



National University of Computer & Emerging Sciences

Department of Software Engineering

Software Requirements Engineering

In-Class Group Assignment - Fall 2024

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Time allowed: 1 hour

Total Marks: 15

Marks Obtained:

Scenario: Online Food Delivery System

You have been approached by PopularDesiFood chain to help transition to an online food delivery system. Your requirements engineering team agrees to design an **Online Food Delivery System (OFDS)** that serves three primary user groups: **Customers**, **Restaurant Managers**, and **Delivery Personnel**. The system aims to make the process of ordering, preparing, and delivering food seamless and efficient.



Description of the System:

Customers can browse menus, place orders, and track delivery status in real time. Restaurant managers receive order notifications, update menu availability, and manage operational reports. Delivery personnel can access optimized delivery routes, update order statuses, and receive push notifications about order assignments. The system integrates with third-party services like payment gateways, map APIs, and SMS notification systems.

User Stories

Customer User Stories:

1. As a customer, I want to browse restaurant menus categorized by cuisine and price so I can decide what to order.
2. As a customer, I want to place an order with multiple items so that I can buy a complete meal in one go.



Non-Functional Requirements (NFRs)

NFR1	The system must ^{shall} process customer requests within 2s under normal conditions.
NFR2	The database shall handle 500,000 simultaneous transactions during peak hours.
NFR3	The app must support offline order preparation and delivery tracking.
NFR4	All data transfers shall be secured with SSL encryption.
NFR5	The platform shall function seamlessly in areas with low network bandwidth.
NFR6	Regular automated backups shall ensure no more than 5 minutes of data loss.
NFR7	The app shall load within 3 seconds on all modern smartphones.
NFR8	The system should integrate AI models to optimize delivery routes.
NFR9	All APIs used must meet industry compliance standards.
NFR10	The platform must support multiple languages, including regional dialects.
NFR12	The UI should adapt to various screen sizes, from phone to tablets.
NFR13	The platform must ensure 99.9% uptime with no more than 1 hour of annual downtime.
NFR14	The system should handle a 100% increase in order & volume during holidays.

R-D-1	Delivery Personnel can shall receive specific pickup instructions from the restaurant.
R-D-2	Delivery Personnel can shall mark orders as "partially delivered" if issues arise.
R-D-3	Delivery Personnel can shall pause delivery assignments for breaks during long shifts.
R-D-4	Delivery personnel can shall receive remainders for high priority orders
R-D-5	Delivery personal can shall request assistance for locating complex delivery addresses.
R-D-6	Delivery personal can shall request assistance to earn performance
R-D-7	Delivery personnel can shall group orders from nearby restaurants.
R-D-8	Delivery personnel can shall view detailed weather updates within the app.
R-D-9	Delivery personnel can shall update their vehicle maintenance status in the app.
R-D-10	Delivery personnel can shall manage and update their work shift
R-D-11	for better scheduling Delivery personnel can shall request advanced navigation tools for challenging routes.
R-D-12	Delivery personnel can shall escalate issues to support.
R-D-13	Delivery personnel shall automatically clock out after completing a shift
R-D-14	Delivery personnel can shall check special delivery instructions from customers.
R-D-20	Delivery personnel shall set delivery limits for fragile items
R-D-15	Delivery personnel can choose to reject orders exceeding their carrying capacity.

Restaurant Staff Functional Requirements (FRs)

R_S_1	1) Managers shall define and update delivery zone
	2) Managers shall assign high priority order to specific staff
	3) Managers shall be able to customize menus for specific tin
	4) Managers shall can send notification to customers about sa
	5) Managers shall track peak ordering hours
	6) Manager shall set loyalty discounts
	7) Managers shall check customer feedbacks
	8) Managers shall manage inventory
	9) Managers shall be able to approve or-reject promotional requests
	10) Managers shall activate promotions
	11) Managers shall ^{be able to} enable pre ordering for events
	12) Managers shall set thresholds for order values
	13) Managers shall be able to track deliveries
	14) Managers shall upload promotional media
	15) Managers shall deactivate specific dishes temporarily
	16) Managers shall identify refunds trends
	17) Manager shall conduct customer surveys
R_S_20	18) Managers shall be able to oversee operations remotely

Customer Functional Requirements (FRs)

R_C_1	
1)	Customers shall register and log in using email, social accounts or phone
2)	Customers shall be able to search for restaurants by location
3)	Customers shall be able to compare dishes from different restaurants in a single view
4)	Customers shall be able to save multiple addresses
5)	Customers shall get notified about their delivery reaching nearby landmarks
6)	Customers ^{shall be allowed to} can request a re-delivery if the order is incorrect or incomplete
7)	Customers ^{shall be able to} can place order for pickup
8)	Customers shall ^{receive} recive personalized meal suggestion
9)	Customers shall share gift cards or vouchers with other users
10)	Customers shall be allowed to view last chance item
11)	Customers ^{shall be able to} can ^{report} report issues like missing item
12)	Customers shall be able to access virtual menus
13)	Customers ^{shall} can access a dedicated help ^{section} session
R_C_20	for FAQs and chat support

Additional Restaurant Manager/Staff User Stories:

US_S_1	Managers can design and update delivery zones.
	Manages can customize menu
	Managers shall be able to manage orders.
	Manages shall be able to assign kitchen staff
	Manages shall be able to track peak hours.

Additional Deliver Personnel User Stories:

US_D_1	As delivery person I want to rate restaurants.
	As delivery person I want to send notifications of arrival.
	As delivery person I shall be able to report unsafe areas.
	As delivery person I shall be able to pause notifications.
	As delivery person I want to be able to track myself.

Instructions for the Activity

Duration: 1 hour

Read the scenario and user stories provided. Can you think from the perspective of customer, restaurant manager/staff, and delivery personnel and add more user stories? First, add more user stories.

Identify **Functional Requirements (FRs)** for the system against user stories for each user group.

Identify **Non-Functional Requirements (NFRs)** such as performance, security, and usability etc.

BE CREATIVE! BRAINSTORM!

Use of AI is strictly not allowed. There is a second part to this activity. To ensure that the second part of the activity is successful all requirements must be manually generated.

Additional Customer User Stories:

US_C-1	As a customer I want to be able to cancel order and get refund.
	As customer I want to give feedback.
	As customer I want to prepay as choose cash on delivery.
	As customer I want to save multiple addresses.
	As customer I want to get notified of delivery

3. As a customer, I want to track the delivery status in real time so I know when my order will arrive.
4. As a customer, I want to save my favorite restaurants for faster ordering in the future.
5. As a customer, I want to apply promo codes during checkout to avail of discounts.

Restaurant Manager and Staff User Stories:

1. As a restaurant manager, I want to update menu items and prices so that my customers have accurate information.
2. As a restaurant manager, I want to receive order notifications as soon as an order is placed so that I can prepare it quickly.
3. As a restaurant manager, I want to mark items as out of stock so that customers cannot order unavailable dishes.
4. As a restaurant manager, I want to view sales reports daily, weekly, and monthly so that I can analyze performance trends.
5. As a restaurant manager, I want to communicate with delivery personnel in case of special delivery instructions.



Delivery Personnel User Stories:

1. As a delivery person, I want to view optimized delivery routes so that I can minimize delivery time.
2. As a delivery person, I want to mark orders as delivered so that the system updates order statuses.
3. As a delivery person, I want to receive notifications of new order assignments so that I can prepare for deliveries.
4. As a delivery person, I want to check customer contact details to resolve issues during delivery.
5. As a delivery person, I want to report delivery delays so that customers and restaurants are informed.

