sodium, carbohydrates, protein, and vitamins.

- [Proceed to Checkout] The customer is taken to the payment page where they can enter their payment information.

**Alternative Flows:**

- [Filter by Dietary Need] The customer has a dietary restriction (e.g., gluten-free, vegan) and wants to filter their cart items accordingly. They select the "Filter" option and the system displays only items that meet their dietary needs.
- [Transparency in Sourcing] The customer is concerned about the origin of the ingredients used in their ordered items. They click on the "Sourcing" tab and are taken to a page displaying information on the farm-to-table practices, animal welfare standards, and environmental sustainability measures.

## 22. Loyalty Milestone Rewards

**Preconditions:** The café has implemented a loyalty program that rewards customers for repeat purchases.

**Main Flow:**

- The customer logs into their account [Log In].
- The system checks if the customer has reached a milestone (e.g., 10th purchase) [Check Milestone].
- If the customer has reached the milestone, they are awarded points and notified of their reward [Award Points].

**Subflows:**

- [Log In] The customer enters their username and password to access their account.
- [Check Milestone] The system checks if the customer has reached a predetermined number of purchases or spent a certain amount.
- [Award Points] The customer is awarded points that can be redeemed for rewards (e.g., free drinks, discounts).

**Alternative Flows:**

- [Milestone Not Reached] The customer has not yet reached the milestone and is notified that they need to make more purchases to qualify.
- [Reward Selection] The customer has reached the milestone and is presented with a list of available rewards. They select their preferred reward and the system applies it to their account.

**Note:** These use cases are grounded in OFD guidelines for health-promoting online environments, specifically focusing on transparency in nutritional information and loyalty programs that encourage repeat purchases.

### **23. Corporate Social Responsibility: Policy Positions & Relationships**

**Preconditions:** The café has implemented a corporate social responsibility program to track and disclose political donations and lobbying activities.

**Main Flow:**

- The café's administration logs its policy positions on key issues [Log Policy Positions].
- The system flags external group relationships, including any organizations that have made significant financial contributions to the café [Flag Group Relationships].
- An audit trail is created for compliance reports, ensuring transparency in all transactions and donations.

**Subflows:**

- [Log Policy Positions] The administration logs its policy positions on key issues, such as environmental sustainability or labor rights [Validate Policy Positions]. If the policy position is deemed compliant with industry standards, it is recorded in the system [Record Policy Position].
- [Flag Group Relationships] The system flags external group relationships, including any organizations that have made significant financial contributions to the café. This includes identifying any potential conflicts of interest [Identify Conflicts of Interest].
- [Validate Policy Positions] Validate the policy positions against industry standards and best practices.
- [Record Policy Position] Record the policy position in the system for auditing purposes.

**Alternative Flows:**

- [Conflict of Interest] A conflict of interest is identified. The café's administration must disclose this information publicly and recuse itself from any decision-making processes related to the conflicting organization [Disclose Conflict].
- [Non-Compliant Policy Position] A policy position is deemed non-compliant with industry standards. The café's administration must revise the policy position to ensure compliance [Revised Policy].

### **24. Corporate Social Responsibility: Review External Contributions**

**Preconditions:** The café has implemented a system to track and disclose political donations and lobbying activities.

**Main Flow:**

- An external organization makes a significant financial contribution to the café [Make Contribution].

- The system flags the contribution as a potential conflict of interest [Flag Contribution].
- The café's administration reviews the contribution and determines whether it is compliant with governance best practices [Review Contribution].

**Subflows:**

- [Make Contribution] An external organization makes a significant financial contribution to the café, which may include donations or sponsorships [Validate Contribution]. If the contribution is deemed compliant with industry standards, it is recorded in the system [Record Contribution].
- [Flag Contribution] The system flags the contribution as a potential conflict of interest, ensuring transparency and accountability.
- [Review Contribution] Review the contribution against governance best practices to ensure compliance.

**Alternative Flows:**

- [Non-Compliant Contribution] A contribution is deemed non-compliant with industry standards. The café's administration must reject the contribution or revise its policy position to ensure compliance [Revised Policy].
- [Compliant Contribution] A contribution is deemed compliant with industry standards. The system records the contribution and ensures transparency in all transactions and donations.

## **25. Receipts: Paperless vs Print**

**Preconditions:** The customer has placed an order through the café's online ordering system, and the café is committed to reducing its carbon footprint.

**Main Flow:**

- The system checks if the customer has opted-in to receive paperless receipts [Paperless Receipts].
- If yes, the system generates a digital receipt [Generate Digital Receipt] and sends it to the customer via email or SMS.
- If not, the system prints a physical receipt using recycled paper [Print Physical Receipt].

**Subflows:**

- [Paperless Receipts] The customer checks the box indicating they prefer paperless receipts [Opt-In]. The system stores this preference for future orders [Store Preference].
- [Generate Digital Receipt] The system generates a digital receipt with order details, including itemized list of products and total cost.
- [Print Physical Receipt] The system prints a physical receipt using recycled paper, including order details and café logo.

**Alternative Flows:**



- [Customer Requested Paper Receipt] The customer requests a paper receipt for their order. The system honors this request and prints a physical receipt using recycled paper [Print Physical Receipt].
- [System Error] The system encounters an error while generating or printing the receipt. It retries the process after 30 seconds [Retry Process].

## 26. Local Sourcing Discount

**Preconditions:** the café is sourcing ingredients from local suppliers to reduce its carbon footprint.

### **Main Flow:**

- The system checks if the order contains any locally sourced products [Locally Sourced Products].
- If yes, the system applies a 5% discount to the total order cost [Apply Discount].
- If not, the system does not apply the discount and proceeds with processing the order.

### **Subflows:**

- [Locally Sourced Products] The system checks if any products in the order are sourced from local suppliers [Check Suppliers]. If yes, it flags the order for a 5% discount.
- [Apply Discount] The system applies a 5% discount to the total order cost and updates the customer's receipt accordingly.
- [No Discount] The system does not apply the discount and proceeds with processing the order.

### **Alternative Flows:**

- [Out-of-Stock Local Product] A locally sourced product is out of stock. The system offers an alternative product from a local supplier or suggests substituting it with a non-local option [Offer Alternative].
- [System Error] The system encounters an error while applying the discount. It retries the process after 30 seconds [Retry Process].

## 27. Inventory: Expiration Check

**Preconditions:** The café is operating within Washington state and has implemented a digital ordering system.

### **Main Flow:**

- A customer places an order through the digital ordering system.
- The system checks if the ordered item is expired or near expiration [Check Expiration].
- If the item is expired, the system flags it for removal from inventory [Flag Expired].

### **Subflows**

- [Check Expiration] The system checks the inventory management module [Validate Inventory] to determine if the ordered item is expired.
- [Validate Inventory] The system verifies that all items in inventory are within their expiration dates and not near expiration.
- [Flag Expired] The system flags the expired item for removal from inventory, triggering a notification to the café manager.

**Alternative Flows:**

- [Near Expiration] If an item is near expiration, the system sends a notification to the café manager to review and take action before it expires.
- [No Expiration Flagged] If the item is not expired or near expiration, the system does not flag it for removal from inventory.

## **28. Health Code Audit & Temperature**

**Preconditions:** The café has implemented a digital ordering system with an audit trail for health code checks.

**Main Flow:**

- A customer places an order through the digital ordering system.
- The system records the order and any relevant health code checks [Record Health Code Check].
- If the order requires a health code check (e.g., food temperature), the system performs the check [Perform Health Code Check].

**Subflows:**

- [Record Health Code Check] The system logs all orders and related health code checks in an audit trail.
- [Perform Health Code Check] The system uses a thermometer module [Validate Temperature] to ensure that food is at the correct temperature for serving.
- [Validate Temperature] The system verifies that food temperatures are within acceptable limits (e.g., 145°F for hot foods, 40°F for cold foods).

**Alternative Flows:**

- [Health Code Check Failed] If the health code check fails (e.g., food is too hot or cold), the system prevents the order from being fulfilled and sends a notification to the café manager.
- [No Health Code Check Required] If no health code check is required, the system does not perform one.

## **29. Tax Calc & Exemptions**

**Preconditions:** The customer has placed an order and is ready to pay.

**Main Flow:**

- The cashier rings up the order [Ring Up Order].
- The system checks if any tax exemptions apply [Check Exemptions].

- The system calculates the total amount due, including taxes [Calculate Total].

#### **Subflows**

- [Ring Up Order] The cashier scans or enters the items on the customer's order [Scan Items][Enter Items]. If an item is not found in the database, the cashier must contact the manager for assistance.
- [Check Exemptions] The system checks if the customer has any tax exemptions, such as a sales tax exemption certificate [Validate Certificate].
- [Calculate Total] The system calculates the total amount due by adding up the prices of all items on the order and applying the applicable tax rate [Apply Tax Rate][Apply Discount].
- [Apply Tax Rate] The system applies the local tax rate to the subtotal [Get Local Tax Rate].
- [Apply Discount] If a discount is available, the system subtracts the discount amount from the total [Subtract Discount].

#### **Alternative Flows:**

- [Tax Exemption] The customer has a valid sales tax exemption certificate. The system logs the exemption and applies it to the order [Log Exemption][Calculate New Total].
- [No Tax Exemption] The customer does not have a valid sales tax exemption certificate. The system calculates the total amount due, including taxes [Calculate Total].

### **30. Tax by Jurisdiction Reporting**

**Preconditions:** The café is required to report tax by jurisdiction.

#### **Main Flow:**

- The cashier rings up the order [Ring Up Order].
- The system checks if any tax exemptions apply [Check Exemptions].
- The system logs the sale and calculates the total amount due, including taxes [Log Sale][Calculate Total].

#### **Subflows:**

- [Ring Up Order] The cashier scans or enters the items on the customer's order [Scan Items][Enter Items]. If an item is not found in the database, the cashier must contact the manager for assistance.
- [Check Exemptions] The system checks if the customer has any tax exemptions, such as a sales tax exemption certificate [Validate Certificate].
- [Log Sale] The system logs the sale and calculates the total amount due by adding up the prices of all items on the order and applying the applicable tax rate [Apply Tax Rate][Apply Discount].
- [Calculate Total] The system calculates the total amount due, including taxes.

- [Get Local Tax Rate] The system gets the local tax rate for the jurisdiction where the sale was made.

**Alternative Flows:**

- [Tax Reporting] The café is required to report tax by jurisdiction. The system generates a report of all sales and taxes paid by jurisdiction [Generate Report][Upload Report].
- [No Tax Reporting Required] The café does not need to report tax by jurisdiction. The system simply logs the sale and calculates the total amount due, including taxes [Log Sale][Calculate Total].