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:

2.

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.

5/5

Additional Customer User Stories:

US_C1	As a customer, I want to pay through atm so that I can easily pay money.
US-C-2	As a customer, I want to recieve sms after order so that I can confirm the order.
US-C3	As a customer, I want to access google maps so that I can see nearby restwants.

5/5

Additional Restaurant Manager/Staff User Stories:

1.5   formal -0.5

US_S_1		(1.5)
	As a restaurant manager I want to set up promotional offers and discounts so that I can attract more customers.	
	As a restaurant staff member, I want to view pending orders in a priority queue so that I can prepare them efficieny.	

5/5

Additional Deliver Personnel User Stories:

5//   1.5

US_D_1	As a delivery person, I want to receive alerts for new delivery tasks so that I can plan my routes.	(1.5)
	As a delivery person, I want to update the delivery status to delivered so that customers and restaurant are informed.	

CamScanner

Customer Functional Requirements (FRs)

R_C_1 ✓	The system shall allow the user/customer to browse resturant menu.
R_C-2 ✓	The system shall allow the user to search food by the name of food (i.e burger, pizza)
R_C-3 ✓	The system shall allow the user customer to order multiple food items at a time.
R_C-4 ✓	The system shall allow the customer to track delivery status (i.e on the road).
R_C-5 ✓	The system shall allow the customer to check expected time of delivery.
R_C-6 ✓	The system shall allow the customer to save favourite resturant in his favourite list.
R_C-7 ✓	The system shall allow the customer to see favourite resturants in his favourite list.
R_C-8 ?	The system shall allow the customer to add promo see codes.
R_C-9 ✓	The system shall give discount according to promo code.
R_C-10 ✓	The system shall deduct the discount amount from the total bill.
R_C-11 ✓	The system shall allow the user to pay through atm card
R_C-12 ✓	" " " the user to receive sms after order confirmation.
R_C-13 ✓	The system shall allow the user to access google maps.
R_C-14 ✓	The system shall allow the user to search nearby resturants
R_C-15 ✓	The system shall send notification if new dishes added.
R_C-16 ✓	The system shall allow user to chat with resturant.
R_C-17	" " " allow user to input address.
R_C-18	" " allow user to input contact number
R_C-19	" " allow user to see estimated preparation time.
R_C_20 ✓	The system shall send promotions to the customer

vague — R_C-8

incorrect — R_C-17, R_C-18

vague -0.
lack of atomicity -0.5

incomplete incorrect -0.5

Restaurant Staff Functional Requirements (FRs)

R_S_1	
✓	Resturant manager shall update menu items
3	Resturant manager shall update food prices.
✓	Resturant manager shall update food according to resturants.
✓	The system shall notify resturant staff as soon as order is placed
✓	The ssystem shall allow staff to mark items out of stock
✗ 6	The system shall prevent customer from ordering item marked as "out of stock".
✓	The system shall enable resturant manager to view performance sales report daily
✓	The system shall generate weekly and monthly sales report.
✓	The system shall enable managers to add promotional offers for customers.
✓	The system shall allow managers to update resturant business hours.
✓	The system shall notify managers of customer feedbacks and complaints.
✓	The system shall provide a dashboard for tracking live orders.
✓	The system shall allow managers to assign tasks to staff managers
R_S_20	

irrelevant to staff

) logical dependency
— Re-inclevel
—0.5

Delivery Personnel Functional Requirements (FRs)

1.5   4
reg ids
-0.5

1.25

R_D_1	The system shall provide delivery personnel with optimized delivery routes.
?✓	The system shall notify delivery personnel of new order assigned to him.
✓	The system shall allow delivery personnel to accept or reject order assignments.
✓	The system shall enable delivery personnel to view customer contact information securely.
✓	The system shall enable delivery personnel to mark order as picked up
✓	The system shall update the statuses to delivered if parcel is delivered.
✓	The system shall notify customer of delays reported by delivery personnel.
✓	The system provide real-time GPS tracking for delivery personnel routes.
✓	The system shall allow delivery personnel to access restaurant contacts.
✓	The system shall allow delivery personnel to view order detail (i.e special instructions).
?✓	The system shall allow delivery personnel to update his availability status
??	The system shall allow delivery personnel with payment detail for cash-on-delivery
	viewing?
R_D_20	

vague

vague
-0.5

CamScanner

4.5/5

must / should

NFR1	The system (shall) handle at least 1000 concurrent users without performance and degradation.
NFR2	Real-time delivery status updates (shall) have a latency of no more than 2 seconds.
NFR3	The system (shall) process order placements within 3 seconds after submission.
NFR4	The system (shall) update menu changes across all platform within 1 min
NFR5	optimized delivery route calculation shall complete within 5 second
NFR6	The system (shall) provide an intuitive and user-friendly interface of customers.
NFR7	The system (shall) support multi-language options for diverse users.
NFR8	The mobile application (shall) comply with accessibility standards.
NFR9	Tutorials or help documentation shall be available for new users
NFR10	The system (shall) ensure a consistent user experience across web and mobile platform to under system
NFR11	The system (shall) have an uptime of 99.9% functiond over a 12-month period.
NFR12	system backups (shall) occur every 24 hours to prevent data loss.