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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.

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.

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Additional Customer User Stories:

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US_C_1	As a Customer, I want to receive estimated delivery times. So, I can Plan my schedule.
US-C-2	As a Customer, I want to reorder from my order history. So, I can save time for frequent order.
US-C-3	As a customer, I want to leave reviews for restaurants & delivery services so I can share my experience.
US-C-4	As a customer, I want to filter resturants based on ratings, delivery time or dietary preferences. So I can choose best option for m
US-C-4	As a customer, I want to schedule ~~reports~~ orders for a specific time. So that my food is delivered when I need it.

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Additional Restaurant Manager/Staff User Stories:

US_S_1	As a Restaurant manager, I want to receive feedback from Customers. so, I can improve quality of food & services.
US-S-2	As a Restaurant manager, I want to set special offers & discounts for specific dishes. So, I can attract more Customers.
US-S-3	As a Restaurant manager, I want to view Peak orders times. so, I can ~~plan~~ manage staff more effectively.
US-S-4	As a Restaurant manager, I want to update resturant opening hours. so, Customer ratio increase.
US-S-5	

Additional Deliver Personnel User Stories:

US_D_1	As a delivery man, I want to access real time traffic updates. so, I can choose faster routes.
US-D-2	As a delivery man, I want to view all pending deliveries. so, I can manage my task efficiently.
US-D-3	As a delivery man, I want to receive remainders for undeliverable orders. so, I can ensure timely deliveries.
US-D-4	As a delivery man, I want to log my working hours & Completed deliveries. so, I can track my Performance.
US-D-5	

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Customer Functional Requirements (FRs)

R_C_1	The system shall allow customers to browse restaurant menus categorized by cuisine and price.
R-C-2	The system shall enable customers to search for specific dishes or restaurants.
R-C-3	The system shall allow customers to add multiple items to their cart for single order.
R-C-4	The system shall provide real-time delivery status tracking for placed order.
R-C-5	The system shall allow customers to save favorite restaurants for faster future orders.
R-C-6	The system shall enable customers to apply promo codes during checkout.
R-C-7	The system shall display estimated delivery time for orders.
R-C-8	The system shall allow customers to leave ratings and reviews for restaurants and delivery personnel
R-C-9	The system shall provide filter options for restaurants based on ratings, delivery time, dietary, preferences, and price r
R-C-10	The system shall store customer order history for easy reordering.
R-C-11	The system shall allow customers to schedule orders for a specific date and time.
R-C-12	The system shall allow customers to edit or cancel orders before preparation starts.
R-C-13	The system shall notify customers of delays in delivery with updated estimated times.
R-C-14	The system shall allow customers to customize their orders.
R-C-15	
R-C-16	
R-C-17	
R-C-18	
R-C-19	
R_C_20	

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Restaurant Staff Functional Requirements (FRs)

R_S_1	The system shall allow restaurant managers to update menu items & their prices.
R_S_2	The system shall notify restaurant managers immediately when a new order is placed.
R_S_3	The system shall enable restaurant managers to mark items as out of stock to avoid availability issues.
R_S_4	The system shall provide an interface for restaurant managers to communicate delivery personnel for instructions
R_S_5	The system shall allow restaurant managers to upload promotional offers or discounts for selected items
R_S_6	The system shall enable restaurant managers to view customer feedback.
R_S_7	The system shall allow restaurant managers to set business operating hours & update them.
R_S_8	The system shall generate detailed reports on top-selling items to assist with menu optimization.
R_S_9	The system shall notify restaurant managers of cancelled orders to avoid unnecessary preparation.
R_S_9	The system shall provide a dashboard displaying all pending and complete orders.
R_S_10	The system shall allow restaurant managers to monitor peak order times for better staffing decisions.
R_S_20	

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Delivery Personnel Functional Requirements (FRs)

R_D_1	The system shall display optimized delivery routes for delivery personnel to minimize delivery time.
R-D-2	The system shall send real-time notifications to delivery personnel when a new order is assigned
R-D-3	The system shall provide access to customer contact details for resolving delivery issues.
R-D-4	The system shall provide live traffic updates to help delivery personnel navigate efficiently.
R-D-5	The system shall allow delivery personnel to update their availability status.
R-D-6	The system shall display estimated delivery times for each order to help delivery personnel prioritize tasks
R-D-7	The system shall notify delivery personnel of high priority or urgent deliveries.
R-D-8	The system shall provide delivery personnel with a summary of daily deliveries.
R-D-9	
R-D-10	
R_D_20	

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Non-Functional Requirements (NFRs) must, should

NFR1	The system shall ensure secure user authentication through encrypted login credential
NFR2	The system shall comply with relevant data protection regulations for customer data
NFR3	The system shall log all user activities for auditing & traceability.
NFR4	The system shall provide multilingual support with atleast three languages
NFR5	The system shall support accessability features for user with disability.
NFR6	The system shall ensure real-time order status updates with 10% - 5 sec delay.
NFR7	The system shall respond to user inputs within 2 sec under normal load conditions