CSC510 P1C1-S2G1
Authors: Robert Kemp, Matthew Nguyen, Tiehang Zheng, Rishi Jeswani

Prompt History

Initial Prompt:

We are moving forward with a minimal viable product for a food delivery app based on use cases that we have generated, edited, and sifted through. Based on these use cases that I am sharing with you, create 10 additional use cases that will cover any gaps that we may have for our minimal viable product. Generate them using the same format of title, actors, description, and include preconditions, Main Flow, Subflows, Alternate Flows, and Post Conditions. After 8 weeks of work, what should a prototype of a food delivery app include in terms of requirements?

UC-01: Browse and Search Restaurants

Actors: Customer
Description: Customer searches and browses available restaurants with dynamic filtering capabilities.

Preconditions:

Customer is logged into the platform

Internet connection available

Main Flow:

Customer opens the app/web platform

System displays dynamic list of nearby restaurants based on availability

Customer applies filters (cuisine, rating, delivery time, price range)

System shows updated list with interactive search suggestions

Customer views restaurant profiles with real-time availability

Subflows:

Interactive Search: Customer types restaurant/dish name → system provides suggestions even with typos

Apply Multiple Filters: Customer combines cuisine, price, rating filters → system updates results

Location-Based Sorting: System sorts by distance using GPS data

Availability Check: System shows only open restaurants with real-time status updates

Alternate Flows:

A1: No restaurants available → system suggests nearby areas or schedule for later

A2: Search yields no results → system suggests alternative dishes/restaurants

A3: Location services disabled → system prompts for manual location entry

Postconditions:

Customer views available restaurant options with accurate information

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UC-02: Place Food Order with Customization

Actors: Customer, Restaurant, Payment Provider
Description: Customer selects items, customizes order, and completes checkout process.

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Preconditions:

Customer has active account

Selected restaurant is open

Valid payment method available

Main Flow:

Customer adds items to cart with customization options

Customer reviews cart and modifies quantities/customizations

Customer selects delivery address from saved addresses or enters new one

Customer chooses payment method and applies any promo codes

System validates order against restaurant availability

Customer confirms order and payment is processed

Order is sent to restaurant with customer and delivery details

Subflows:

Customize Items: Customer adds special instructions → system validates with restaurant capabilities

Apply Promotions: Customer enters promo code → system validates and recalculates total

Address Validation: System checks delivery zone coverage and estimates delivery time

Payment Processing: System integrates with payment provider for secure transaction

Alternate Flows:

A1: Payment fails → system offers alternative payment methods

A2: Item becomes unavailable → restaurant suggests substitution

A3: Address outside delivery zone → system suggests pickup option

Postconditions:

Order confirmed

Payment processed

Restaurant notified

UC-03: Track Order in Real Time

Actors: Customer, Driver, Restaurant
Description: Customer tracks their order through preparation, dispatch, and delivery stages.

Preconditions:

Customer has placed an order

Driver has been assigned

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Main Flow:

System shows order confirmation with estimated preparation and delivery time

Customer receives updates at key stages (accepted, preparing, ready, en route)

System provides live GPS tracking of driver once order is picked up

ETA dynamically updates based on driver's location

Subflows:

Preparation Updates: Restaurant updates status → system notifies customer

Driver Assignment: System notifies customer of driver's identity and vehicle details

Live GPS Tracking: Customer views map with driver location and ETA

Delay Alerts: System recalculates ETA if traffic or delays occur

Alternate Flows:

A1: No driver available → system informs customer and offers cancellation/refund

A2: Driver cancels → system reassigns driver and updates customer

A3: System error in tracking → fallback ETA is provided without GPS

Postconditions:

Customer successfully monitors order status until delivery completion

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UC-04: Accept and Fulfill Order

Actors: Restaurant Staff, Customer
Description: Restaurant receives and processes an order to prepare it for delivery.

Preconditions:

Restaurant is logged into the platform

Customer order received

Main Flow:

Restaurant receives notification of new order

Staff reviews order details, customizations, and notes

Staff confirms acceptance of order

Food preparation begins and progresses to completion

Restaurant marks order as “Ready for Pickup”

Subflows:

Queue Management: Orders displayed in preparation queue in chronological order

Substitutions: If ingredient unavailable, staff suggests alternatives → customer confirms/declines

Batch Orders: Restaurant groups orders with similar prep time for efficiency

Alternate Flows:

A1: Restaurant rejects order → system informs customer and issues refund

A2: Staff accidentally accepts wrong order → admin support required for correction

Postconditions:

Food is prepared and ready for delivery driver pickup

UC-05: Assign and Dispatch Driver

Actors: Driver, System, Restaurant
Description: System assigns drivers to orders based on location and availability.

Preconditions:

Order has been accepted by restaurant

Drivers are active on the platform

Main Flow:

System searches for available drivers near restaurant

System sends job request to nearest driver

Driver accepts assignment

Driver navigates to restaurant for pickup

Subflows:

Driver Matching: System evaluates distance, availability, and driver rating

Batch Dispatch: System may assign multiple orders in same route to one driver

Auto-Reassignment: If driver rejects, system reassigns to next available driver

Alternate Flows:

A1: No drivers accept → system alerts customer and extends delivery time

A2: Driver cancels after acceptance → new driver reassigned

Postconditions:

Driver assigned and notified to pick up food

UC-06: Pickup and Deliver Food

Actors: Driver, Customer, Restaurant
Description: Driver collects the prepared order from the restaurant and delivers it to the customer.

Preconditions:

Driver has been assigned to the order

Restaurant has marked the order as “Ready for Pickup”

Main Flow:

Driver arrives at the restaurant

Driver verifies order ID with restaurant staff

Restaurant staff hands food to driver

Driver confirms pickup in system

Driver navigates to customer’s address

Driver hands food to customer and marks delivery as complete

Subflows:

Restaurant Handoff: Driver shows order code → restaurant validates before handoff

Customer Contact: Driver calls/messages customer if clarification is needed

Proof of Delivery: Driver captures photo/signature for delivery confirmation

Tip Collection: Customer adds tip at or after delivery

Alternate Flows:

A1: Customer unavailable → driver retries or contacts support

A2: Incorrect order at pickup → driver/restaurant escalate to admin

A3: Delivery address unclear → driver contacts customer for clarification

Postconditions:

Order is successfully delivered

System marks order as completed

UC-07: Handle Payments and Refunds

Actors: Customer, Payment Provider, Admin
Description: System manages payment authorization, processing, and potential refunds.

Preconditions:

Customer has valid payment method on file

Payment provider services are operational

Main Flow:

Customer selects payment method during checkout

System sends transaction request to payment provider

Payment provider validates and authorizes funds

System confirms successful transaction and records it

Admin can later issue refunds when required

Subflows:

Transaction Authorization: Provider checks card validity and funds

Split Payments: System processes promo codes, gift cards, or multiple payment methods

Refund Request: Customer requests refund → admin reviews

Partial Refunds: Admin approves refund for missing/incorrect items

Alternate Flows:

A1: Payment fails → customer prompted to use alternate method

A2: Chargeback raised → admin investigates with evidence

A3: Payment provider service outage → order cannot be completed

Postconditions:

Successful transactions recorded

Refunds processed when necessary

UC-08: Rate and Review Experience

Actors: Customer, Restaurant, Driver, Admin
Description: Customer rates and reviews both the restaurant and driver after delivery.

Preconditions:

Order completed

Customer logged in

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Main Flow:

System prompts customer to leave feedback after delivery

Customer rates driver (1–5 stars)

Customer rates restaurant for food quality and packaging

Customer may add written comments

System stores feedback and updates average ratings

Subflows:

Driver Rating: Customer rates driver performance → visible to driver

Restaurant Review: Customer comments on food/service quality

Reply to Review: Restaurant or driver can respond to reviews

Review Moderation: Inappropriate content flagged for admin review

Alternate Flows:

A1: Customer skips feedback → system closes review process

A2: Customer leaves abusive review → flagged for moderation

A3: Review disputed → admin intervenes and resolves

Postconditions:

Ratings and reviews updated in system

Feedback available for future customers

UC-09: Manage Menus and Promotions

Actors: Restaurant Staff, Admin
Description: Restaurants update menu items and create promotional offers.

Preconditions:

Restaurant has active account

Staff logged into system

Main Flow:

Restaurant staff log into portal

Staff add, edit, or remove menu items

Staff upload descriptions, prices, and photos

Staff set availability (in-stock, out-of-stock, scheduled)

Staff create promotions or discounts

Subflows:

Add/Edit Menu Items: Restaurant enters details → system validates fields

Set Availability: Items marked available/unavailable in real time

Create Promotion: Staff set discount terms → system validates rules

Approval Workflow: Certain promotions require admin review

Alternate Flows:

A1: Invalid menu entry → system rejects update

A2: Duplicate promotion code → system requests different code

A3: Admin disapproves promotion → restaurant notified

Postconditions:

Menu and promotions updated and visible to customers

UC-10: Administer and Monitor Platform

Actors: Admin, Customers, Drivers, Restaurants
Description: Admin manages accounts, monitors platform activity, and ensures compliance.

Preconditions:

Admin logged into system with appropriate privileges

Main Flow:

Admin logs into the system dashboard

Admin views reports and analytics on platform usage

Admin manages user accounts (add, suspend, deactivate)

Admin reviews and resolves disputes

Admin monitors compliance with regulations

Subflows:

User Management: Admin edits/suspends customer, driver, or restaurant accounts

Fraud Detection: Suspicious activity flagged for admin investigation

Dispute Resolution: Admin mediates between parties and issues refunds if needed

Audit Logging: All admin actions recorded for accountability

Compliance Reporting: Admin generates tax/food safety/data privacy reports

Alternate Flows:

A1: Unauthorized admin access → system denies entry and logs attempt

A2: Dispute unresolved → escalated to higher authority

A3: Data access request denied due to insufficient privileges

Postconditions:

Platform remains secure, compliant, and well-administered

UC-11: Register New User Account

Actors: Customer, Driver, Restaurant Staff
Description: A new user creates an account to access the platform.

Preconditions:

User has a valid email/phone number

System services available

Main Flow:

User opens the app or website

User selects “Create Account” option

User provides required details (name, email, phone, password)

System sends verification code to email/phone

User enters verification code

System confirms account creation and grants access

Subflows:

Profile Setup: User adds address, payment method, and preferences after registration

Driver Registration: Drivers provide license, vehicle, and insurance details for approval

Restaurant Registration: Restaurants provide business license and upload initial menu

Alternate Flows:

A1: Verification code not received → system resends or offers alternative method

A2: Duplicate email/phone detected → system prompts user to log in instead

A3: Invalid input (weak password, missing fields) → system requests corrections

Postconditions:

User account created and ready for use

UC-12: Log In and Authenticate User

Actors: Customer, Driver, Restaurant Staff, Admin
Description: User accesses their account securely through authentication.

Preconditions:

User already has a registered account

Main Flow:

User opens app/website

User enters email/phone and password

System verifies credentials

System grants access to dashboard or home screen

Subflows:

Two-Factor Authentication: System requests one-time code for added security

Social Login: User logs in with Google, Apple, or Facebook account

Alternate Flows:

A1: Incorrect credentials → system shows error message and retry option

A2: Multiple failed attempts → system locks account temporarily

A3: Forgotten password → user requests reset link

Postconditions:

User successfully logged in with secured access

UC-13: Update User Profile

Actors: Customer, Driver, Restaurant Staff
Description: User updates personal details, payment methods, or preferences.

Preconditions:

User logged into account

Main Flow:

User navigates to profile settings

User updates personal info (name, email, phone, address)

User updates payment methods or delivery preferences

System validates and saves updates

Subflows:

Customer Profile: Customer adds new addresses, updates saved cards

Driver Profile: Driver updates vehicle information, insurance documents

Restaurant Profile: Restaurant updates contact details, operating hours

Alternate Flows:

A1: Invalid data entry → system rejects and prompts correction

A2: Payment method expired → system requires replacement

A3: Profile update conflicts with platform policy (e.g., fake info) → admin review required

Postconditions:

Updated profile information stored and visible in system

UC-15: Driver Availability Management

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Actors: Driver, System
Description: Drivers set their availability to receive or stop receiving delivery requests.

Preconditions:

Driver has active and approved account

Driver logged into platform

Main Flow:

Driver opens app

Driver toggles availability status (online/offline)

System updates driver's status in dispatch algorithm

System only assigns orders to available drivers

Subflows:

Scheduled Availability: Driver sets working hours in advance

Auto-Timeout: If driver ignores requests repeatedly, system sets status to offline

Alternate Flows:

A1: Driver tries to go online without required documents (insurance, license) → system blocks

A2: Connectivity issues → system shows driver as offline until resolved

A3: Driver attempts to go offline during an active order → system prevents until delivery complete

Postconditions:

Driver availability status updated and reflected in system

UC-18: Manage Customer Addresses

Actors: Customer, System
Description: Customers add, update, and manage delivery addresses.

Preconditions:

Customer logged into account

Main Flow:

Customer navigates to profile settings

Customer adds a new address (home, work, etc.)

System validates address format and coverage area

Customer saves updated address list

Subflows:

Geolocation Autofill: Customer allows GPS → system auto-fills current address

Nickname Addresses: Customer labels addresses (e.g., “Home,” “Office”)

Delivery Zone Check: System validates address against serviceable areas

Alternate Flows:

A1: Invalid address entry → system requests corrections

A2: Address outside coverage area → system rejects or suggests pickup option

A3: Duplicate address detected → system prompts to confirm merge

Postconditions:

Updated address list stored and available for future orders

UC-23: Driver Earnings and Payouts

Actors: Driver, Admin, Payment Provider
Description: Drivers view earnings and request payouts for completed deliveries.

Preconditions:

Driver has completed deliveries

Payment account connected

Main Flow:

Driver opens “Earnings” dashboard

System shows breakdown of completed deliveries and total earnings

Driver requests payout

System processes payout through linked bank or wallet

Driver receives confirmation of transaction

Subflows:

Daily/Weekly Reports: Driver views earnings history by time period

Automatic Payouts: System deposits earnings on fixed schedule

Incentive Tracking: System shows bonuses and surge pay

Alternate Flows:

A1: Payout request fails → system retries or informs driver

A2: Invalid bank account details → system requests correction

A3: Payout delayed due to verification → system provides ETA

Postconditions:

Driver earnings successfully disbursed or pending resolution

UC-28: Restaurant Performance Dashboard

Actors: Restaurant Staff, Admin
Description: Restaurants track business performance with real-time dashboards.

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Preconditions:

Restaurant account active

Data available for reporting period

Main Flow:

Restaurant logs into dashboard

System displays key metrics: sales, orders, ratings, cancellations

Restaurant filters by time period or category

System updates dashboard dynamically

Subflows:

Trend Analysis: Restaurant compares weekly/monthly performance

Customer Feedback: Restaurant reviews aggregated ratings and comments

Peak Hours Tracking: Dashboard highlights busiest times

Alternate Flows:

A1: No data for selected range → system displays empty dashboard

A2: Restaurant requests export → system generates CSV/PDF

A3: Unauthorized user → system denies access

Postconditions:

Restaurant gains insights into performance for business decisions

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UC-29: Admin User and Role Management

Actors: Admin
Description: Admin manages internal user accounts and assigns system roles.

Preconditions:

Admin logged in with sufficient permissions

Main Flow:

Admin navigates to user management dashboard

Admin views list of employees with current roles

Admin creates, updates, or removes user accounts

Admin assigns roles and permissions (support, finance, marketing, etc.)

Subflows:

Role Templates: System provides default role configurations

Custom Permissions: Admin fine-tunes access rights

Audit Logging: System records all changes for compliance

Alternate Flows:

A1: Admin tries to delete account with active tasks → system blocks

A2: Role conflict detected → system prompts for resolution

A3: Unauthorized attempt to modify roles → system denies and alerts

Postconditions:

Updated internal user list with correct roles and permissions

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Claude Sonnet 4

Looking at your existing use cases, I can identify several gaps that would be important for a minimal viable product. Here are 10 additional use cases to complement your current set:These additional use cases address several critical gaps in your existing set:

Key Gaps Addressed:

1. **Order Cancellation** - Essential for customer satisfaction and refund management
2. **Customer Support** - Critical for handling issues and maintaining user satisfaction
3. **Promotional Codes** - Important for marketing and customer acquisition
4. **Favorites/Saved Items** - Enhances user experience and encourages repeat orders
5. **Notifications System** - Keeps all parties informed throughout the order lifecycle
6. **Out-of-Stock Handling** - Manages inventory issues proactively
7. **Scheduled Delivery** - Provides flexibility for customer convenience
8. **Driver Performance Tracking** - Ensures service quality and operational efficiency
9. **Group Orders** - Captures additional market segment for office/event orders
10. **Address Validation** - Reduces delivery failures and improves accuracy

The 8-week MVP prototype outlined focuses on core functionality while maintaining simplicity. It prioritizes the essential user journeys that make the platform functional and valuable, while leaving advanced features like detailed analytics, complex promotional campaigns, and sophisticated AI recommendations for future iterations.

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This scope balances ambition with realistic development timelines, ensuring you have a working product that can be tested with real users while providing a solid foundation for future enhancements.

Document From Claude Sonnet 4

Additional Use Cases for Food Delivery MVP

UC-14: Cancel Order

Actors: Customer, Restaurant, Driver, Admin
Description: Customer cancels an order before or during preparation/delivery with appropriate refund handling.

Preconditions:

- Customer has placed an order
- Customer is logged into the platform
- Order is in a cancellable state

Main Flow:

1. Customer opens order tracking or order history
2. Customer selects "Cancel Order" option
3. System checks order status and cancellation policy
4. System calculates refund amount based on timing and progress
5. Customer confirms cancellation
6. System processes refund and notifies all parties
7. Order status updated to "Cancelled"

Subflows:

- **Policy Check:** System applies cancellation rules based on order stage
- **Partial Refund:** System calculates partial charges for preparation costs
- **Notification Chain:** Restaurant and driver (if assigned) receive cancellation alerts

Alternate Flows:

- A1: Order already in preparation → system offers partial refund only
- A2: Driver already dispatched → cancellation blocked, customer contacted
- A3: Restaurant already started cooking → customer pays preparation fee

Postconditions:

- Order cancelled and refund processed
- All parties notified of cancellation

UC-16: Handle Customer Support Requests

Actors: Customer, Support Agent, Admin
Description: Customers submit support tickets for order issues, account problems, or general inquiries.

Preconditions:

- Customer has access to support system
- Support agents available

Main Flow:

1. Customer accesses help/support section
2. Customer selects issue category (order, payment, account, technical)
3. Customer describes problem and submits ticket
4. System assigns ticket to appropriate support agent
5. Support agent reviews and responds to customer
6. Issue resolved and ticket closed

Subflows:

- **FAQ Integration:** System suggests relevant FAQ articles before ticket creation
- **Live Chat:** Customer can engage in real-time chat with support
- **Escalation:** Complex issues escalated to senior agents or admin

Alternate Flows:

- A1: No agents available → system queues ticket with ETA
- A2: Customer unsatisfied with resolution → ticket escalated
- A3: Duplicate ticket detected → system merges with existing

Postconditions:

- Customer issue documented and resolved
- Support metrics updated

UC-17: Apply and Manage Promotional Codes

Actors: Customer, Admin, Marketing Team
Description: Customers apply discount codes during checkout while admins manage promotional campaigns.

Preconditions:

- Valid promotional codes exist in system
- Customer has items in cart

Main Flow:

1. Customer enters promo code during checkout
2. System validates code against current promotions
3. System applies discount and updates order total
4. Customer completes order with discounted price
5. System tracks promo code usage

Subflows:

- **Code Validation:** System checks expiry, usage limits, and eligibility
- **Stacking Rules:** System applies multiple codes according to policy
- **Usage Tracking:** System monitors redemption rates and effectiveness

Alternate Flows:

- A1: Invalid/expired code → system shows error and suggests alternatives
- A2: Usage limit reached → system informs customer code is no longer valid
- A3: Minimum order not met → system explains requirements

Postconditions:

- Valid discounts applied to order
- Promotional usage tracked for analytics

UC-19: Manage Favorites and Saved Items

Actors: Customer
Description: Customers save favorite restaurants and menu items for quick reordering.

Preconditions:

- Customer logged into account
- Customer has browsed restaurants/items

Main Flow:

1. Customer browses restaurants or menu items
2. Customer selects "Add to Favorites" for preferred items
3. System saves favorites to customer profile
4. Customer can access favorites from dedicated section
5. Customer can reorder directly from favorites list

Subflows:

- **Quick Reorder:** Customer adds entire previous order to cart
- **Favorites Organization:** Customer creates lists (work lunch, weekend treats)
- **Availability Check:** System shows if favorite items are currently available

Alternate Flows:

- A1: Favorite restaurant closed → system suggests similar alternatives
- A2: Favorite item discontinued → system recommends replacements
- A3: Storage limit reached → customer must remove items to add new ones

Postconditions:

- Customer preferences saved and easily accessible
- Enhanced user experience for repeat orders

UC-20: Send Order Notifications

Actors: System, Customer, Driver, Restaurant
Description: System sends timely notifications about order status changes to relevant parties.

Preconditions:

- Users have notification preferences set
- Valid contact information available

Main Flow:

1. Order status changes in system
2. System identifies notification recipients based on status
3. System formats appropriate message for each recipient type
4. System sends notifications via preferred channels (push, SMS, email)

5. System logs notification delivery status

Subflows:

- **Multi-Channel Delivery:** System sends via multiple channels for critical updates
- **Customization:** Users can set preferences for notification types and timing
- **Retry Logic:** Failed notifications automatically retried

Alternate Flows:

- A1: Notification delivery fails → system tries alternative contact method
- A2: User opted out of notifications → critical updates still sent
- A3: System overload → notifications queued and sent in batches

Postconditions:

- All relevant parties informed of order status
- Communication preferences respected

UC-21: Handle Out-of-Stock Items

Actors: Restaurant, Customer, System
Description: System manages situations when ordered items become unavailable during order processing.

Preconditions:

- Customer has placed order with specific items
- Restaurant discovers item unavailability

Main Flow:

1. Restaurant marks item as out-of-stock during order preparation
2. System identifies affected active orders
3. System notifies customers of unavailable items
4. System offers alternatives: substitution, removal, or order cancellation
5. Customer makes selection
6. System updates order and processes any refund adjustments

Subflows:

- **Automatic Substitution:** System suggests similar items based on customer preferences
- **Partial Fulfillment:** Customer chooses to proceed with remaining items

- **Full Cancellation:** Customer cancels entire order due to key item unavailability

Alternate Flows:

- A1: Customer doesn't respond to substitution offer → system applies default policy
- A2: Multiple items out-of-stock → system offers order cancellation first
- A3: Substitute item costs more → customer approves additional charge

Postconditions:

- Order adjusted to reflect available items
- Customer satisfaction maintained through proactive communication

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UC-22: Manage Delivery Time Slots

Actors: Customer, Restaurant, System
Description: Customers schedule deliveries for specific time slots based on restaurant and delivery capacity.

Preconditions:

- Restaurant supports scheduled delivery
- Customer placing order

Main Flow:

1. Customer selects "Schedule for Later" during checkout
2. System displays available time slots based on restaurant capacity
3. Customer selects preferred delivery time
4. System reserves slot and adjusts restaurant preparation schedule
5. Order queued for preparation at appropriate time
6. Normal delivery process begins at scheduled time

Subflows:

- **Capacity Management:** System limits concurrent orders per time slot
- **Preparation Timing:** System calculates when to start cooking for on-time delivery
- **Slot Modification:** Customer can change time slot before preparation begins

Alternate Flows:

- A1: Preferred slot full → system suggests nearby available times
- A2: Restaurant closes before scheduled time → system alerts customer to reschedule
- A3: Customer wants to move to immediate delivery → system checks availability

Postconditions:

- Delivery scheduled for customer's preferred time
- Restaurant workflow optimized for scheduled orders

UC-24: Track Driver Performance

Actors: Admin, Driver
Description: System monitors and evaluates driver performance metrics for quality assurance.

Preconditions:

- Driver has completed deliveries
- Performance data available

Main Flow:

1. System continuously collects driver performance data
2. Admin accesses driver performance dashboard
3. System displays metrics: delivery time, customer ratings, completion rate
4. Admin reviews performance trends and identifies issues
5. Admin takes action for underperforming drivers (coaching, warnings, deactivation)

Subflows:

- **Automated Alerts:** System flags drivers with concerning metrics
- **Performance Trends:** System shows improvement or decline patterns
- **Comparative Analysis:** System ranks drivers for recognition programs

Alternate Flows:

- A1: Driver contests performance rating → admin reviews individual cases
- A2: System error in tracking → admin manually adjusts metrics
- A3: Driver shows improvement → admin removes warnings/restrictions

Postconditions:

- Driver performance documented and managed
- Service quality maintained across platform

UC-25: Manage Group Orders

Actors: Order Organizer (Customer), Group Members (Customers), Restaurant
Description: Multiple customers collaborate on a single order from the same restaurant.

Preconditions:

- Order organizer has account
- Restaurant supports group orders
- Group members have platform access

Main Flow:

1. Order organizer creates group order and selects restaurant
2. System generates shareable link for group order
3. Organizer shares link with group members
4. Group members add items to shared cart
5. Organizer reviews final order and handles payment
6. Single order placed with restaurant for group delivery

Subflows:

- **Individual Payments:** Each member pays for their own items
- **Split Payment:** Group divides total cost equally or by custom amounts
- **Order Coordination:** System prevents conflicts and manages item limits

Alternate Flows:

- A1: Member adds item after organizer starts checkout → system allows last-minute additions
- A2: Payment fails from one member → organizer can cover or remove items
- A3: Restaurant minimum not met → system suggests additional items

Postconditions:

- Group order successfully placed and paid
- Single delivery coordinated for entire group

UC-26: Handle Delivery Address Validation

Actors: Customer, System, Driver
Description: System validates delivery addresses for accuracy and serviceability before order confirmation.

Preconditions:

- Customer entering delivery address
- Address validation service available

Main Flow:

1. Customer enters or selects delivery address
2. System validates address format and existence
3. System checks address against delivery coverage zones
4. System estimates delivery time and fees for validated address
5. Customer confirms address and proceeds with order

Subflows:

- **Auto-Complete:** System suggests addresses as customer types
- **GPS Integration:** Customer's current location auto-fills address fields
- **Delivery Zone Check:** System confirms restaurant delivers to specified area

Alternate Flows:

- A1: Address not found → system requests clarification or manual verification
- A2: Address outside delivery zone → system suggests pickup or nearby restaurants
- A3: Ambiguous address → system presents multiple options for customer selection

Postconditions:

- Valid, serviceable delivery address confirmed
- Accurate delivery estimates provided to customer

MVP Prototype Requirements After 8 Weeks

Based on these use cases, an 8-week MVP prototype should include:

Core User Features:

- **Account Management:** Registration, login, profile updates
- **Restaurant Discovery:** Browse, search, filter restaurants with real-time availability
- **Order Management:** Add items to cart, customize orders, checkout, cancel orders
- **Payment Processing:** Secure payment with multiple methods, refund handling
- **Order Tracking:** Real-time status updates with GPS tracking
- **Favorites:** Save preferred restaurants and items
- **Notifications:** Push notifications for order updates
- **Customer Support:** Help system with ticket submission

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Restaurant Features:

- **Menu Management:** Add/edit items, set availability, pricing
- **Order Processing:** Accept/reject orders, update preparation status
- **Basic Dashboard:** View incoming orders and daily summary

Driver Features:

- **Availability Management:** Go online/offline for deliveries
- **Order Assignment:** Receive and accept delivery requests
- **Delivery Process:** Pickup confirmation, navigation, delivery confirmation
- **Basic Earnings:** View completed deliveries and earnings

Admin Features:

- **User Management:** Basic account oversight and suspension capabilities
- **Order Monitoring:** View platform activity and resolve basic disputes
- **Content Management:** Approve restaurants and monitor reviews

Technical Requirements:

- **Mobile Apps:** iOS and Android native or React Native
- **Web Platform:** Responsive web application for all user types
- **Real-time Updates:** WebSocket connections for live tracking and notifications
- **Payment Integration:** Stripe or similar payment processor
- **Maps Integration:** Google Maps for location services and navigation
- **Database:** Scalable database design for users, orders, and transactions
- **API Architecture:** RESTful APIs for mobile and web clients
- **Basic Analytics:** Order volume, user engagement, and performance metrics

Chat-GPT 5

https://chatgpt.com/s/t_68c4b8cf29e881919896bbf4c4b073c9

Got it ✅ Thanks for sharing your full set of use cases. I can see you already have a strong foundation for your **MVP food delivery app** (customers, drivers, restaurants, admin). What I'll do is:

1. Create **10 additional use cases (UC-31 to UC-40)** to cover gaps not yet addressed.
2. Summarize **what a prototype should include after 8 weeks** in terms of requirements.

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🔹 Additional Use Cases

UC-31: Customer Support Chat

Actors: Customer, Support Agent, Admin
Description: Customers can reach support for issues with orders, refunds, or delivery.

Preconditions:

- Customer logged in
- Order history available

Main Flow:

1. Customer navigates to "Support" section.
2. Customer selects issue type (order, payment, delivery).
3. System connects customer with support agent or chatbot.
4. Customer and support chat to resolve issue.
5. Support logs resolution in system.

Subflows:

- Chatbot Resolution: Simple FAQs handled automatically.
- Escalation: Complex issues escalated to human agent.

Alternate Flows:

- A1: No agent available → system creates a support ticket.
- A2: Chat disconnects → system reopens chat log when customer returns.

Postconditions:
Customer issue logged and (ideally) resolved.

UC-32: Order Cancellation and Modification

Actors: Customer, Restaurant, Driver, Admin
Description: Customers can cancel or modify orders before preparation or delivery.

Preconditions:

- Order placed
- Order not yet completed

Main Flow:

1. Customer selects order from “My Orders.”
2. Customer requests cancellation or change.
3. System checks status of order.
4. If allowed, system processes cancellation/modification.

Subflows:

- Modify Item: Customer changes item quantity or customization.
- Cancel Order: Customer requests full cancellation.

Alternate Flows:

- A1: Order already in preparation → only partial refund allowed.
- A2: Driver already en route → system denies cancellation.

Postconditions:
Order updated or canceled with refund if applicable.

UC-33: Push Notifications and Alerts

Actors: Customer, Driver, Restaurant, System
Description: System sends real-time notifications about orders, promotions, and status updates.

Preconditions:

- User logged into app
- Notifications enabled

Main Flow:

1. System generates notification (e.g., order status, new promo).
2. Notification sent to user’s device.
3. User views and interacts with notification.

Subflows:

- Order Alerts: Preparation, pickup, delivery updates.
- Promotions: Restaurants push discounts.
- Safety Alerts: System messages for outages or delays.

Alternate Flows:

- A1: Notifications disabled → system uses email/SMS fallback.

Postconditions:
Users stay updated with relevant real-time alerts.

UC-34: Favorites and Reorder

Actors: Customer, System
Description: Customers save favorite restaurants/dishes and reorder quickly.

Preconditions:

- Customer logged in
- At least one completed order

Main Flow:

1. Customer marks order or restaurant as favorite.
2. System saves favorites in profile.
3. Customer navigates to favorites tab and selects “Reorder.”
4. System pre-fills order with previous selections.

Subflows:

- Customize Before Reorder: Customer changes items before checkout.

Alternate Flows:

- A1: Item no longer available → system suggests replacement.

Postconditions:
Order placed faster through saved preferences.

UC-35: Customer Loyalty and Rewards

Actors: Customer, System, Restaurant
Description: Customers earn points or rewards for repeat orders.

Preconditions:

- Customer account active
- Loyalty program enabled

Main Flow:

1. Customer completes order.
2. System calculates loyalty points.
3. Customer views points balance in profile.
4. Customer redeems points at checkout.

Subflows:

- Tiered Rewards: Customers progress through levels (silver, gold, etc.).
- Restaurant-Specific Rewards: Points limited to certain brands.

Alternate Flows:

- A1: Points expired → system notifies customer.

Postconditions:
Customer balance updated and rewards redeemed.

UC-36: Scheduled Orders

Actors: Customer, Restaurant, System
Description: Customers schedule orders in advance for delivery at a specific time.

Preconditions:

- Customer logged in
- Restaurant open at scheduled time

Main Flow:

1. Customer selects items as usual.
2. Customer chooses “Schedule Delivery.”
3. Customer sets future time/date.
4. System saves order and notifies restaurant at correct time.

Subflows:

- Prepaid Orders: Payment processed upfront.
- Order Reminders: Customer notified before scheduled delivery.

Alternate Flows:

- A1: Restaurant closed unexpectedly → system cancels and refunds.

Postconditions:
Order delivered at chosen future time.

UC-37: Driver Route Optimization

Actors: Driver, System
Description: System provides optimized routes for multiple deliveries.

Preconditions:

- Driver assigned multiple orders
- GPS enabled

Main Flow:

1. System calculates optimal delivery sequence.
2. Driver receives route guidance.
3. Driver follows step-by-step navigation.

Subflows:

- Live Traffic Adjustments: Route updated based on traffic.
- Multi-Stop Optimization: System balances shortest path and delivery times.

Alternate Flows:

- A1: Driver ignores suggested route → system recalculates based on current position.

Postconditions:
Orders delivered more efficiently.

UC-38: Safety and Verification Checks

Actors: Driver, Customer, System
Description: Ensures safe and verified handoff of food orders.

Preconditions:

- Delivery in progress

Main Flow:

1. Driver arrives at delivery location.

2. Customer provides delivery code or PIN.
3. Driver enters code into system.
4. System confirms match before marking delivery complete.

Subflows:

- Contactless Delivery: Photo proof replaces code entry.

Alternate Flows:

- A1: Wrong code entered → driver retries or contacts support.

Postconditions:
Verified and secure delivery handoff.

UC-39: Promotions and Referral Program

Actors: Customer, System, Admin
Description: Customers earn discounts for inviting friends.

Preconditions:

- Customer logged in
- Referral program active

Main Flow:

1. Customer shares referral code with friend.
2. Friend signs up and places first order.
3. System credits both accounts with discounts.

Subflows:

- Multi-Referral Bonuses: Extra rewards after threshold referrals.

Alternate Flows:

- A1: Referral abuse detected → admin revokes credits.

Postconditions:
New users onboarded and customers rewarded.

UC-40: Outage and Incident Management

Actors: Admin, System
Description: Platform handles technical outages or service incidents.

Preconditions:

- System detects outage or admin reports issue

Main Flow:

1. System detects downtime or disruption.
2. System notifies admin team.
3. Admin posts real-time status update to users.
4. System reroutes services or restricts new orders.

Subflows:

- Automated Failover: Backup servers activated.
- Status Dashboard: Users see incident updates.

Alternate Flows:

- A1: False alarm detected → system clears alert.

Postconditions:
Platform stability managed and customers informed.

🔹 MVP Prototype After 8 Weeks

After 8 weeks, a **prototype** should include at least:

✅ Core Customer Features

- Registration, login, and profile management
- Browse/search restaurants with filters
- Place and customize orders
- Checkout with payment integration (at least one provider)
- Order tracking (basic status + simple GPS)
- Basic push notifications (order updates)

✅ Core Restaurant Features

- Accept/reject/manage incoming orders

- Update menu items (basic text and price editing)
- Mark items available/unavailable

✅ Core Driver Features

- Toggle availability
- Accept/reject delivery requests
- Pickup and delivery confirmation (basic proof-of-delivery)
- Earnings dashboard (basic total earnings)

✅ Admin/Platform Features

- User management (customers, drivers, restaurants)
- Basic dispute resolution/refunds
- Dashboard to monitor active orders

✅ Non-Functional Requirements

- Secure login/authentication
- Scalable order flow (customers → restaurants → drivers)
- Basic analytics/logging for debugging
- Mobile-first responsive UI

👉 This prototype would not be “feature complete,” but it should **demonstrate the full flow from browsing to ordering to delivery** with **basic admin oversight**.

Would you like me to also **prioritize these use cases** into a suggested MVP scope vs. “nice-to-have later features”?