Canteen Food Ordering and Management System

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Deliverable I (Project Proposal)

<u>Abstract</u>

The main purpose of this online food ordering and management system is to replace the existing manual system by using automated software with the help of advanced information and technology systems so that the process can be faster and simpler. Besides, valuable data can also be stored, manipulated, and accessed easily for a longer period. Today's way of ordering food mostly relies on manpower to enter orders to the ordering machine and collect payments manually. This is not only a waste of manpower but also a waste of time. The customers have no way to know the status of their ordered food, whether the food is being prepared or is on its way of delivery. The food ordering system allows the user to access the account with valid credentials. In the food ordering system, there are food items according to categories and online payment methods available for the users to surf, order and make a payment. Besides, users can track their orders with the food details. The admin of the food ordering system would have the authority to view order details and update the delivery status of food.

Team Introduction

Jeffrey Kwan Qing Ong:

He is a Malaysian. He knows a couple of languages such as English, Chinese, Malay and Hokkien. He wants to work on this project as this is part of the assignment and he is also very interested in the management system. He can help expand the idea for the project as he worked as a server before so he has some experience in food ordering and some management.

Khang Phan:

He comes from Vietnam and he has been here for 5 years. Like most of us, he thinks this is a very interesting project that would benefit everyone who is participating in this project alone because it helps everyone in the group understand the value of teamwork. Furthermore, this idea will help people's lives a lot easier. However, he can share his ideas and his experiences to help build the greatest app for all friendly users.

Shan Shan Lee:

She is also a Malaysian. Her major is software engineering. She proposed this idea because she realized that most of the food orderings are done manually in Malaysia and this system can help in saving time and manpower. She can help in this project as she has experience in developing a similar management system which is a college enrollment system.

Neil Remolar:

He's Filipino who came to the U.S. in 2004. Still fluent in Tagalog and has past experiences in customer service and inventory management. He can help this project due to knowing the front and backend of inventory management system based on his experiences from working at Starbucks as a Supervisor and Best Buy as an Inventory Specialist.

Cost Estimation

1. Labor/staffs expense:

    a. 4 engineering salary: $60\$/h * 40h * 16 \text{ weeks} = 38,400\$$

    b. Travel: $200\$ * 4 \text{ weeks} = 800\$$

2. Equipment:

a. Computer/laptop: $1200\$ * 4 = 4,800\$$

b. Server: $2,000\$$

c. Service/licenses: $2,500\$$

d. Incurred cost: $5,000\$$

3. Others:

a. Room rental: $1200\$/month * 4 \text{ moths} = 4,800\$$

b. Foods/ drinks: $200\$ * 12 \text{ weeks} = 2,400\$$

c. Gas: $60\$ * 4 \text{ weeks} = 240\$$

d. Furniture: $2,500\$$

e. Incurred cost: $5,000\$$

Total: 68,440$

Deliverables II (User Story)

<u>Roles</u>

1. User (customer)

    a. View available food categories

    b. Order food and put in cart

    c. Proceed to checkout

    d. Make payment

    e. Track ordered food status

2. Admin (manager)

a. Update order records and status

As a user, I want to view, pre-order and pay for the food and drink, so that I can have my meal without queuing in the canteen.

Role	Transaction	Reasons
User	View food categories	• To be able to choose the foods and drinks
User	Order food	• Food to be added to the cart • Seller can start preparing food
User	Proceed to checkout	• To pay for the food
User	Payment	• Debit/Credit Card
User	Track ordered food status	• To know when the food is under preparation, on the way or ready

Table 1

As an admin, I want to view and manage food items that customers ordered and let them know when the food is ready for pickup.

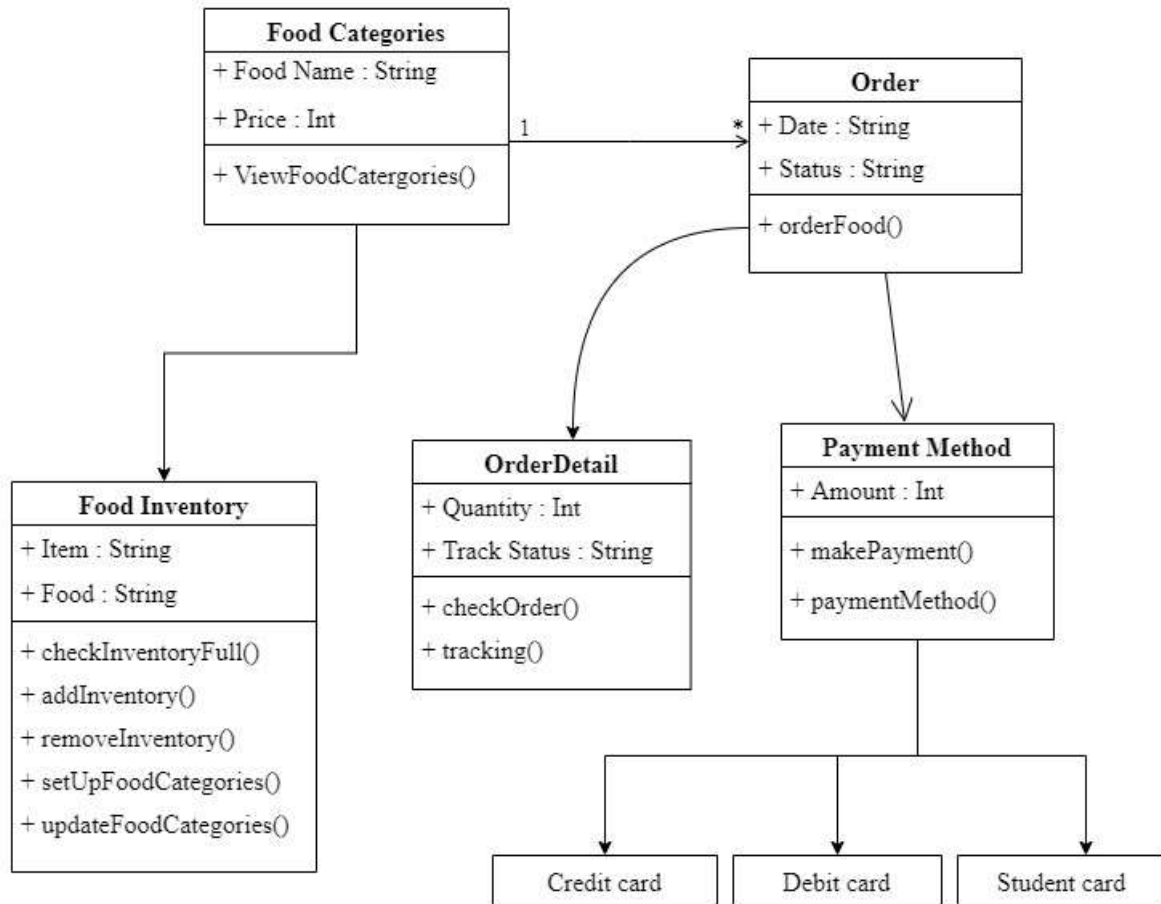| Role	Transaction	Reasons
Admin	Send order to kitchen	• Make the foods for the customers.
Admin	Send out food status to customer with their tracking number	• Let customers know when they should pick up their order.
Admin	Send order complete	• Let customers know their order ready and could pick it up.

Table 2

Deliverable III (Backlog)

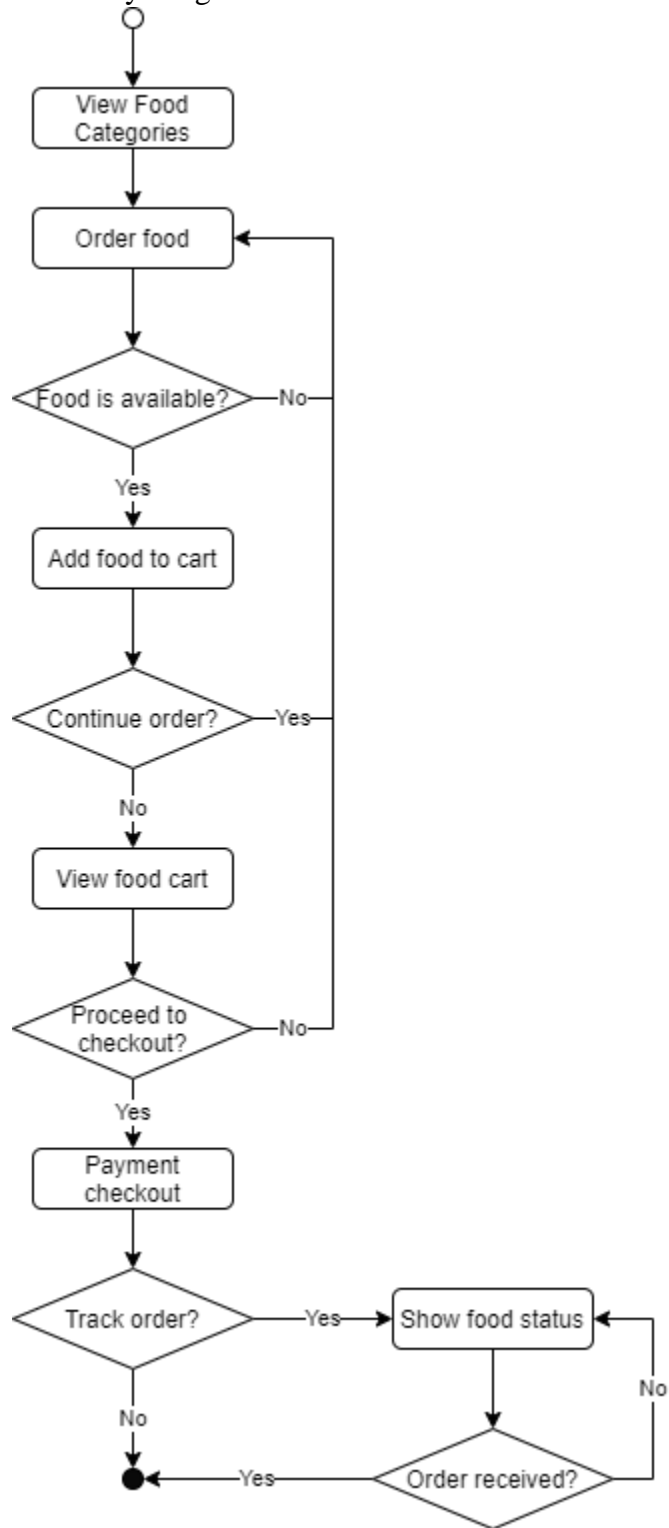| User stories	Detailed requirement	Implement (code)

US1
View food categories
	R1.1
	To view food choices
	R1.2
	To choose food and drinks
		FoodCategories
		viewFoodCategories(){
		Return foodCategories;
		}

US2
Order food
	R2.1
	Food is available
	R2.2
	Quantity ordered is available
	R2.3
	To add food to cart
		Void orderFood(Food food){
		cart.add(food);
		}

US3
Proceed to checkout
	R3.1
	There is food being ordered
	R3.2
	To make payment
		Void makePayment(){
		User.money - price;
		}

US4
View again the ordered food list
	R4.1
	To check what is in cart
		Cart checkOrder(){
		Return cart;
		}

US5
Choose payment method
	R5.1
	There is food already ordered
	R5.2
	Amount to pay is greater than 0
	R5.3
	To be able to check out
		Void paymentMethod(String method){
		if(credit card){
		creditCardPayment - price;
		}
		
		if(debit card){
		debitCardPayment - price;
		}
		
		if(student card){
		studentCardPayment - price;
		}
		}

US6
Track ordered food status using tracking number
	R6.1
	There is food ordered to be checked
	R6.2
	racking number exists
		String Tracking(){
		if(Tracking ==true){
		Return checked;
		} else
		Return Null;
		}

User stories	Detailed requirement	Implement (code)

US7
View order received
	R7.1
	There is food ordered
	R7.2
	Tracking number exists
	R7.3
	View order status
		String Tracking(){
		if(checked == true){
		Return Tracking;}
		else
		Return Null;
		}

US8
Send out status of
food to customer with
their tracking number
	R8.1
	Tracking number exists
	R8.2
	Status exists
	R8.3
	Send out order status
		String Tracking(){
		if(Tracking == true){
		Return StatusOder;}
		else
		Return Null;
		}

Deliverable IV (Software Design)

1.Class Diagram

Food Categories
+ Food Name : String
+ Price : Int
+ ViewFoodCatergories()

Order
+ Date : String
+ Status : String
+ orderFood()

1   *

Food Inventory
+ Item : String
+ Food : String

+ checkInventoryFull()
+ addInventory()
+ removeInventory()
+ setUpFoodCategories()
+ updateFoodCategories()

OrderDetail
+ Quantity : Int
+ Track Status : String

+ checkOrder()
+ tracking()

Payment Method
+ Amount : Int

+ makePayment()
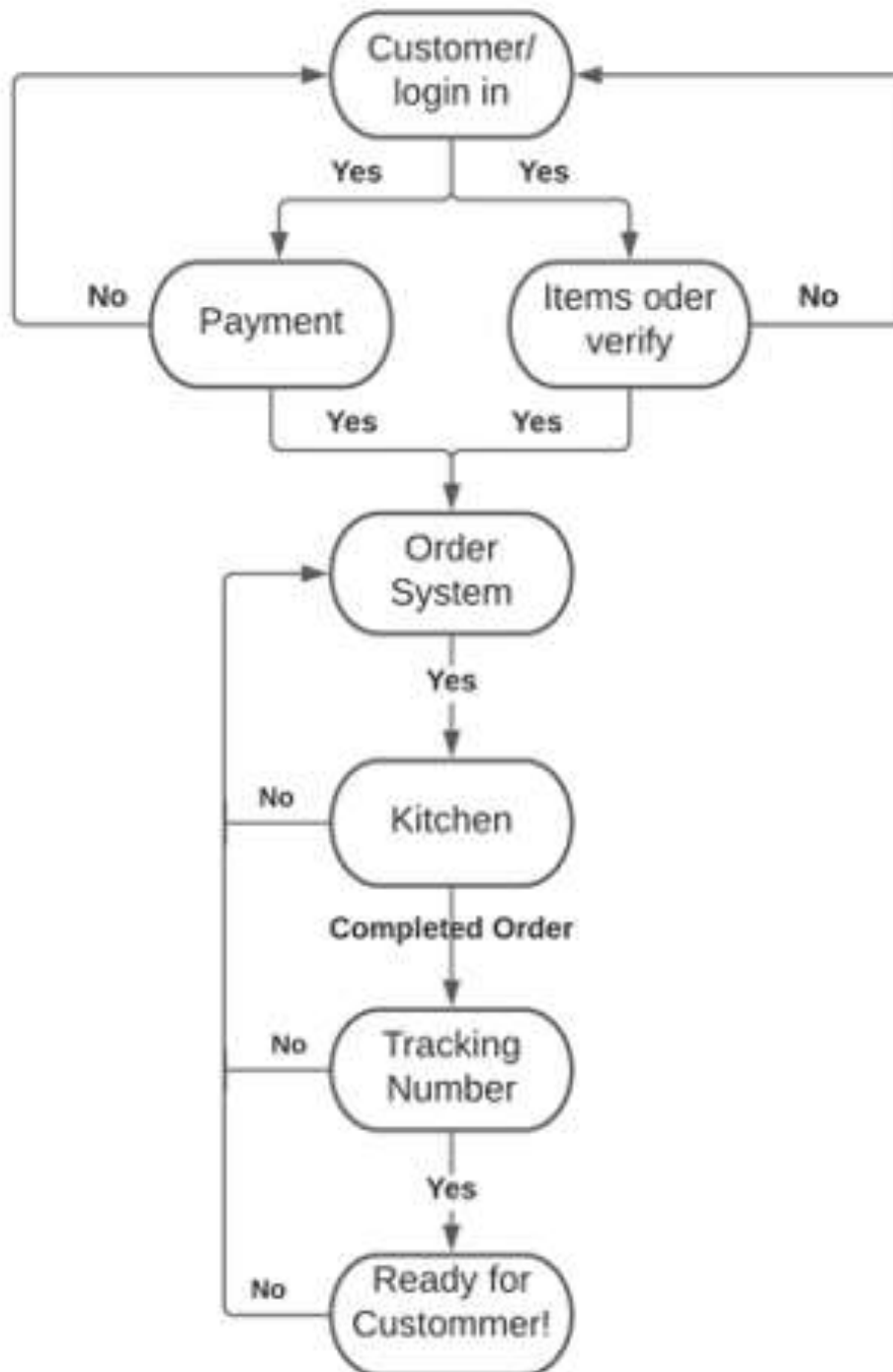+ paymentMethod()

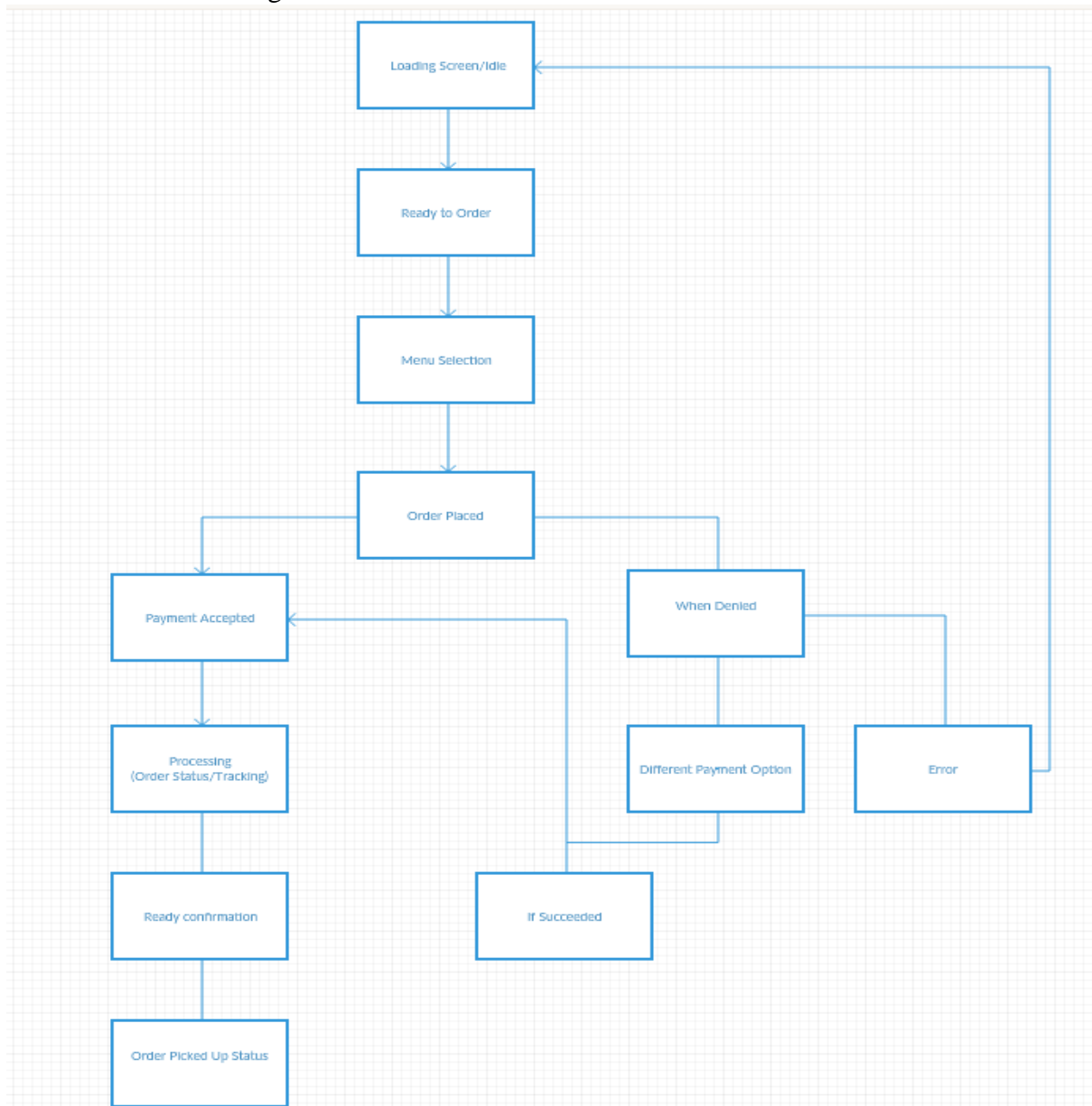Credit card   Debit card   Student card

2.Activity Diagram

3.Data Flow Diagram

4. State Transition Diagram

Deliverable V (Test Cases)

Requirement	Test Case #	Inputs/Steps	Expected Output
Create an account	1	Click Customer Create Account button	
		Insert your name and password	"Name cannot be left empty, Please fill in your name." will pop-up
		Click Confirm button when you are done	
	2	Click Customer Create Account button	
		Insert your name and password	"New password cannot be left empty, Please fill in the new password. " will pop-up
		Click Confirm button when you are done	
	3	Click Customer Create Account button	
		Insert your name and password	"Your ID and Password" will pop-up
		Click Confirm button when you are done	
Customer log in	4	Click Customer Log in button	
		Insert your ID and password	"Please fill in your ID. " message will pop-up
		Click Confirm button when you are done	

Requirement	Test Case #	Inputs/Steps	Expected Output
	5	Click Customer Log in button	
		Insert your ID and password	"Invalid ID, ID has to be integer. " message will pop-up
		Click Confirm button when you are done	
	6	Click Customer Log in button	
		Insert your ID and password	"Please fill in your password. " message will pop-up
		Click Confirm button when you are done	
	7	Click Customer Log in button	
		Insert your ID and password	"Incorrect ID or password. " message will pop-up
		Click Confirm button when you are done	
	8	Click Customer Log in button	
		Insert your ID and password	You will be brought to the Main Menu page
		Click Confirm button when you are done	

Requirement	Test Case #	Inputs/Steps	Expected Output
Admin log in (Only for admin)	9	Click Admin Log in button	
		Insert your password	"Please fill in password. " message will pop-up
		Click Confirm button	
	10	Click Admin Log in button	
		Insert your password	"Incorrect password. " message will pop-up
		Click Confirm button	
Add food to the cart	11	View the food menu screen	
		Choose the foods, desserts or drinks category	"You haven't ordered anything yet." message pop-up
		Click the "Δ" or "∇" button	
	12	View the food menu screen	
		Choose the foods, desserts or drinks category	Your item will be added to the cart or removed from the cart and showing the quantity and price of it.
		Click the "Δ" or "∇" button	

Requirement	Test Case #	Inputs/Steps	Expected Output
Proceed to the payment page	13	Proceed to checkout	
		Fill the details required such as name, tel no., address, card no. and CVV.	"Name cannot be left empty. Please fill in your name." message pop-up
		Click the confirm button	
	14	Proceed to checkout	
		Fill the details required such as name, tel no., address, card no. and CVV.	"Tel no. cannot be left empty. Please fill in your tel no.." message pop-up
		Click the confirm button	
	15	Proceed to checkout	
		Fill the details required such as name, tel no., address, card no. and CVV.	"Address cannot be left empty. Please fill in your address." message pop-up
		Click the confirm button	
	16	Proceed to checkout	
		Fill the details required such as name, tel no., address, card no. and CVV.	"Invalid phone no., Please follow format (xxx)xxx-xxxx" message pop-up
		Click the confirm button	
	17	Proceed to checkout	

Requirement	Test Case #	Inputs/Steps	Expected Output
		Fill the details required such as name, tel no., address, card no. and CVV.	"Thank you for your payment. Your order has been placed. =) Your tracking number: " message pop-up
		Click the confirm button	
Track ordered food status using tracking number	18	Click Track Your Food >> button	
		Fill in the tracking number given.	"Please fill in your tracking number. " message pop-up
		Click Confirm button	
	19	Click Track Your Food >> button	
		Fill in the tracking number given.	"The tracking number is incorrect. " message pop-up
		Click Confirm button	
	20	Click Track Your Food >> button	
		Fill in the tracking number given.	"Your food is under preparation." message pop-up
		Click Confirm button	
Admin update the status of food to customer when the food is ready	21	Input tracking number "1" in tracking number field	

Requirement	Test Case #	Inputs/Steps	Expected Output
		Input new food status "is on the way" in status field	"Please fill in your tracking number. " pop-up message
		Click update status button	
	22	Input tracking number "1" in tracking number field	
		Input new food status "is on the way" in status field	"Invalid tracking number, has to be integer. " pop-up message
		Click update status button	
	23	Input tracking number "1" in tracking number field	
		Input new food status "is on the way" in status field	"Please fill in new status." pop-up message
		Click update status button	
	24	Input tracking number "1" in tracking number field	
		Input new food status "on the way" in status field	"Status for tracking number #() has been updated" pop-up message
		Click update status button	
Track ordered food status using tracking number again	25	Click Track Your Food >> button	
		Fill in the tracking number given.	"Your food is on the way. " message pop-up

Requirement	Test Case #	Inputs/Steps	Expected Output
		Click the Confirm button.	
Admin send out status of food to customer with their tracking numbers when the food has received	26	Input tracking number "1" in tracking number field	
		Input new food status "delivered" in status field	"Status for tracking number #() has been updated" pop-up message
		Click update status button	
Track ordered food status using tracking number again	27	Click Track Your Food >> button	
		Fill in the tracking number given.	"Your food is delivered. " message pop-up
		Click the Confirm button.	