

CSC 510 Project 1 B1

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Use Cases

UC1: Browse Menu and Add Items to Cart

Preconditions:

- Customer has access to the WolfCafe app or website
- Restaurant menu is published and available
- Customer is on the restaurant's menu page

Main Flow:

1. Customer browses available menu categories and items
2. System displays item details, prices, and availability status
3. Customer selects item and chooses customization options
4. System validates selections against availability and safety rules
5. Customer adds item to cart with specified quantity
6. System updates cart total and item count

Subflows:

- [Item Customization] Customer selects modifications, sides, or special instructions
- [Quantity Selection] Customer specifies number of items to add

Alternative Flows:

- [Item Unavailable] If item is out of stock, system displays "unavailable" and suggests alternatives
- [Invalid Customization] If selected modifications are incompatible, system prevents addition and explains restrictions

UC2: Checkout and Payment Processing

Preconditions:

- Customer has items in cart
- Customer account exists or guest checkout is enabled
- Payment method is available

Main Flow:

1. Customer proceeds to checkout from cart
2. System displays order summary with itemized pricing
3. Customer enters contact information and selects payment method
4. System calculates final total including taxes and fees
5. Customer confirms order and submits payment
6. System processes payment and creates order record
7. Customer receives order confirmation with pickup details

Subflows:

- [Contact Information] Customer provides phone number for pickup notifications
- [Payment Method Selection] Customer chooses from saved cards or enters new payment info

Alternative Flows:

- [Payment Failed] If payment processing fails, system displays error and allows retry or alternative payment method
- [Guest Checkout Error] If guest checkout fails, system suggests account creation for smoother process

UC3: Price, Tax, and Fee Calculation (Pickup)

Preconditions:

- Menu items configured with tax categories
- Restaurant location has mapped tax jurisdiction
- Customer has items in cart

Main Flow:

1. System calculates item-level pricing based on selections
2. System determines applicable taxes based on jurisdiction and item categories
3. System adds service charges and other applicable fees (no delivery fees)
4. System displays tax breakdown before payment
5. System records tax decision metadata for audit

Subflows:

- [Item Exemption] Certain items flagged as non-taxable are excluded from tax calculation
- [Service Fee Calculation] System applies pickup service fees if configured

Alternative Flows:

- [Jurisdiction Error] If jurisdiction lookup fails, system blocks checkout and prompts retry or contact support
- [Tax Calculation Error] System applies default tax rate and logs error for manual review

UC4: Track Order Status for Pickup

Preconditions:

- Customer has placed and paid for a pickup order
- Order is in system with status "Confirmed" or "In Preparation"

Main Flow:

1. Customer opens WolfCafe app and navigates to "Track Order"
2. System displays real-time order progress (Confirmed → Preparing → Ready for Pickup)
3. Customer receives push notifications for each status change
4. System shows estimated pickup time
5. Customer can view order details and restaurant contact information
6. System sends "Ready for Pickup" notification when order is complete

Subflows:

- [Preparation Updates] Kitchen staff update order status triggering customer notifications
- [Pickup Reminders] System sends reminders if order isn't picked up within reasonable time

Alternative Flows:

- [Notification Failed] If push notifications fail, customer can refresh app to see current status
- [Delayed Order] If order is delayed beyond estimated time, system automatically notifies customer with updated timeline

UC5: Order Confirmation and Receipt

Preconditions:

- Pickup order completed or refunded
- Payment processing completed

Main Flow:

1. System generates itemized receipt with taxes and fees
2. Customer receives confirmation via email and in-app notification
3. System stores receipt in customer's order history
4. Tax decision data stored for retention period
5. Receipt includes pickup location and estimated ready time
6. Receipt export available to accounting systems

Subflows:

- [Digital Receipt] Customer receives electronic receipt with pickup details
- [Audit Trail] System maintains transaction records for compliance

Alternative Flows:

- [Email Delivery Failed] If email fails, receipt remains accessible in app
- [Export Error] Admin can retry export or contact support

UC6: User Registration and Login

Preconditions:

- Customer has access to WolfCafe app or website
- Registration system is operational

Main Flow:

1. Customer selects "Create Account" or "Sign Up"
2. System displays registration form
3. Customer enters required information (email, password, phone number for pickup notifications)
4. System validates information and checks for duplicate accounts
5. System sends email verification
6. Customer confirms email and account is activated
7. Customer can now log in with credentials

Subflows:

- [Social Login] Customer can register/login using social media accounts
- [Guest Checkout] Customer can place pickup orders without creating account

Alternative Flows:

- [Email Already Exists] System prompts customer to login or reset password
- [Verification Failed] Customer can request new verification email

UC7: Customize Dietary Preferences and Allergies**Preconditions:**

- Customer has registered account and is logged in
- Customer wants to set dietary restrictions

Main Flow:

1. Customer accesses "Dietary Preferences" from account settings
2. System displays options for common dietary restrictions (vegetarian, vegan, gluten-free, etc.)
3. Customer selects applicable restrictions and adds custom allergies
4. System saves preferences and applies filters to menu display
5. Customer sees only compatible menu items by default
6. System warns when items may contain allergens

Subflows:

- [Custom Allergies] Customer can add specific allergens not in preset list
- [Preference Filtering] Menu automatically filters based on saved preferences

Alternative Flows:

- [Save Failed] If preferences cannot be saved, system retries and maintains temporary session filters
- [Conflicting Items] When customer tries to order incompatible items, system provides clear warnings and alternatives

UC8: Save Favorite Orders and Reorder**Preconditions:**

- Customer has registered account and is logged in
- Customer has previously placed at least one order

Main Flow:

1. Customer accesses "Order History" from account menu
2. System displays list of previous orders
3. Customer selects "Add to Favorites" for desired order
4. System saves order as favorite
5. Customer can access "Favorites" to quickly reorder saved combinations
6. System adds favorite items to cart with current pricing

Subflows:

- [Quick Reorder] One-click reordering from favorites list
- [Favorite Management] Customer can edit or delete saved favorites

Alternative Flows:

- [Unavailable Items] If some items from favorite order are no longer available, system notifies customer and suggests alternatives
- [Price Changes] If prices have changed since favorite was saved, system displays updated pricing before adding to cart

UC9: Rate and Review Orders

Preconditions:

- Customer has completed a pickup order
- Order status is "Picked Up" or "Completed"
- Customer receives rating prompt

Main Flow:

1. System sends rating request 2 hours after pickup completion
2. Customer opens rating interface from notification or app
3. Customer rates overall experience (1-5 stars) and individual items
4. Customer optionally adds written review
5. System saves rating and review
6. System displays confirmation and thanks customer

Subflows:

- [Item-Level Rating] Customer can rate individual menu items separately
- [Photo Reviews] Customer can attach photos to reviews

Alternative Flows:

- [Skip Rating] Customer can skip rating process, but receives gentle reminders
- [Inappropriate Content] If review contains inappropriate content, system flags for moderation

UC10: Kitchen Display System Integration

Preconditions:

- Orders in "Pending" with pickup times
- KDS system is operational and connected

Main Flow:

1. New pickup orders automatically appear on kitchen display
2. KDS auto-prioritizes tickets by promised pickup time and prep SLA
3. Staff marks stages: "In Prep," "Ready for Pickup"
4. Status updates sync with customer tracking system
5. Alerts fire if pickup SLA at risk

Subflows:

- [Priority Ordering] System sorts tickets by urgency and prep time

- [Station Assignment] Orders route to appropriate prep stations

Alternative Flows:

- [Network Error] Local fallback prints ticket; sync when connection restored
- [Manual Override] Staff can manually adjust priorities for special circumstances

UC11: Manage Menu Items and Availability

Preconditions:

- Staff member is logged in with menu management permissions
- Restaurant has existing menu structure

Main Flow:

1. Staff accesses menu management interface
2. System displays current menu items with availability status
3. Staff adds new items, edits existing items, or updates availability
4. Staff sets pricing, descriptions, and item categories
5. System validates required fields and publishes changes
6. Updated menu appears immediately in customer app

Subflows:

- [Bulk Updates] Staff can update multiple items simultaneously
- [Scheduling Changes] Staff can schedule menu changes for future dates

Alternative Flows:

- [Missing Required Data] System blocks publish until required fields are completed
- [Pricing Conflicts] If new pricing conflicts with active promotions, system warns and suggests adjustments

UC12: Rapid 86 (Instant Stockout)

Preconditions:

- At least one menu item is currently available
- Staff has access to kitchen management system

Main Flow:

1. Staff marks an item "86" (out of stock) from kitchen screen
2. System immediately removes item from customer add-to-cart options
3. System flags existing carts containing the item
4. System suggests alternatives to affected customers
5. Item status updates across all platforms instantly

Subflows:

- [Partial Availability] Staff can mark specific variants or sizes as unavailable
- [Estimated Return] Staff can provide estimated restock time

Alternative Flows:

- [Restore Item] When stock is replenished, staff re-enables item availability
- [Substitute Suggestions] System automatically suggests similar available items

UC13: Process Refunds and Order Cancellations

Preconditions:

- Staff member is logged in with appropriate permissions
- Pickup order exists in system that requires refund processing
- Refund request has been initiated

Main Flow:

1. Staff accesses "Refund Management" interface
2. System displays pending refund requests with order details
3. Staff reviews refund reason and order information
4. Staff approves refund and selects refund method
5. System processes refund through original payment method
6. System updates order status and notifies customer

Subflows:

- [Partial Refund] Staff can refund specific items rather than entire order
- [Store Credit] Staff can issue store credit instead of payment refund

Alternative Flows:

- [Deny Refund] If refund is denied, staff provides reason and customer is notified
- [Processing Error] If refund fails, system queues for retry and notifies management

UC14: Manage Restaurant Hours and Availability

Preconditions:

- Staff member is logged in with management permissions
- Restaurant profile exists in system

Main Flow:

1. Staff accesses "Restaurant Settings" from management panel
2. System displays current operating hours and availability status
3. Staff updates hours, closes restaurant temporarily, or sets holiday schedules
4. System saves changes and updates customer-facing information
5. System automatically prevents new orders outside operating hours
6. Customers see updated availability information immediately

Subflows:

- [Holiday Schedules] Staff can set special hours for holidays and events
- [Temporary Closure] Staff can temporarily close for maintenance or emergencies

Alternative Flows:

- [Invalid Hours] If closing time is before opening time, system requests correction
- [Emergency Closure] Staff can immediately close restaurant with one-click emergency closure option

UC15: Allergen Declaration and Consumer Advisory

Preconditions:

- Menu items tagged with allergens
- Advisory text configured for restaurant

Main Flow:

1. System displays allergen information on each menu item
2. Item pages show allergen symbols and cross-contact warnings
3. If raw/undercooked items exist, menu shows consumer advisory
4. Customer must acknowledge advisory before checkout when required
5. Allergen information appears on order confirmations and receipts

Subflows:

- [Cross-Contact Warnings] System shows potential cross-contamination risks
- [Allergen Filtering] Customers can filter menu by allergen restrictions

Alternative Flows:

- [Missing Declaration] System blocks item publish until allergens are specified
- [Advisory Not Acknowledged] System prevents checkout until customer accepts advisory

UC16: Consumer Advisory Acknowledgment for Undercooked Items**Preconditions:**

- Menu includes undercooked or raw food options
- Consumer advisory is configured

Main Flow:

1. System identifies items requiring consumer advisory
2. Advisory message appears on affected menu items
3. Customer must acknowledge advisory once per session/order
4. Acknowledgment is recorded on receipt and order record
5. System prevents ordering advisory items without acknowledgment

Subflows:

- [Session Persistence] Acknowledgment remains valid for entire ordering session
- [Receipt Documentation] Advisory acceptance is documented for legal compliance

Alternative Flows:

- [No Acknowledgment] System blocks checkout for advisory items until accepted
- [Advisory Update] If advisory text changes, customer must re-acknowledge

UC17: Customization Limits for Food Safety**Preconditions:**

- Items have configured safe modification rules
- Food safety guidelines are programmed into system

Main Flow:

1. Customer selects item modifications

2. System enforces food safety guardrails (minimum cook temperatures, safe combinations)
3. System blocks unsafe modifications (e.g., undercooked proteins beyond safe limits)
4. Warnings shown for higher-risk customer choices
5. Only safe customizations are allowed to proceed

Subflows:

- [Temperature Controls] System enforces minimum safe cooking temperatures
- [Combination Safety] System prevents unsafe ingredient combinations

Alternative Flows:

- [Unsafe Request] System blocks selection and explains safety reasoning
- [Alternative Suggestions] System suggests safe alternatives to blocked modifications

UC18: Apply Discount Codes and Promotions

Preconditions:

- Customer has items in cart
- Valid promotional codes exist in system
- Customer is at checkout page

Main Flow:

1. System displays promo code entry field during checkout
2. Customer enters promotional code
3. System validates code eligibility and applies discount
4. System recalculates total with applied discount
5. Customer confirms order with discounted price
6. System processes payment and completes order

Subflows:

- [Automatic Promotions] System automatically applies eligible promotions
- [Stacked Discounts] System handles multiple compatible promotions

Alternative Flows:

- [Invalid Code] If code is expired, invalid, or already used, system displays appropriate error message
- [Minimum Order Not Met] If order doesn't meet promotion requirements, system informs customer of needed changes

UC19: Schedule Future Pickup Order

Preconditions:

- Customer has registered account and is logged in
- Restaurant accepts advance pickup orders
- Customer selects scheduling option during checkout

Main Flow:

1. Customer adds items to cart and proceeds to checkout
2. System displays pickup scheduling options (date and time slots)

3. Customer selects desired pickup date and time
4. System confirms kitchen availability and processes payment
5. System schedules order for specified pickup time
6. Customer receives confirmation with scheduled pickup details

Subflows:

- [Advance Payment] System processes payment immediately for scheduled orders
- [Reminder Notifications] System sends reminders before scheduled pickup time

Alternative Flows:

- [Invalid Time Slot] If selected time is unavailable or outside operating hours, system suggests alternative times
- [Schedule Conflict] If restaurant becomes unavailable for scheduled time, system notifies customer and offers rescheduling options

UC20: Order Modification Before Kitchen Cutoff

Preconditions:

- Pickup order placed and paid for
- Order has not yet passed kitchen preparation cutoff time
- Customer wants to modify order

Main Flow:

1. Customer accesses current order from "My Orders" section
2. System checks if order can still be modified based on preparation status
3. Customer requests changes (item swap, quantity adjustment, special instructions)
4. System recalculates totals including tax adjustments
5. System processes any additional payment or refund
6. Updated order details sent to kitchen and customer

Subflows:

- [Payment Adjustment] System handles additional charges or refunds for modifications
- [Kitchen Notification] Modified orders are highlighted in kitchen system

Alternative Flows:

- [Past Cutoff] If order is already in preparation, system explains limitation and offers alternatives
- [Modification Not Allowed] System provides explanation and suggests full cancellation if needed

UC21: Group Ordering for Multiple People (Pickup)

Preconditions:

- Customer has registered account and is logged in
- Customer wants to place pickup order for multiple people

Main Flow:

1. Customer selects "Group Order" option from main menu

2. System creates shareable group order link with expiration time
3. Customer shares link with group members
4. Group members add their individual items to shared cart
5. System aggregates all items and calculates total
6. Original customer reviews and confirms group order for pickup
7. System processes payment and provides pickup details to organizer

Subflows:

- [Individual Tracking] System tracks which items were added by each participant
- [Pickup Coordination] System provides single pickup time and location for entire group

Alternative Flows:

- [Link Expired] If group order link expires before completion, system allows extension or new link generation
- [Payment Disputes] If group members want to split payment, system provides individual payment options

UC22: Multi-Language Support

Preconditions:

- Customer prefers a language other than default
- Multiple language options are configured
- Restaurant serves diverse customer base

Main Flow:

1. Customer accesses language settings from app preferences
2. System displays available language options
3. Customer selects preferred language
4. System updates all interface elements to selected language
5. System maintains language preference across sessions
6. Customer can switch languages at any time

Subflows:

- [Automatic Detection] System can detect device language and suggest appropriate option
- [Regional Variations] System supports regional language variations

Alternative Flows:

- [Language Not Available] If preferred language isn't supported, system suggests closest alternative and offers feedback option
- [Translation Errors] If customers report translation issues, system provides feedback mechanism for improvements

UC23: Capacity Throttling for Pickup (Pause New Orders)

Preconditions:

- Admin/manager is logged in with appropriate permissions
- System monitoring indicates kitchen capacity concerns

Main Flow:

1. Manager assesses current order volume and kitchen capacity
2. Manager activates "Pause Orders" or reduces available pickup time slots
3. System hides checkout option or limits slot availability
4. Banner informs customers of temporary delays for new orders
5. System queues incoming orders if partial capacity available
6. Manager monitors situation and adjusts capacity as needed

Subflows:

- [Gradual Throttling] Manager can reduce capacity incrementally rather than full pause
- [Automatic Throttling] System can auto-throttle based on preset capacity rules

Alternative Flows:

- [Emergency Resume] Manager can immediately lift pause when capacity allows
- [Customer Communication] System proactively notifies waiting customers of status changes

UC24: Generate Sales and Performance Reports**Preconditions:**

- Staff member is logged in with reporting permissions
- Historical order data exists in system

Main Flow:

1. Staff accesses "Reports" section from management dashboard
2. System displays available report types (daily sales, popular items, customer trends, pickup times)
3. Staff selects report type and date range
4. System generates and displays requested report
5. Staff can export report as PDF or CSV
6. System saves report for future reference

Subflows:

- [Scheduled Reports] Staff can set up automatic recurring reports
- [Pickup Analytics] System tracks pickup time performance and customer wait times

Alternative Flows:

- [No Data Available] If no data exists for selected period, system informs staff and suggests alternative date ranges
- [Large Dataset] For extensive reports, system processes in background and notifies when complete

UC25: Pickup Time Slot Management**Preconditions:**

- Time-slot capacity is configured for restaurant
- Customer is proceeding through checkout for pickup

Main Flow:

1. Customer reaches pickup time selection during checkout
2. System displays available pickup time slots based on kitchen capacity
3. Customer selects preferred pickup time slot
4. System checks kitchen capacity and reserves the slot
5. Slot appears on order confirmation
6. System manages slot availability in real-time

Subflows:

- [Capacity Management] System limits slots based on kitchen capacity and prep times
- [Buffer Times] System automatically adds prep time buffers between slots

Alternative Flows:

- [Slot Full] If selected slot is full, system offers nearby available times
- [Capacity Override] Manager can manually adjust slot availability for special circumstances

UC26: Live Chat Support Integration**Preconditions:**

- Customer is logged in and experiencing an issue
- Customer support staff are available
- Live chat feature is enabled

Main Flow:

1. Customer accesses "Help & Support" from app menu
2. System displays support options including "Live Chat"
3. Customer initiates chat and describes their issue
4. System routes customer to appropriate support agent
5. Agent assists customer and resolves issue in real-time
6. System saves chat transcript and follows up on resolution

Subflows:

- [Issue Categorization] System routes chats based on issue type (pickup issues, order problems, etc.)
- [Escalation Path] Complex issues can be escalated to supervisors

Alternative Flows:

- [No Agents Available] If no live agents are available, system offers callback scheduling or directs to FAQ resources
- [Technical Issues] If chat system fails, system provides alternative contact methods

UC27: Automated Order Issue Detection for Pickup**Preconditions:**

- Customer has placed a pickup order
- System monitors order progress and timing

- Predictive algorithms are configured

Main Flow:

1. System continuously monitors order status and timing against pickup benchmarks
2. System detects potential issues (long preparation time, pickup delays, etc.)
3. System automatically notifies customer of delay and provides updated pickup timeline
4. System offers compensation options (discount, free item, priority status)
5. Customer selects preferred resolution or declines compensation
6. System applies selected compensation and updates order records

Subflows:

- [Proactive Communication] System notifies customers before they arrive for pickup
- [Compensation Tracking] System tracks compensation costs for business analysis

Alternative Flows:

- [No Issues Detected] System continues normal monitoring without customer intervention
- [False Positive] If customer reports no actual issue, system adjusts detection algorithms

UC28: Loyalty Program and Points Management

Preconditions:

- Customer has registered account
- Restaurant has active loyalty program
- Customer has made qualifying pickup purchases

Main Flow:

1. System automatically tracks customer purchases and awards points
2. Customer accesses "Loyalty Rewards" from account menu
3. System displays current points balance and available rewards
4. Customer selects reward to redeem
5. System applies reward discount or free item to current pickup order
6. System deducts points and processes order

Subflows:

- [Tier Management] System tracks customer status levels (bronze, silver, gold)
- [Bonus Point Events] System applies special point multipliers during promotions

Alternative Flows:

- [No Rewards Available] If insufficient points, system shows progress toward next reward level
- [Expired Points] System notifies customers of expiring points and available redemption options

UC29: Temperature/Hold-Time Warning for Pickup Orders

Preconditions:

- Item has hold-time/temperature rules configured
- Order is marked "Ready for Pickup"

Main Flow:

1. When order is marked "Ready," system starts timer for safe hold time
2. System tracks how long prepared food has been waiting
3. If pickup is delayed, system prompts staff to verify temperature or consider remaking
4. Customer is notified if remake is needed due to food safety
5. System logs hold times for quality control analysis

Subflows:

- [Temperature Monitoring] System tracks which items require temperature maintenance
- [Quality Control] System maintains logs of hold times for analysis

Alternative Flows:

- [Hold-Time Exceeded] Order is partially remade; receipt updated with new items
- [Customer Accepts Risk] Customer can accept older food with proper disclosure

UC30: Large Order and Catering Management (Pickup)**Preconditions:**

- Customer needs to place large pickup order for event or group
- Restaurant offers catering services
- Advance notice requirements are met

Main Flow:

1. Customer accesses "Catering Orders" from main menu
2. System displays catering menu and minimum order requirements
3. Customer configures large order with quantities and pickup details
4. System calculates pricing with bulk discounts if applicable
5. Customer submits catering request with required advance notice
6. Restaurant reviews and confirms catering order capability
7. System processes payment and schedules preparation for pickup
8. System provides special pickup instructions for large orders

Subflows:

- [Bulk Pricing] System applies volume discounts for large orders
- [Special Pickup Arrangements] System handles special pickup timing and logistics

Alternative Flows:

- [Requirements Not Met] If order doesn't meet minimum requirements or advance notice, system explains requirements and offers alternatives
- [Capacity Issues] If restaurant cannot fulfill large order, system suggests alternative pickup dates or scaled options

Reflection using LLM Critiques***Feedback from Claude***

When asking Claude to critique our existing use cases from project 1a without context, Claude reported numerous issues including ambiguity, missing error handling, and lacking additional

behaviors. Additional use cases involving customer login, order cancellation, order modification, and customer order history tracking were also recommended.

When provided with the Requirements Supplementary Information Spreadsheet, the WolfCafe and CoffeeMaker requirements webpages, Claude was able to output more specific critiques regarding role-based operations, the order management workflow, and problems with logic flow. Specifically, Claude noted that Use Case 1 does not offer capabilities for cart review of modification and also recommended specifying user roles and permissions in the system.

Feedback from ChatGPT

When asking ChatGPT to critique our existing use cases from project 1a without any context, ChatGPT reported that use cases dealing with delivery drivers was the primary piece that was missing. Therefore, without giving Chat any context about the project and simply asking it to critique our existing use cases, it gave critiques that were unhelpful for our specific project because delivery drivers are not a part of WolfCafe.

After providing ChatGPT more context for our project, clarifying the requirements of WolfCafe and providing spreadsheet resources, it gave much more valuable feedback. Specifically, it identified missing use cases related to calculating taxes, displaying nutritional and allergen information, cancelling and refunding orders, and better inventory management.

LLM Budget

Our budget was \$0.