Report on

Online Food delivery Management System

Prepared for

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Course Title: Information System Design & Software Engineering LAB

Course Code: CSE CSE3036.1&346.1

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South East University
Department of Computer Science and Engineering

Executive Summary

The purpose of Online Food Ordering System is to automate the existing manual system by the help of computerized equipment's and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with.

Online Food Ordering System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus, it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

The aim is to automate its existing manual system by the help of computerized equipment's and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. Basically, the project describes how to manage for good performance and better services for the clients.

The main objective of the Project on Online Food Ordering System is to manage the details of Food Item, Category, Customer, Order, Confirm Order. It manages all the information about Food Item, Payment, Confirm Order, Food Item. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Food Item, Category, Payment, Customer. It tracks all the details about the Customer, Order, Confirm Order.

Contents

Letter of Transmittal

To,

AKM Ahsanul Hoque

Adjunct Professor &Consultant

Southeast University

Subject: Submission of Report.

Sir,

This is a great opportunity & immense pleasure for us to submit this report on the topic "Development of Online Food Delivery Management System". We have prepared this report as partial fulfillment of the course ART 102. We have tried our level best to prepare this report to the required standard. It was certainly a great opportunity for us to work on this paper to actualize our theoretical knowledge in the practical arena.

We express our heart full gratitude to you to go through this report and make your valuable comments. It would be very kind of you, if you please evaluate our performance regarding this report.

Thanking you

Sincerely Yours.

All the members of group “5”

Department of Computer and science and Engineering

Southeast University

Introduction

Project Introduction

The "Online Food Delivery Management System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system. Moreover, this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

To prevent data entry mistakes, the program is kept as simple as feasible. When inputting incorrect data, it also displays an error notice. The user does not require any formal expertise to utilize this system. As a result, it demonstrates that it is user-friendly. As previously said, an online food ordering system may lead to an error-free, secure, trustworthy, and rapid management system. It might let the user focus on their other tasks rather than maintaining track of their records. As a result, the company will be able to make better use of its resources.

Every organization, whether big or small, has challenges to overcome and managing the information of Category, Food Item, Order, Payment, Confirm Order. Every Online Food Ordering System has different Food Item needs; therefore, we design exclusive employee management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executives who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

Team Introduction

Name: Md Naimul Islam

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Project Background

The Online Food Delivery Management System is one of the most recent services that is ordered online and delivered to the client using this approach. The adoption of an electronic payment system makes this possible. Customers pay via credit cards; however, they can be served even before making a purchase, either in cash or through an online payment system. Customers will be able to order food online using the technology developed for this project.

Several opportunities are emerging on the internet as a result of the increased knowledge of the internet and the technology connected with it. Because of the internet, a lot of enterprises and corporations may now start up with simplicity. An online meal ordering system is one of the businesses that the internet has introduced. Many restaurants have opted to focus on quick preparation and delivery of orders rather than providing a full dining experience in today's age of fast food and takeout. Until recently, the majority of these delivery orders were placed over the phone, but this approach has a number of drawbacks.

Anyone may order any product over the internet and have it delivered to their home. However, when discussing the technique of transferring goods and services, the focus is on the payment mechanism. To put it another way, can you pay for products and services through the internet? This leads to a discussion of the economic implications of digital currency. What are the economic implications of the implementations? Since the world is fast becoming a global village, the necessary tool for this process is communication of which telecommunication is a key player. A major breakthrough is the wireless telephone system which comes in either fixed wireless telephone lines or the Global System of Mobile communication.

We propose is an online ordering system originally designed for use in college cafeterias, but just as applicable in any food delivery industry. The main advantage of this system is that it greatly simplifies the ordering process for the customer. The system also greatly lightens the load on the restaurants end, as the entire process of taking orders is automated.

Objectives

Primary Objective:

- Through improved application of technology in daily operations, enhance efficiency and improve services given to customers.
- To be able to stand out from competitors in the food service industry

Secondary Objectives:

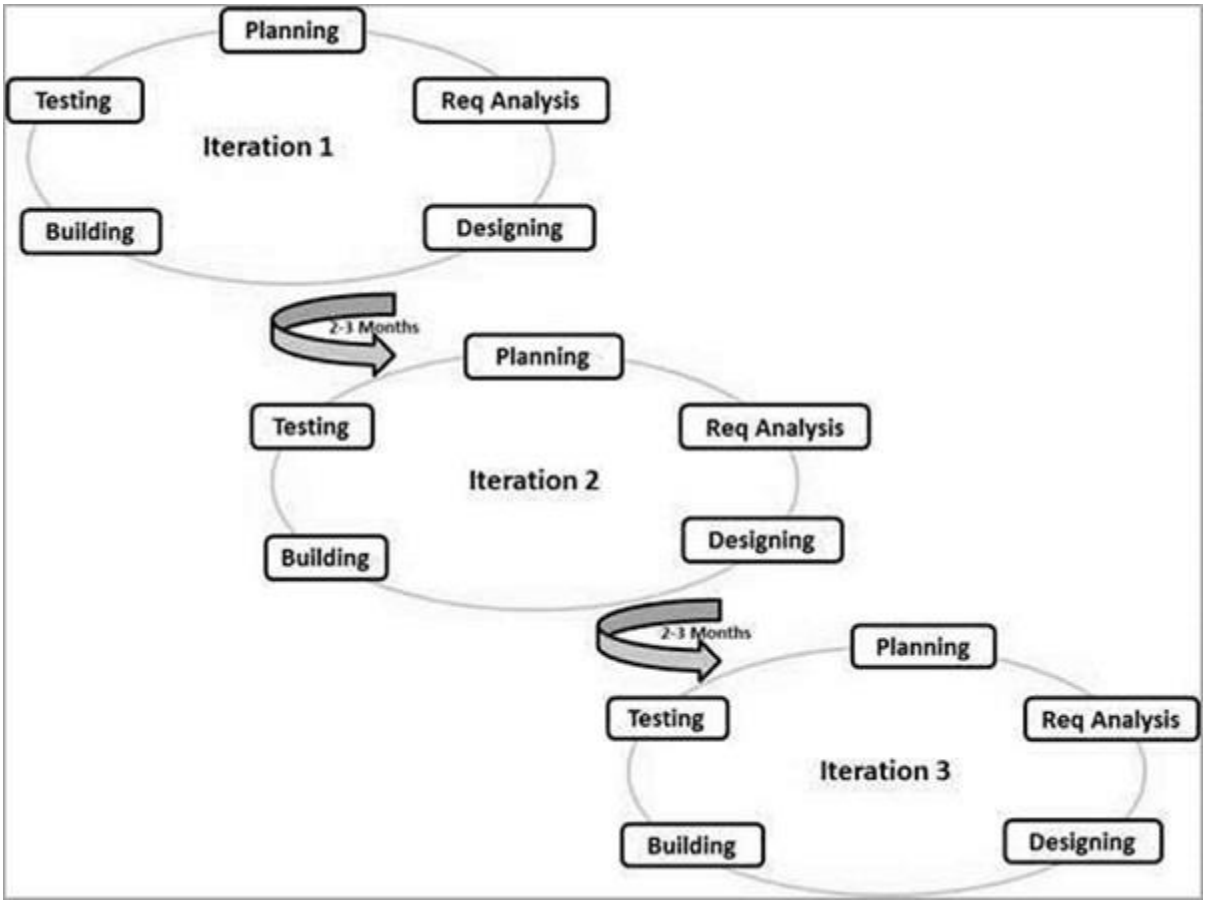
- To enable customers to order custom meals that aren't in the menu.
- To enable customers to have a visual confirmation that the order was placed correctly.
- To enable customers to know food ingredients before ordering to reduce restaurant's food wastage.
- To ensure correct placement of orders through visual confirmation.
- Improve efficiency of restaurant's staff.
- Eliminate paper work and increase level of accuracy.
- Eliminate paper work and increase level of accuracy.

Process Model

Agile

Agile model believes that every project needs to be handled differently and the existing methods need to be tailored to best suit the project requirements. In Agile, the tasks are divided to time boxes (small time frames) to deliver specific features for a release.

Iterative approach is taken and working software build is delivered after each iteration. Each build is incremental in terms of features; the final build holds all the features required by the customer.



The Agile thought process had started early in the software development and started becoming popular with time due to its flexibility and adaptability.

Following are the Agile Manifesto principles −

- **Individuals and interactions** − In Agile development, self-organization and motivation are important, as are interactions like co-location and pair programming.
- **Working software** − Demo working software is considered the best means of communication with the customers to understand their requirements, instead of just depending on documentation.
- **Customer collaboration** − As the requirements cannot be gathered completely in the beginning of the project due to various factors, continuous customer interaction is very important to get proper product requirements.
- **Responding to change** − Agile Development is focused on quick responses to change and continuous development.

Planning

Project Planning

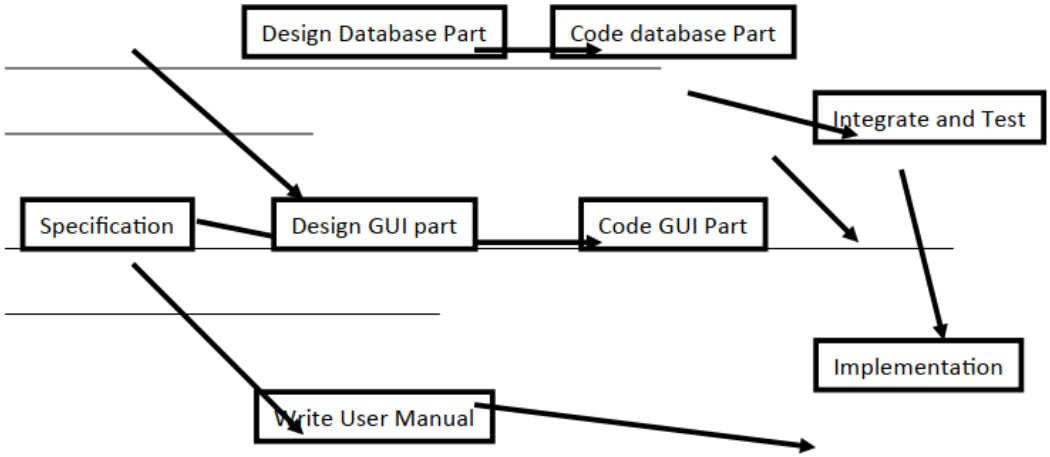
It may help collecting perfect management in detail. In a very short time, the collection will be obvious, simple and sensible. It will help a person to know the management of passed year perfectly and vividly. It also helps in current all works relative to Online Food Ordering System. It will be also reduced the cost of collecting the management & collection procedure will go on smoothly.

Our project aims at Business process automation, i.e. we have tried to computerize various processes of Online Food Ordering System.

- In computer system the person has to fill the various forms & number of copies of the forms can be easily generated at a time.
- In computer system, it is not necessary to create the manifest but we can directly print it, which saves our time.
- To assist the staff in capturing the effort spent on their respective working areas. To utilize resources in an efficient manner by increasing their productivity through automation.
- The system generates types of information that can be used for various purposes.
- the user requirement
- Be easy to understand by the user and operator
- Be easy to operate
- Have a good user interface
- Be expandable
- Delivered on schedule within the budget.

Pert/CPM

PERT chart is organized for events, activities or tasks. It is a scheduling device that shows graphically the order of the tasks to be performed. It enables the calculation of the critical path. The time and cost associated along a path is calculated and the path requires the greatest amount of elapsed time in critical path.



Gannt Chart/time Chart

It is also known as Bar chart is used exclusively for scheduling purpose. It is a project controlling technique. It is used for scheduling. Budgeting and resourcing planning. A Gantt is a bar chart with each bar representing activity. The bars are drawn against a time line. The length of time planned for the activity. The Gantt chart in the figure shows the Gray parts is slack time that is the latest by which a task has been finished

	Description	Duration(Days)	27th Wed	28th thurs	31th sun	1st mon	2nd tue	3rd wed	4th thurs	8th sun	9th mon	10th(wed
User Interview	Current app test, SEQ survey	1										
Market Research	Background, Business Analysis	2										
Competitive Analysis	Competitor feature comparision	2										
Affinity Mapping	Summarise user feedback	1										
Persona/Tasking	Defining user groups, CIM, Feature Ideation	3										
Sketching/Wireframing	Physical Sketches	2										
ProtoTyping		3										
Usability Test	1st prototype test, SUS, SEQ	1										
Iteration		3										
Usability Test Report		4										
Usability Test	2nd prototype test, SUS SEQ	1										
Iteration		1										
Presentation	Presentation practice	1										
Slides	Project deck preparation	5										
LEGEND:	SUS: System usability Scale											
	SEQ: Single Ease Question											
	CIM: Customer Journey Mapping											

Software Estimation

It is an online food delivery management system that allows users to place orders and have them delivered depending on their preferences. Any company interested in launching a food delivery service like Uber Eats or Food Panda must work with restaurants and bakeries to ensure that customers have a sufficient number of alternatives to select from. After then, both the company and the restaurant collaborate on the creation of meal delivery applications or websites.

This food delivery management service that lets customers make meals and have them delivered to their desired location. Any firm interested in starting a food delivery service like Uber Eats must collaborate with restaurants and bakeries to guarantee that customers have a diverse range of options. Following that, the firm and the restaurant work together to develop food delivery apps.

Depending on the features you are looking to add in our on-demand food delivery system and the resources that it would require to get your app transformed from its idea stage to the launch phase, the cost of developing a food-delivery app like UberEATS or Food Panda would come out to somewhere around $10,000 to $20,000. But a sophisticated system development company may charge about $30,000 to $40,000. This is the cost range that would most likely be charged by the professional mobile app development company, comprises of all Mobile app design, development of both Android and iOS versions of the app, app testing, and app launch in the market. Price may vary based on which countries company you are going to work with. Developing a food delivery app for android costs high as it requires more testing, whereas for iOS is a bit less.

Some Basic Calculation of App Development:

- UI/UX design (60 Hours — $1500 to $3000)
- Front-end and Back-end development (400 Hours — $7,000 to $ 15,000)
- Technical documentation (40 hours — $1000 to $1500)
- MVP testing (80 Hours — $2000 to $4000)
- Polishing and bug fixing (40 hours — $1000 to $2000)

Required Panels:

1. Customer Panel

2. Delivery Panel

3. Merchant Panel

4. Admin Panel

1. Customer Panel

- Customer can log in using social media / simple registration process
- Able to view nearby restaurant and book food
- Add restaurant to favorite menu
- Re-Order option for fast order
- Pay via App wallet or online using the payment gateway or via credit and debit card
- Offers and Discount
- View History and Payouts

2. Delivery Panel

- Get approval from Admin
- Receive Order

- Accept / Reject order request
- Complete booking and earn more
- View total earning

3. Merchant/Vendor Panel

- Receive order and booking
- Manage delivery
- View daily, weekly, monthly, yearly graph
- Download report in CSV format
- Manage multiple locations
- Upload food menu
- Dynamic Offer / Discount setup
- Manage Payouts
- Single/Bulk Notification

4. Admin Panel

- Manage User, Delivery and Merchant
- Restaurant location management
- Promote offer and discount by advertisement

- Manage transaction
- Backup and Restore option
- Application Security
- History & Notification
- Areawise Map Location
- Manage Claim Restaurant
- Refund/Order cancellation

Resource requirements:

For Restaurant Listing: Github API, FourSquare API.
For Payment: Square API, Braintree, Stripe, PayPal.
To Find user Location: Core Location Framework, Google Places API.
To Find Directions: Google Maps, MapKit.
For Cloud: AWS, Azure.
For Registration: Facebook SDK Login.
For Storage: Amazon Cloud Storage.
For Analytics: Google Analytics.

Cost benefit Analysis:

Assumptions:

- Currently, the owner of the company has more work than he can cope with, and he is outsourcing to other design firms at a cost of $50 an hour. The company outsources an average of 100 hours of work each month.
- He estimates that revenue will increase by 50 percent with increased capacity.
- Per-person production will increase by 10 percent with more working space.
- The analysis horizon is one year: that is, he expects benefits to accrue within the year.

Costs

Category	Details	Cost in First Year
Lease.	750 square feet available next door at $18 per square foot	$13,500
Leasehold improvements.	Knock out walls and reconfigure office space	$15,000
Hire two more designers.	Salary, including benefits	$75,000
	Recruitment costs	$11,250
	Orientation and training	$3,000
Two additional workstations.	Furniture and hardware	$6,000
	Software licenses	$1,000
Construction downtime.	Two weeks at approximately $7,500 revenue per week	$15,000

Category	Details	Cost in First Year
Total		**$139,750**

Benefits

Benefit	Benefit Within 12 Months
50 percent revenue increase.	$195,000
Paying in-house designers $15 an hour, versus $50 an hour outsourcing (100 hours per month, on average: savings equals $3,500 a month.)	$42,000
10 percent improved productivity per designer ($7,500 + $3,750 = $11,250 revenue per week with a 10 percent increase = $1,125/week.)	$58,500
Improved customer service and retention as a result of 100 percent in-house design.	$10,000
Total	**$305,500**

This calculates the payback time as shown below: $139,750 / $305,500 = 0.46 of a year, or approximately 5.5 months.

Function Definitions:

Various case studies have highlighted the problems faced while setting up a restaurant. Some of the problems found during the survey in the existing system are listed below:

• To place the orders customer visits the restaurant, checks the menu items available in the restaurant,
and chooses the items required, then places the order and then do the payment. This method demands manual work and time on the part of the customer.

• When the customer wants to order over the phone, customer is unable to see the physical copy of the
menu available in the restaurant, this also lacks the verification that the order was placed for the appropriate menu items.

• Every restaurant needs someone or the other to take the order personally or over phone, to offer the
customer a rich experience and even to process the
payment

Use Case Diagram

Online Food delivery management system:

use case diagram describing the actors and the activities involved in the proposed solution. The use case begins once the user starts the application. The system will display a login screen. The users enter their credentials by input their email and password. The system will verify the information and lead to the ordering platform. The customer places the food /drink order and the system automatically calculates the total amount. The customer chooses whether they want to eat from the restaurant or takeaway the meal.

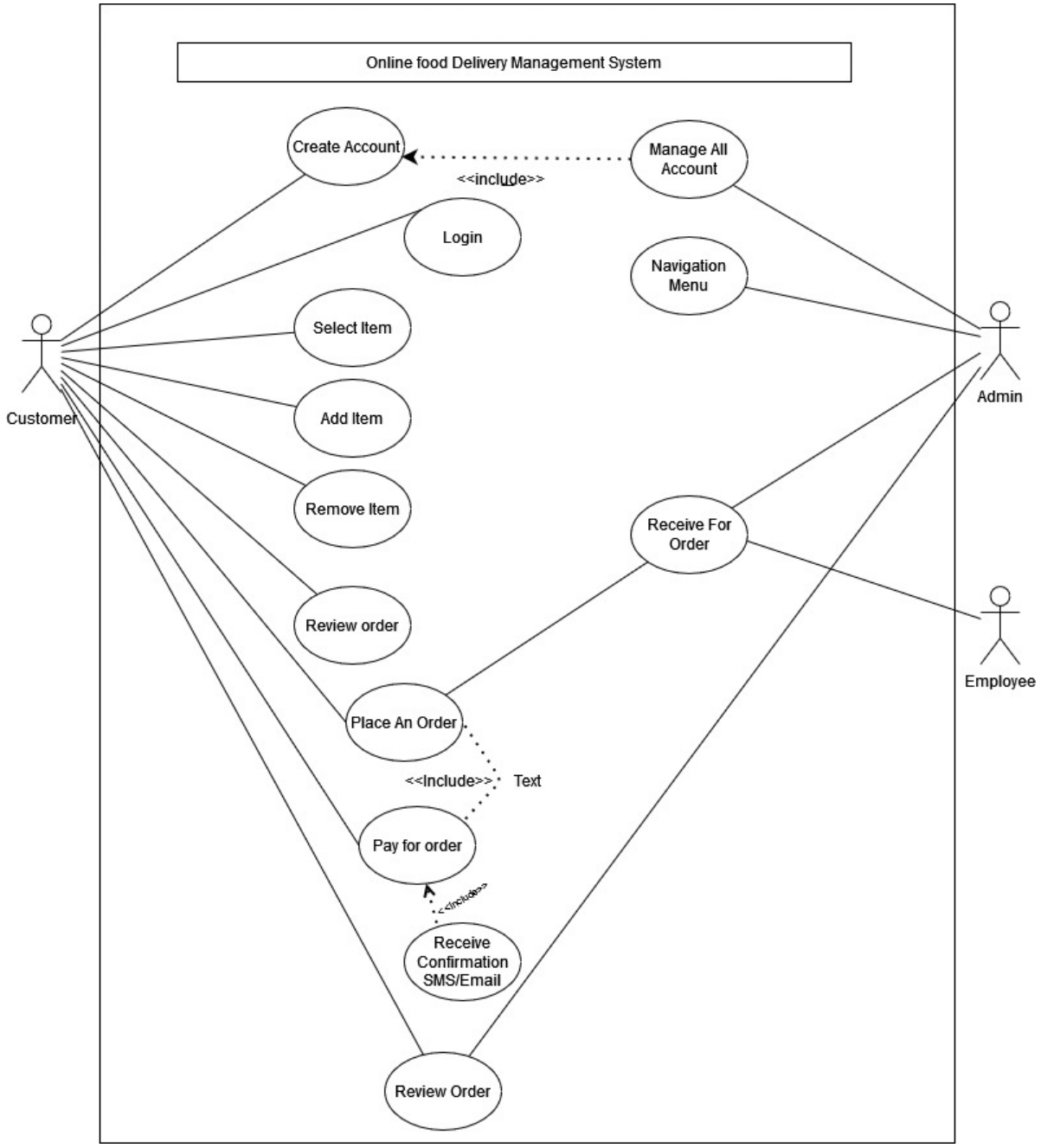


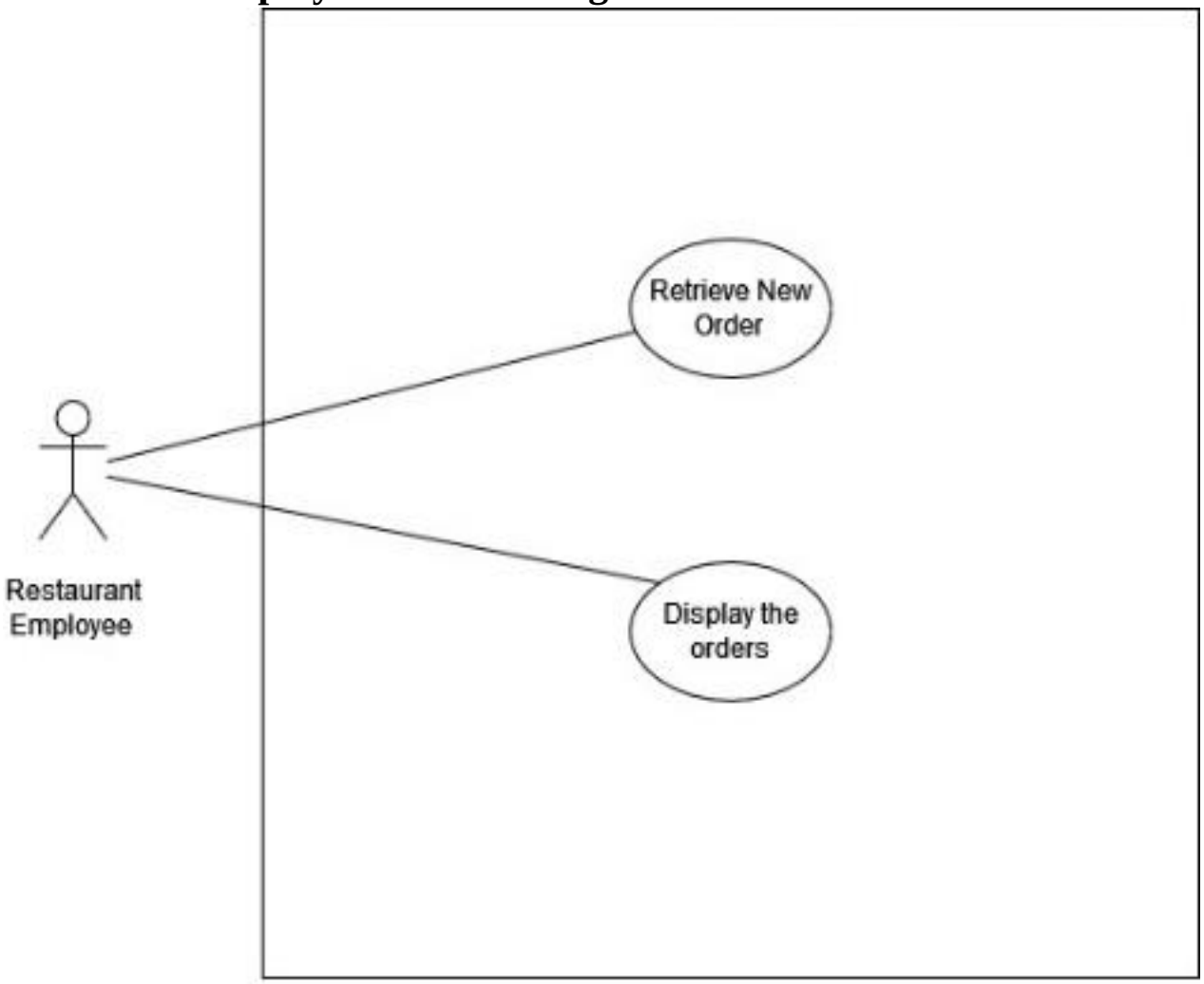
Figure: Main Diagram

Admin Use case diagram:

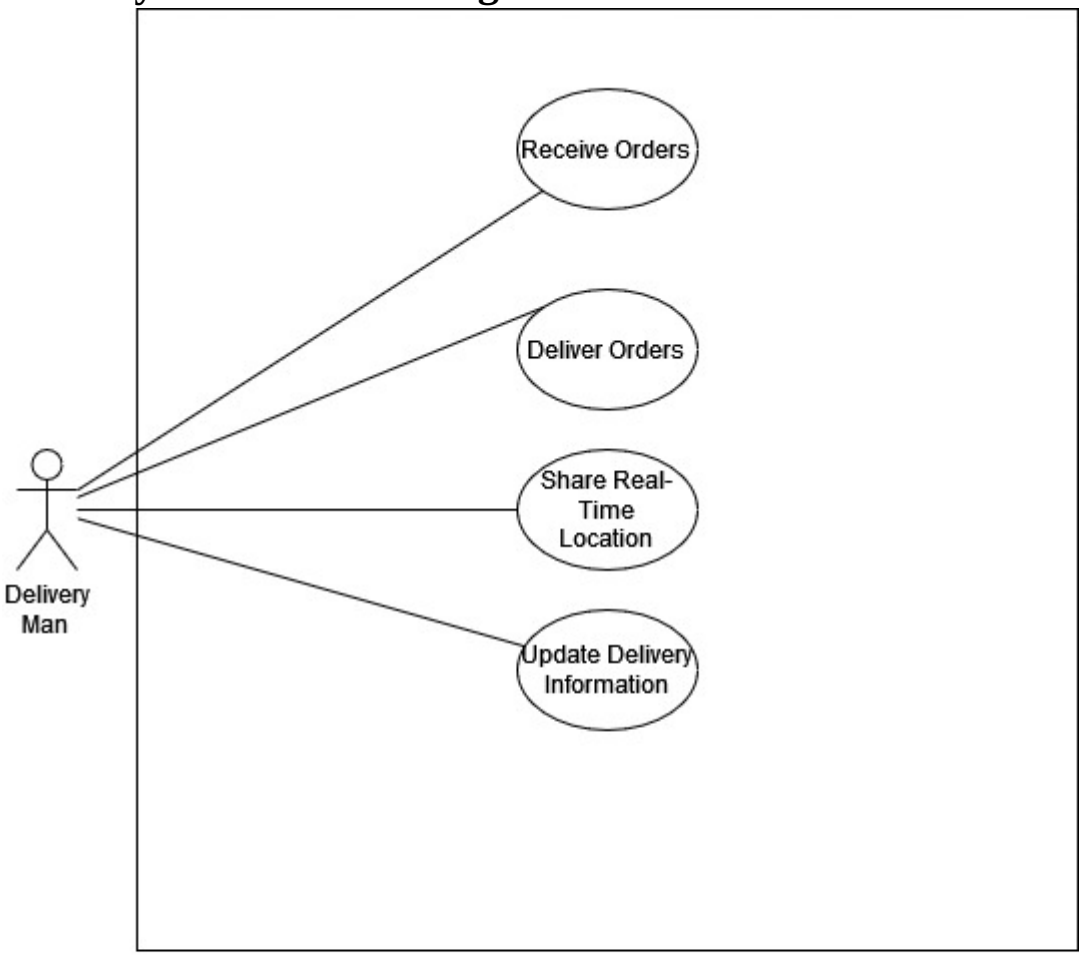
Figure: admin user case

Customer Use case diagram:

Restaurant employee Use case diagram:



Delivery man Use case diagram:



Use case Narratives

Use Case No: 1

Use Case Name	Create Account
Primary Actor	Manager, Customer
Secondary Actor	-
Description:	The create account use case allow manager and customer to create their accounts and become a registered member.
Preconditions:	None
Normal Course:	1. The customer enter the full name, email address and password. 2. The manager enter the full name, email address, password and name of the restaurant. 3. The system will ask them to choose strong password. 4. The system will ask to reenter the password. 5. The account will be created after click on sign up button.
Alternative Courses:	1.1 Invalid entry of information 1. The system will show the message to reenter the invalid data. 1.3 weak password 1. The system will show the message to enter strong password.
Post-condition:	1. The manager and customer are now registered. 2. The system display all features to which customer and manager are associated with as defined in their account.

Use Case No: 2

Use Case Name	Select Items
Primary Actor	Customer
Secondary Actor	-
Description:	The customer will select the items as for his requirement from the website or app.
Preconditions:	None
Normal Course:	1. Website displays all Product. 2. Customer clicks Product button. 3. Website display show all type of product 4. Customer selects a Product and see at the price and buy according to their own needs 5. Customer click the "add to card" button.
Alternative Courses:	1. If the product is not available then the message will show. 2. The system will show the available Product if the website have.
Post-condition:	No.

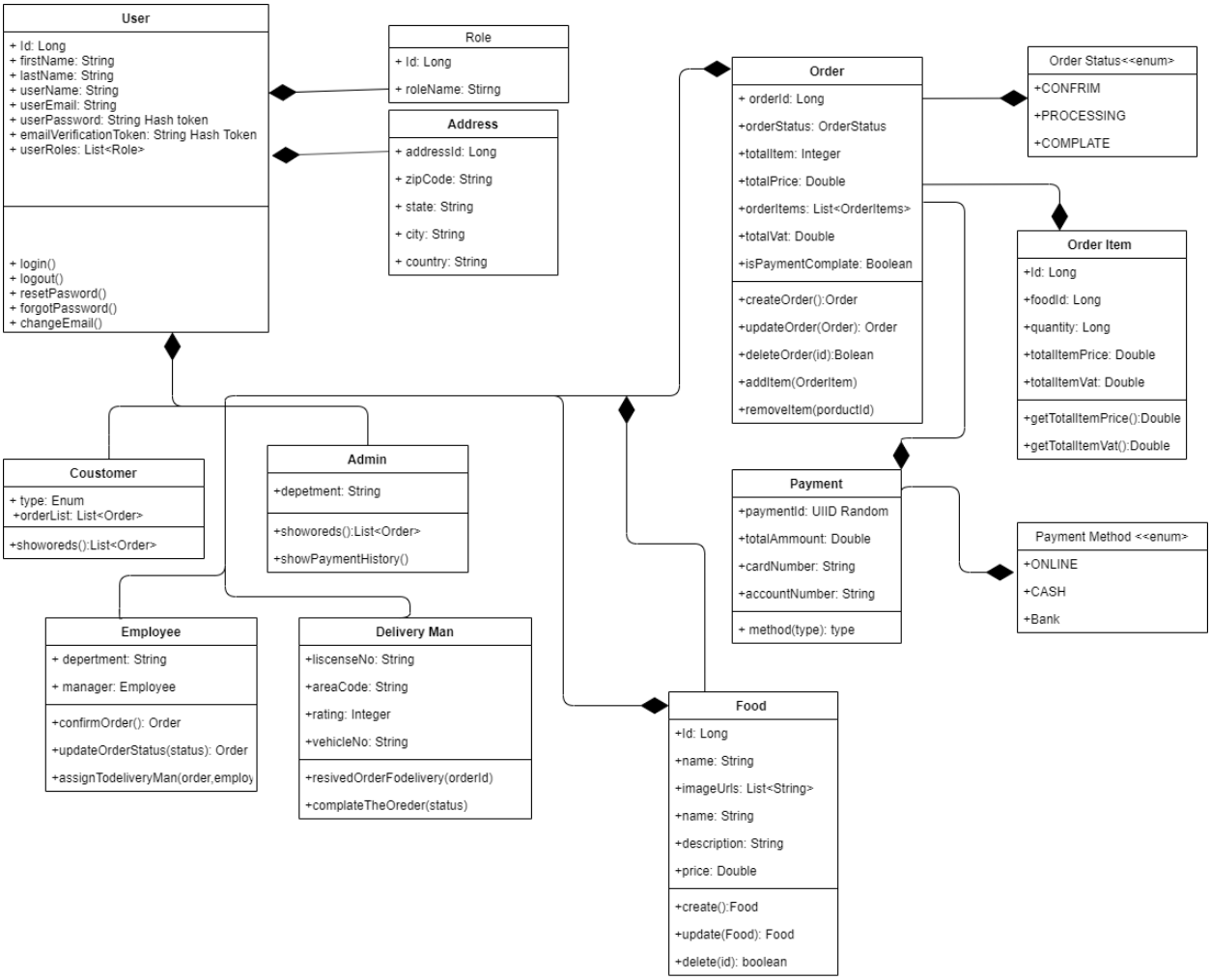
Use Case No: 3

Use Case Name	Show Item
Primary Actor	Customer
Secondary Actor	-
Description:	This use case allow customer to check all items of website or apps.
Preconditions:	None
Normal Course:	1. The customer search the system. 2. The system displays the the all product. 3. The check menu button the product section.
Alternative Courses:	
Post-condition:	user does not log in first, user cannot function by the product. So user must log in.

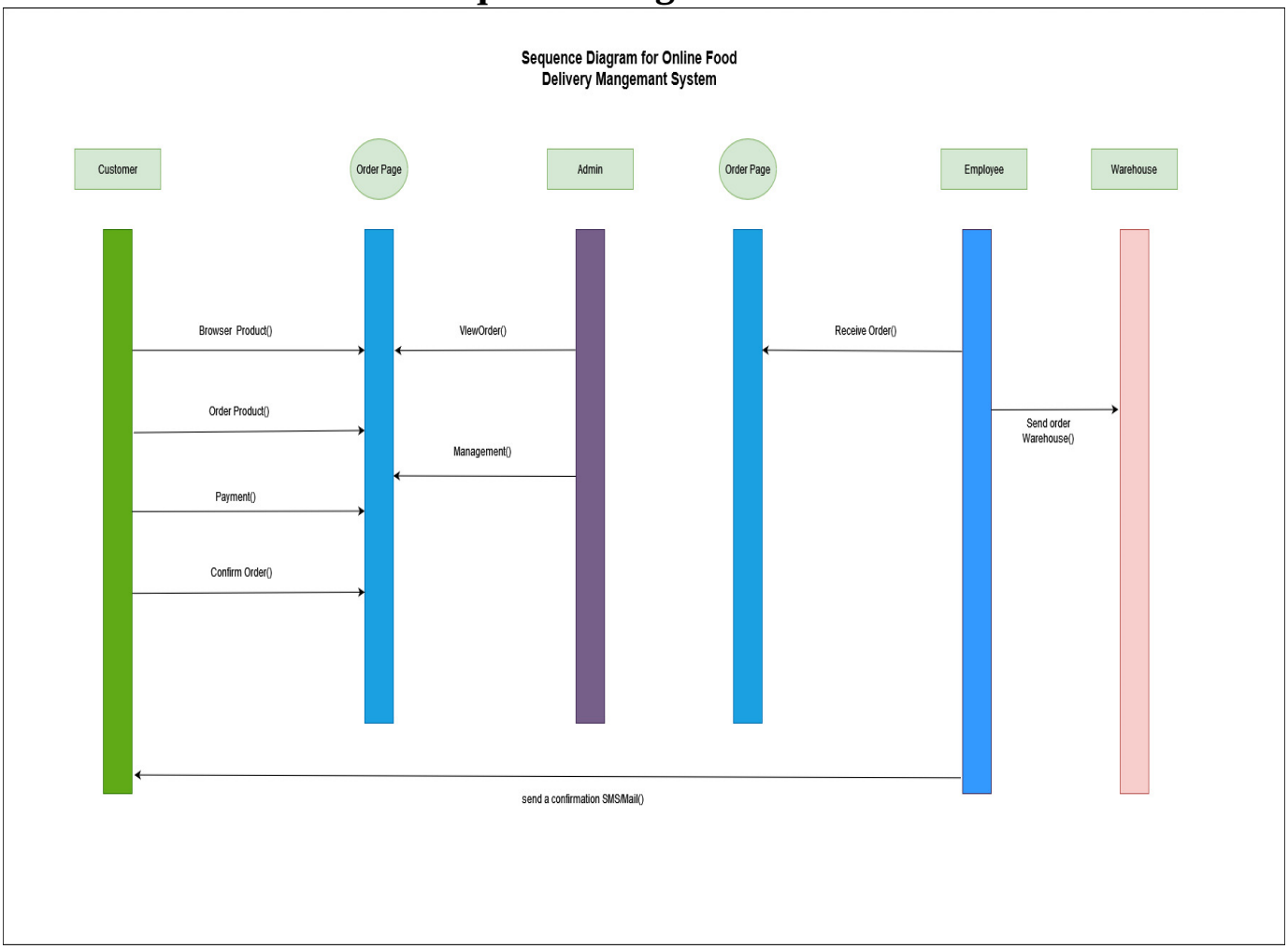
Use Case No: 4

Use Case Name	Payment
Primary Actor	Customer
Secondary Actor	-
Description:	Customers are logged onto system and must have enough money to pay so customers can check money before. If they don't have enough money, they must fill money before.
Preconditions:	None
Normal Course:	1. Customers enter username and password. 2. Customers click log in" button. 3. Customers select "Payment from the menu. 4. System displays the total cost. 5. Customers view and confirm to pay money.
Alternative Courses:	1. System displays error message saying incorrect usemame or password when username or password is incorrect. 2. System displays message saying server have some problem along
Post-condition:	-

Class diagram



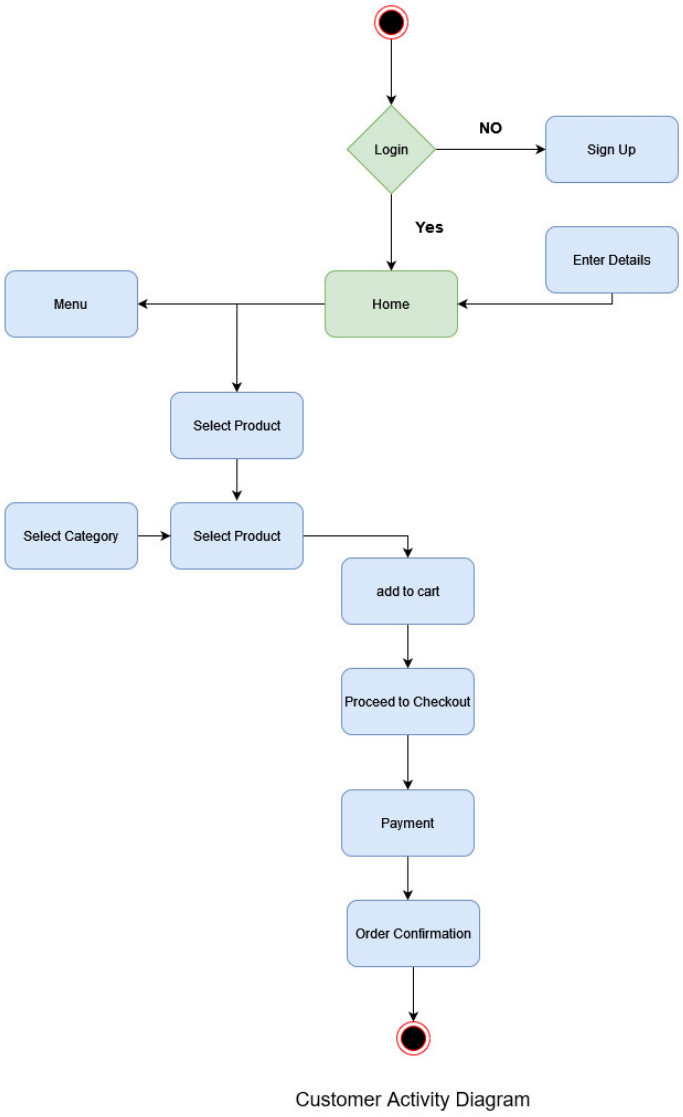
Sequence Diagram



This System Login Sequence Diagram, which shows how admins may access their accounts using their credentials. User may control all operations on Category, Order, Delivery, Food Item, and Customer after logging in. All pages, including Delivery, Food Item, and Customer, are secure, and users may only access them after logging in. The diagram below demonstrates how a Food Ordering System's login page works. The different items on the Food Item, Category, Order, Delivery, and Customer pages interact with one another during the sequence, and users will be unable to access this page without first proving their identification.

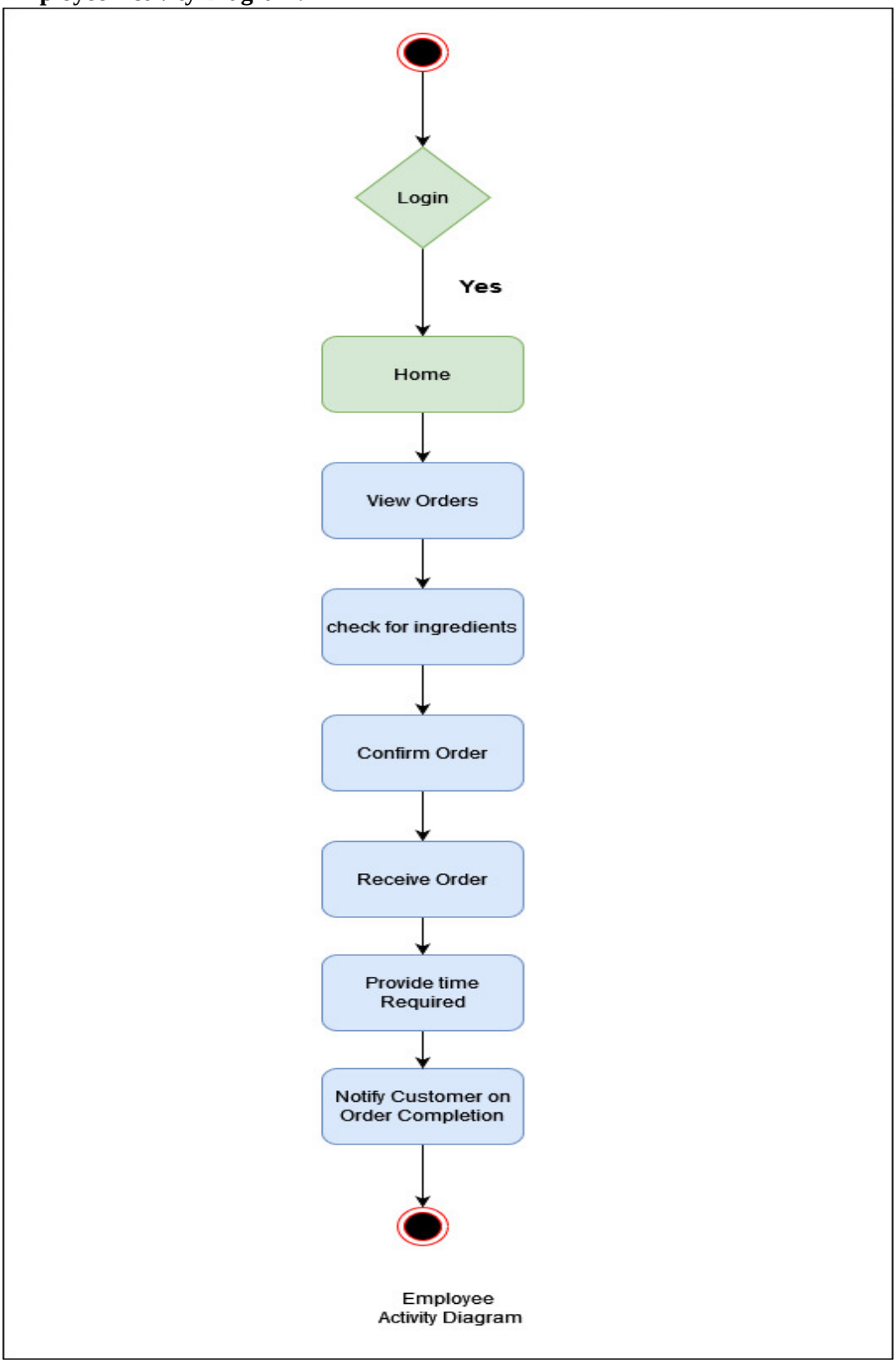
Activity Diagram

Customer Activity Diagram

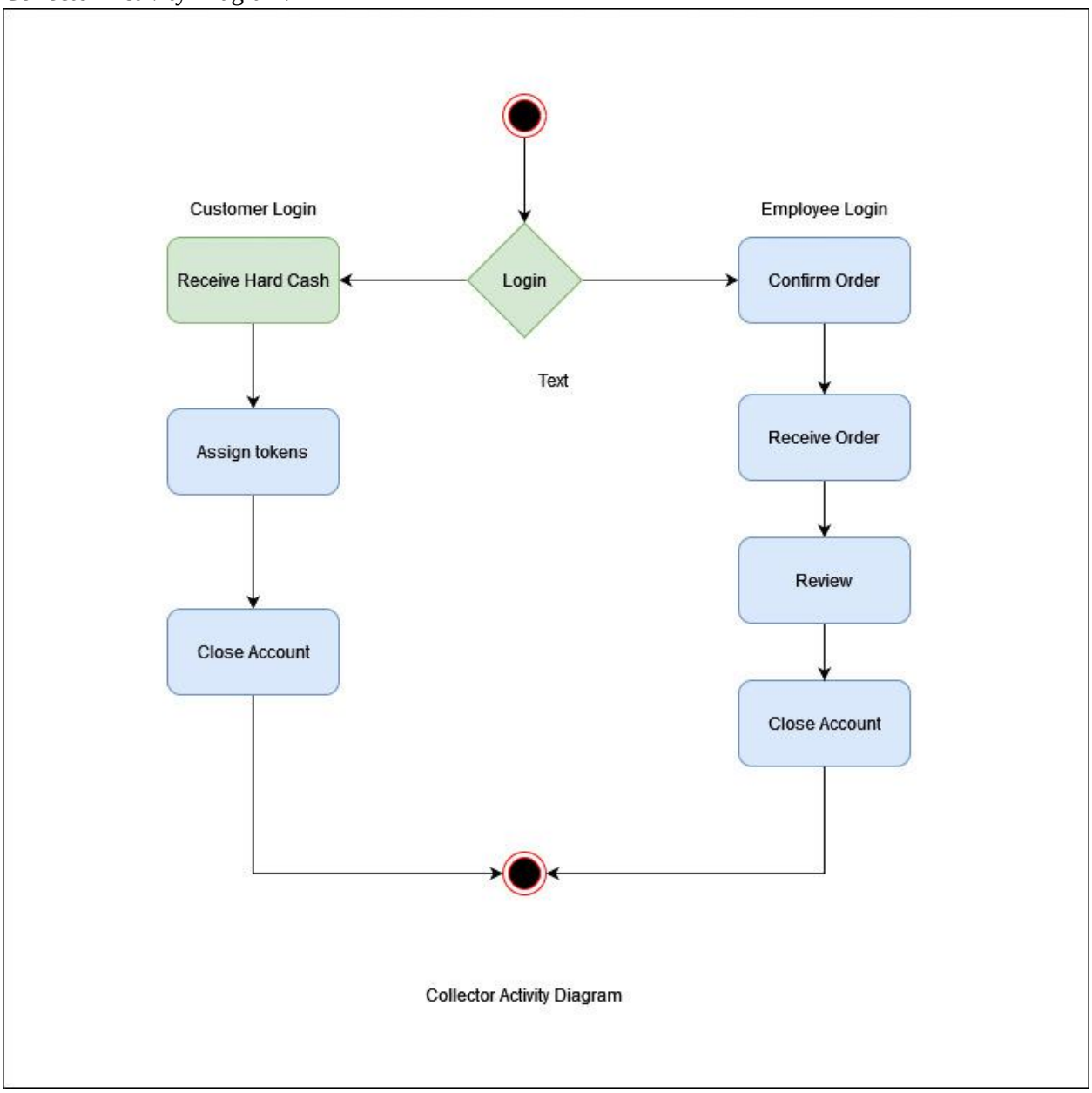


Customer Activity Diagram

Employee Activity Diagram:

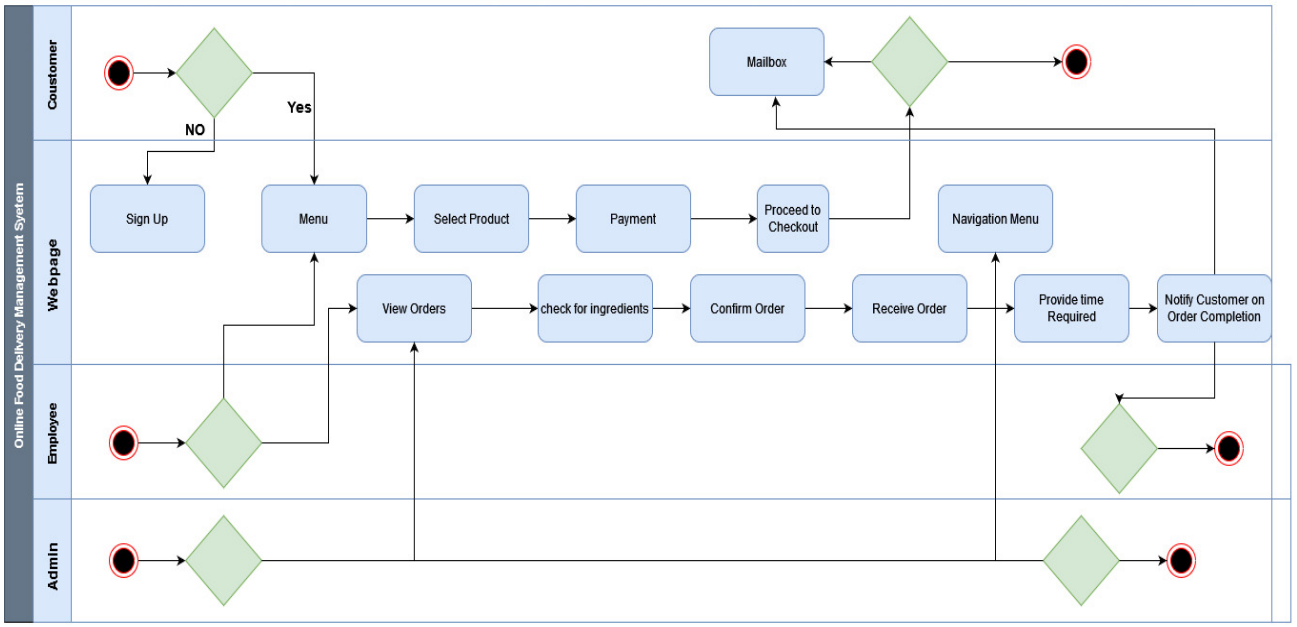


Collector Activity Diagram:



Swim lane Diagram

Swim lane diagram Online Food Delivery Management System:



Swimlane diagram

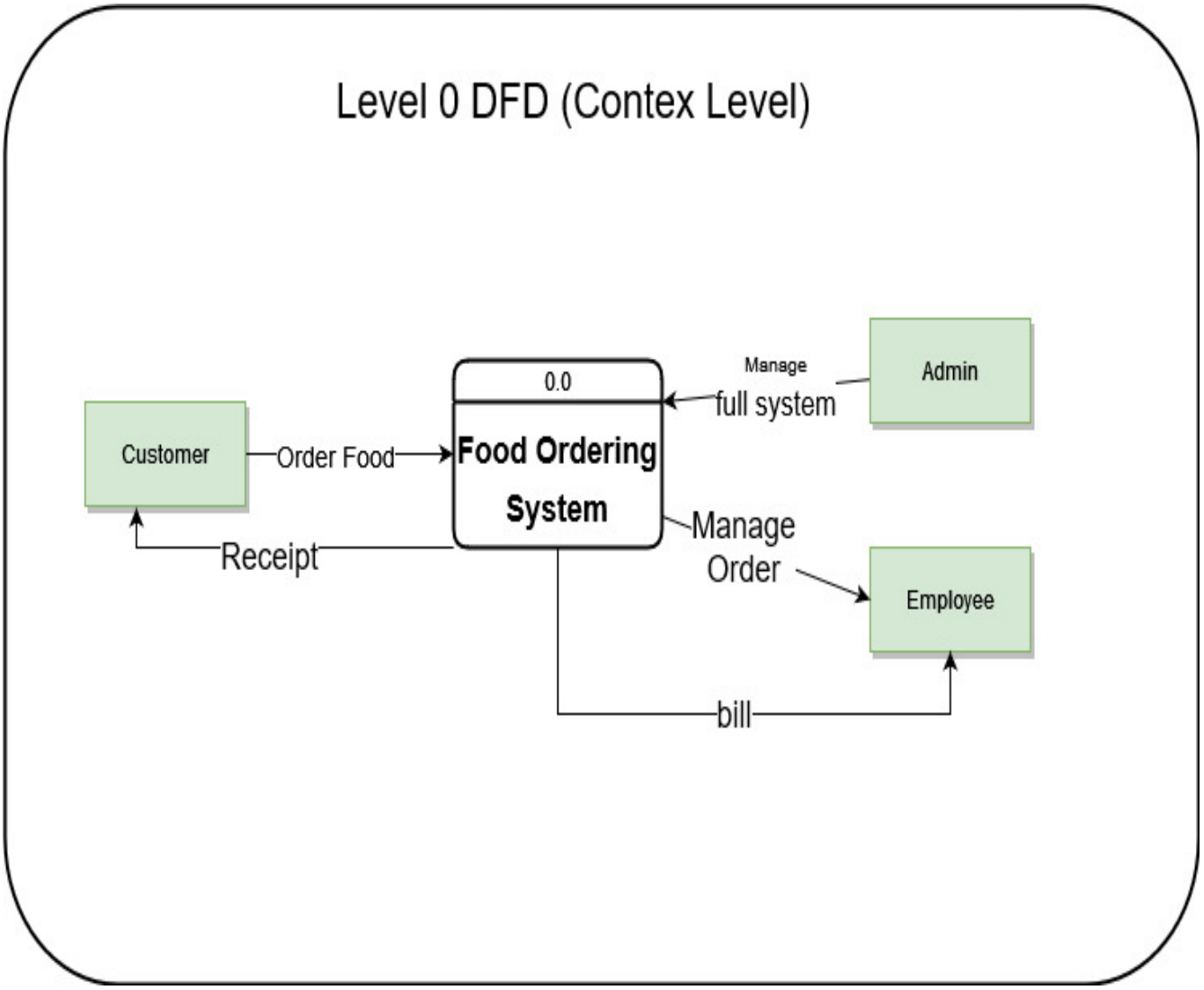
Online Food Delivery Management Syetem

A Swimland activity diagram groups the activities into swim lanes columns that contain all of the activities which fit into the category represented by that Swimland. Swim lanes can represent many categories of information such as actors which perform the activities, the stage of the process in which the activity takes place, or whatever else the creator of the document feels should be emphasized and communicated by the swim lane diagram. The term swim lane was adopted due to the visual similarity between the horizontal rows of the diagram to that of the swim lanes found within a swimming pool.

Data Flow Diagram

DFD diagram level 0:

At this level, the Input and Output of the system are shown. The system is designed and established across the world with input and output at this level.



Food Ordering System has the following input. Food order is input as the customer's order for food.

Food Ordering System has the following output:

- Receipt of the order.
- For further processing the order, the food order is passed to the kitchen.
- The restaurant manager gets the report of Bill and Management.

For processing the order, process 1.0 is responsible. For food, the housekeeping activities involved are represented by processes 2.0, 3.0, and 4.0. The detailed information about daily sold items should be available to create and report management and the list of items that are available 'in-stock' should be kept by maintaining the inventory data (describes the records of datasets such as their name, their content, source, many useful information, etc.) at the same time.

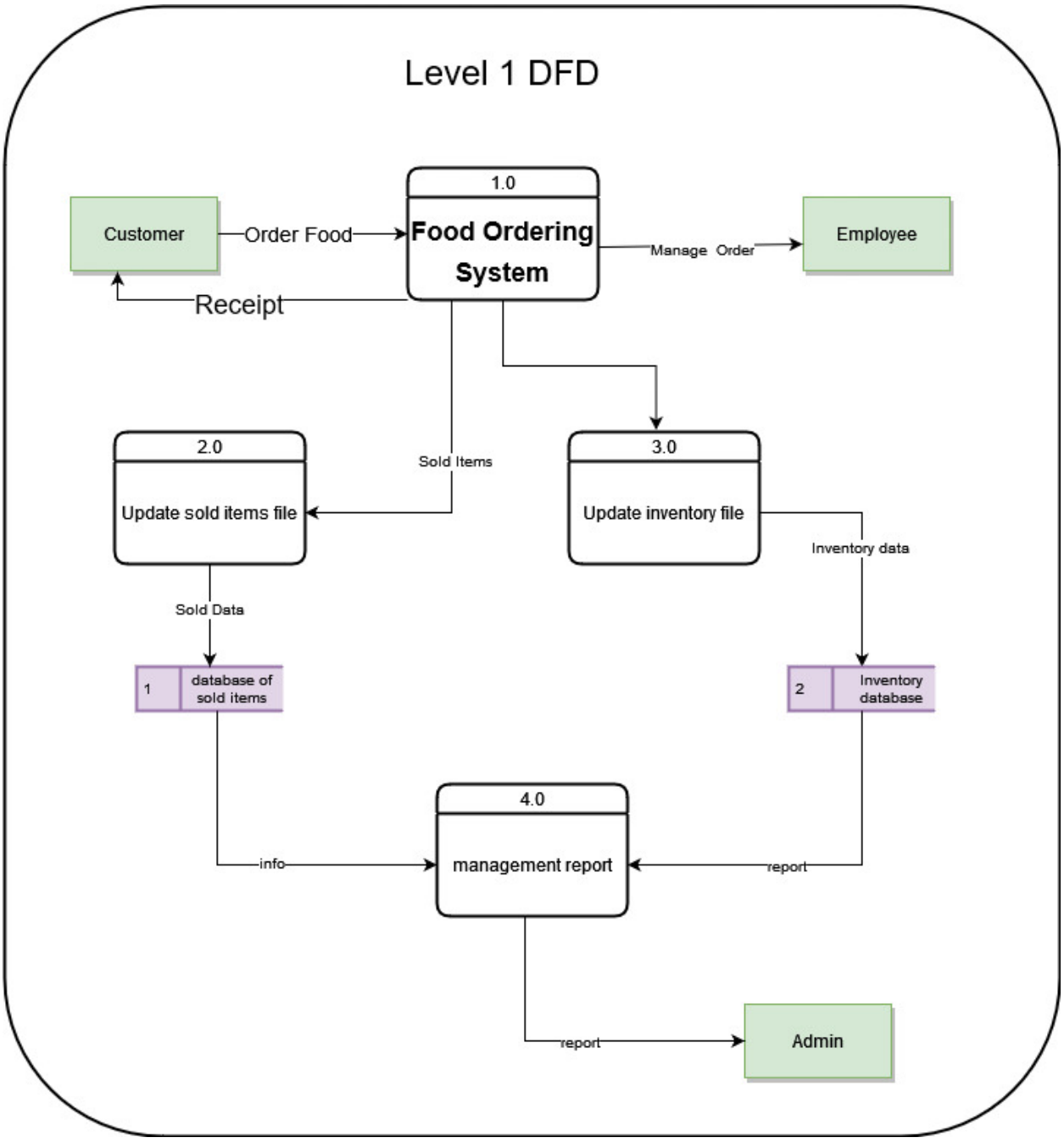
Hence, two data stores are used in this level of DFD given below:

- Database of Sold items
- Inventory database

In the end, with the use of the amount of daily sold items and daily inventory depletion, it is easy to prepare a report of management. Further, the restaurant manager gets this report of management.

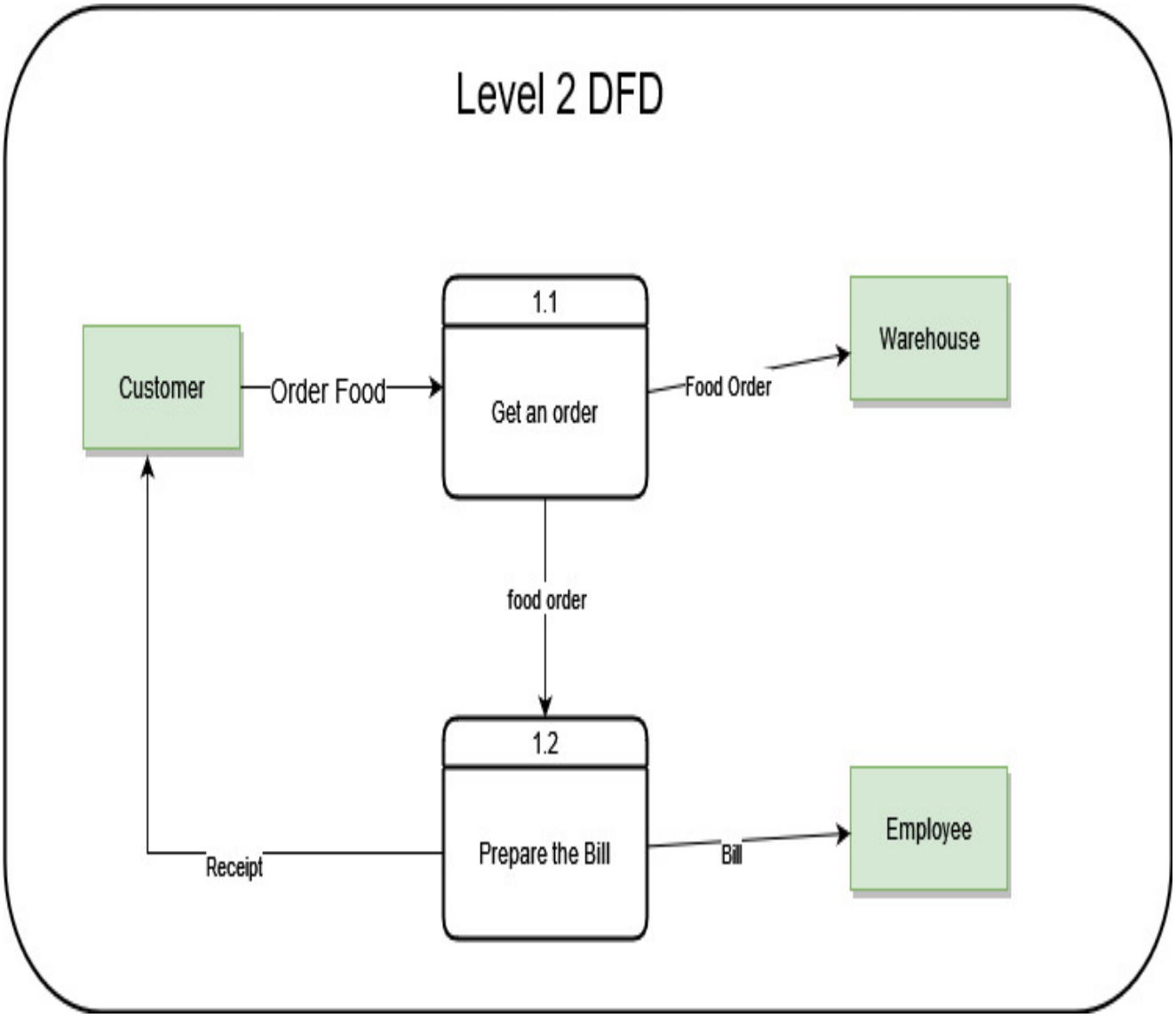
DFD diagram level 1:

For processing the order, process 1.0 is responsible. For food, the housekeeping activities involved are represented by processes 2.0, 3.0, and 4.0. The detailed information about daily sold items should be available to create and report management and the list of items that are available 'in-stock' should be kept by maintaining the inventory at the same time.



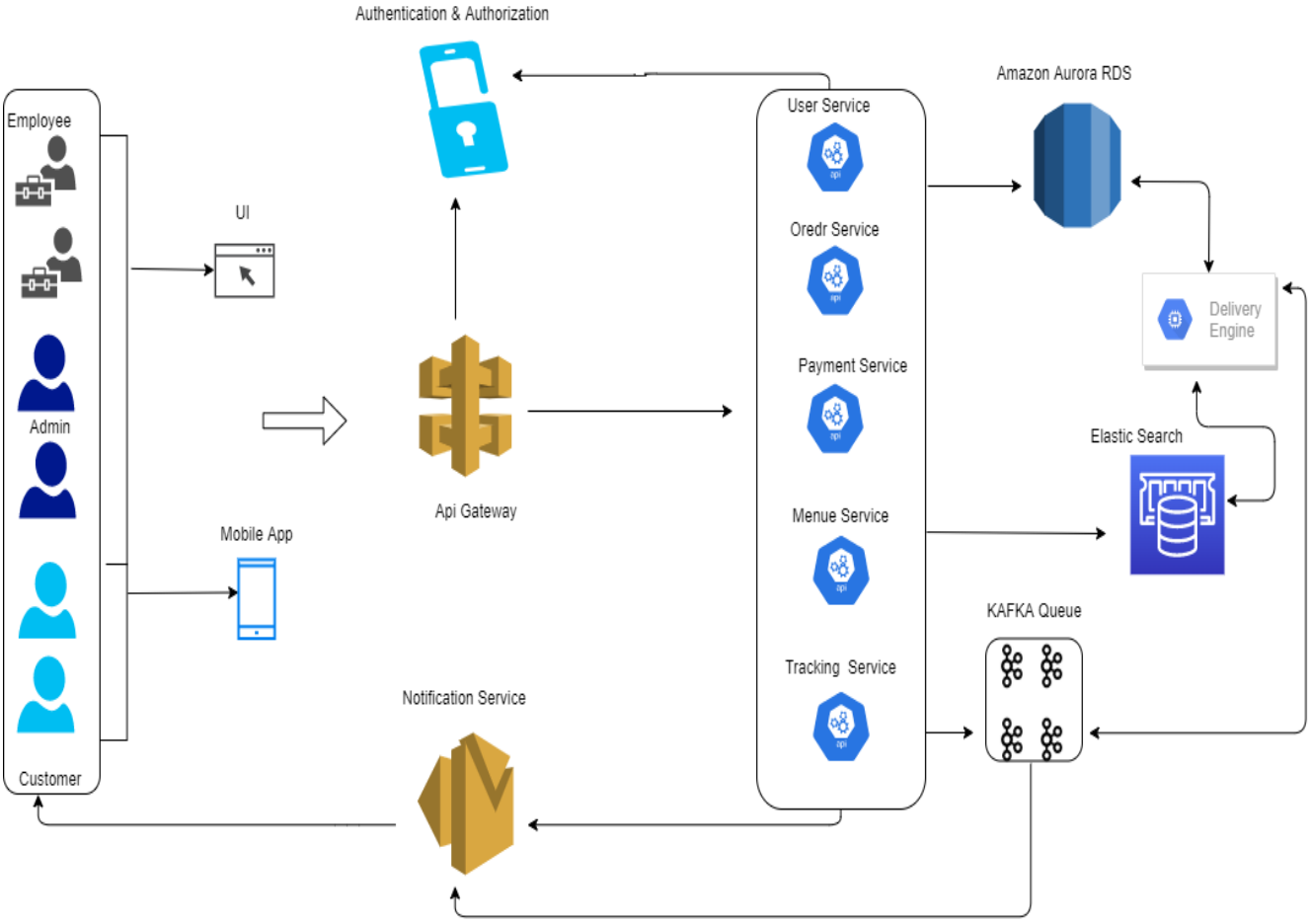
DFD diagram level 2:

Detailed information about “Processing of an Order” is shown below:



Architecture Flow Diagram

Online Food Delivery Management System Architecture Flow Diagram



UI/UX design

Navigation and Rating:

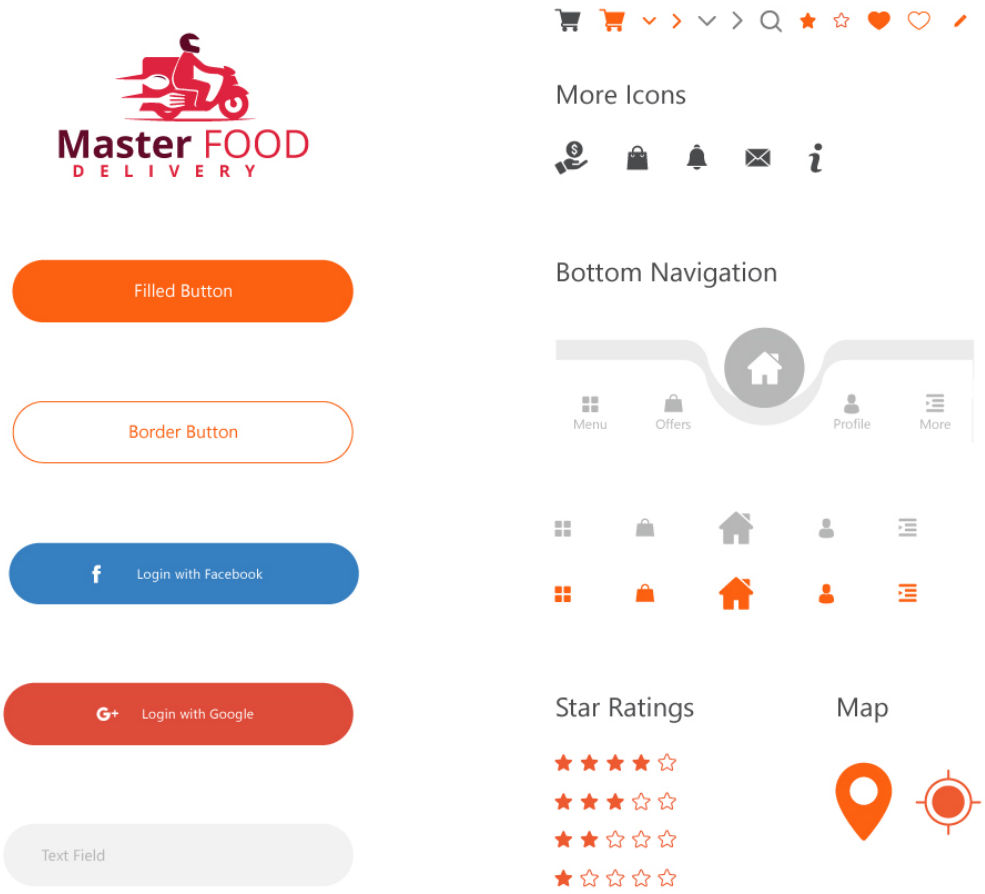


Figure: Navigation and rating for Paly store/ IOS Store.

Welcome Page:

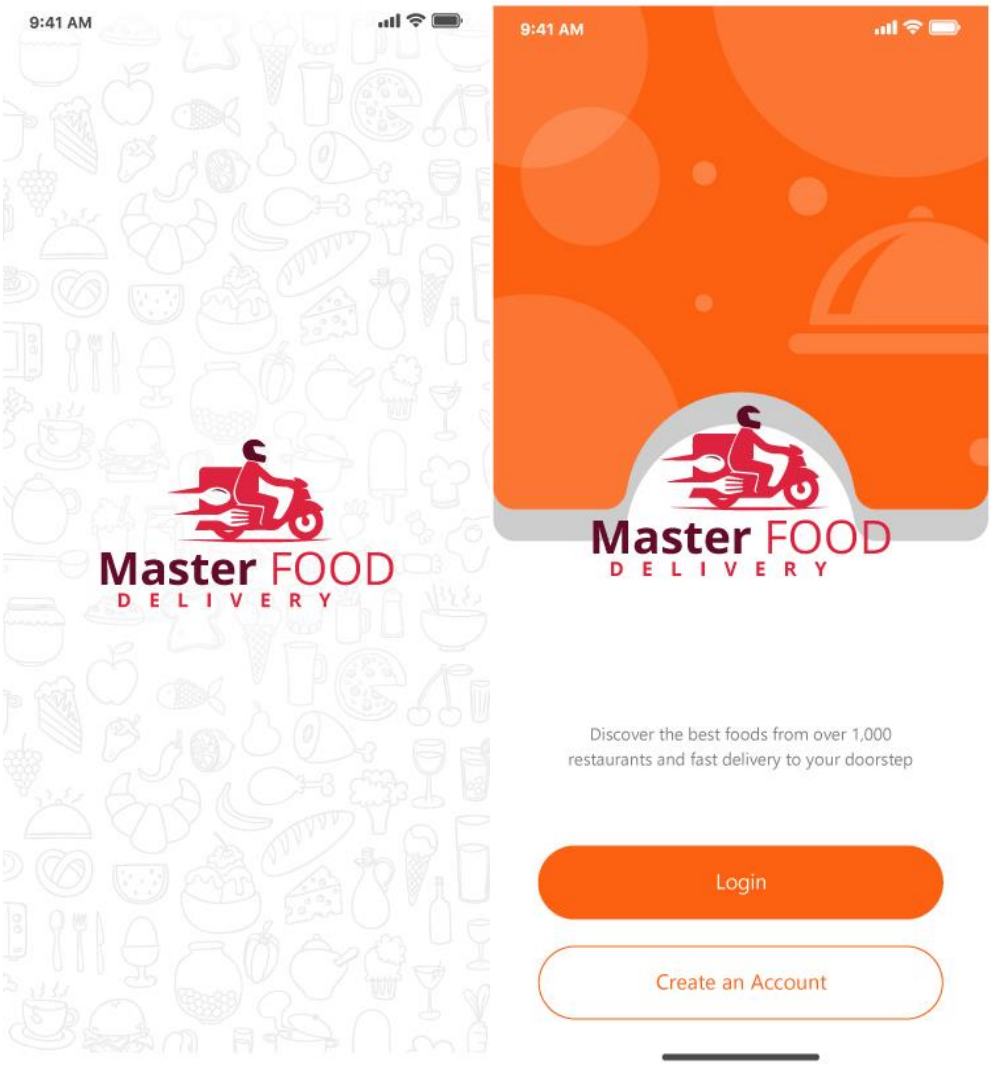


Figure: This is we Welcome for customer.

Customer Login and Sign Up

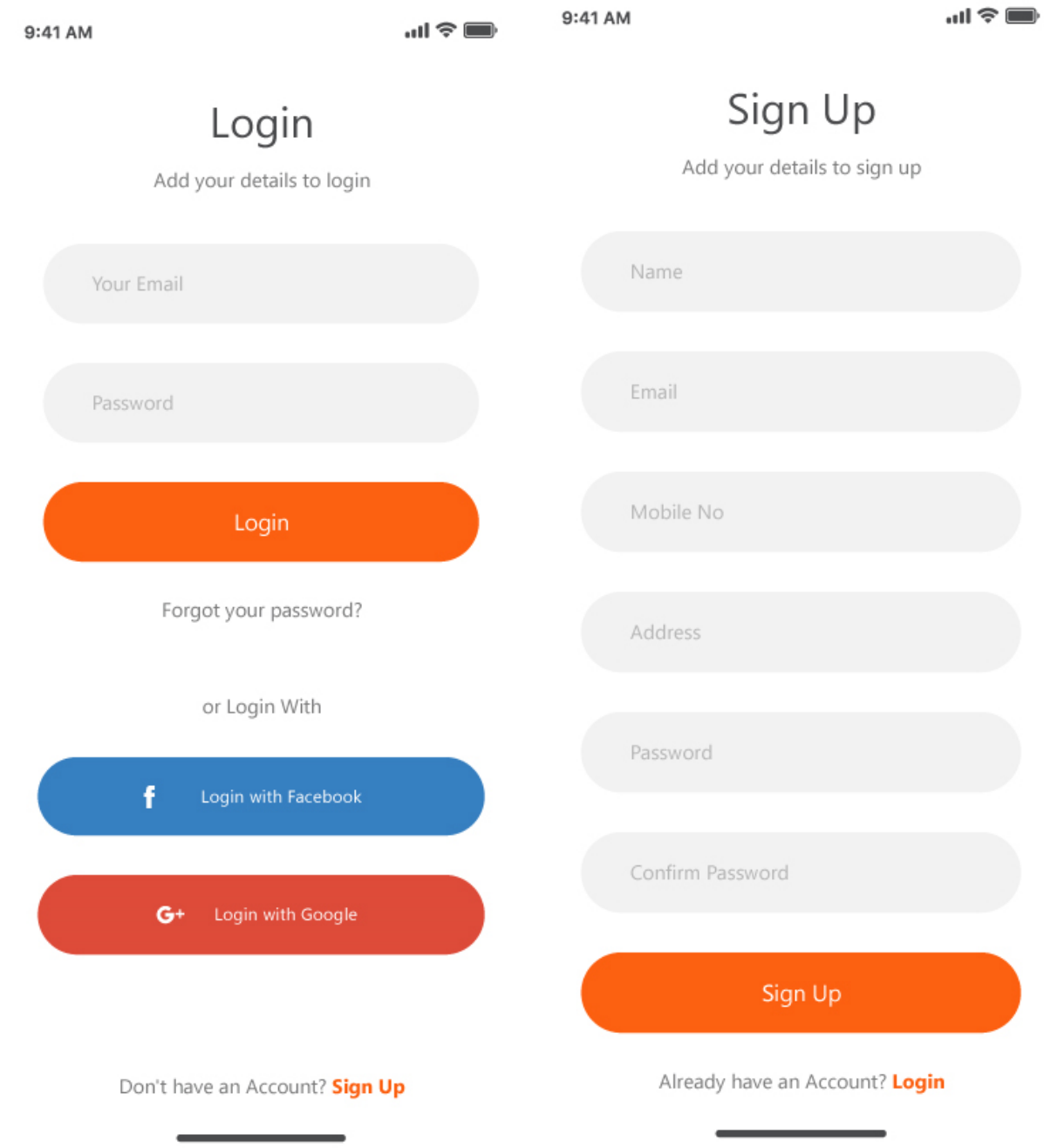


Figure: Customer Login and Sign Up for Customer.

Reset password

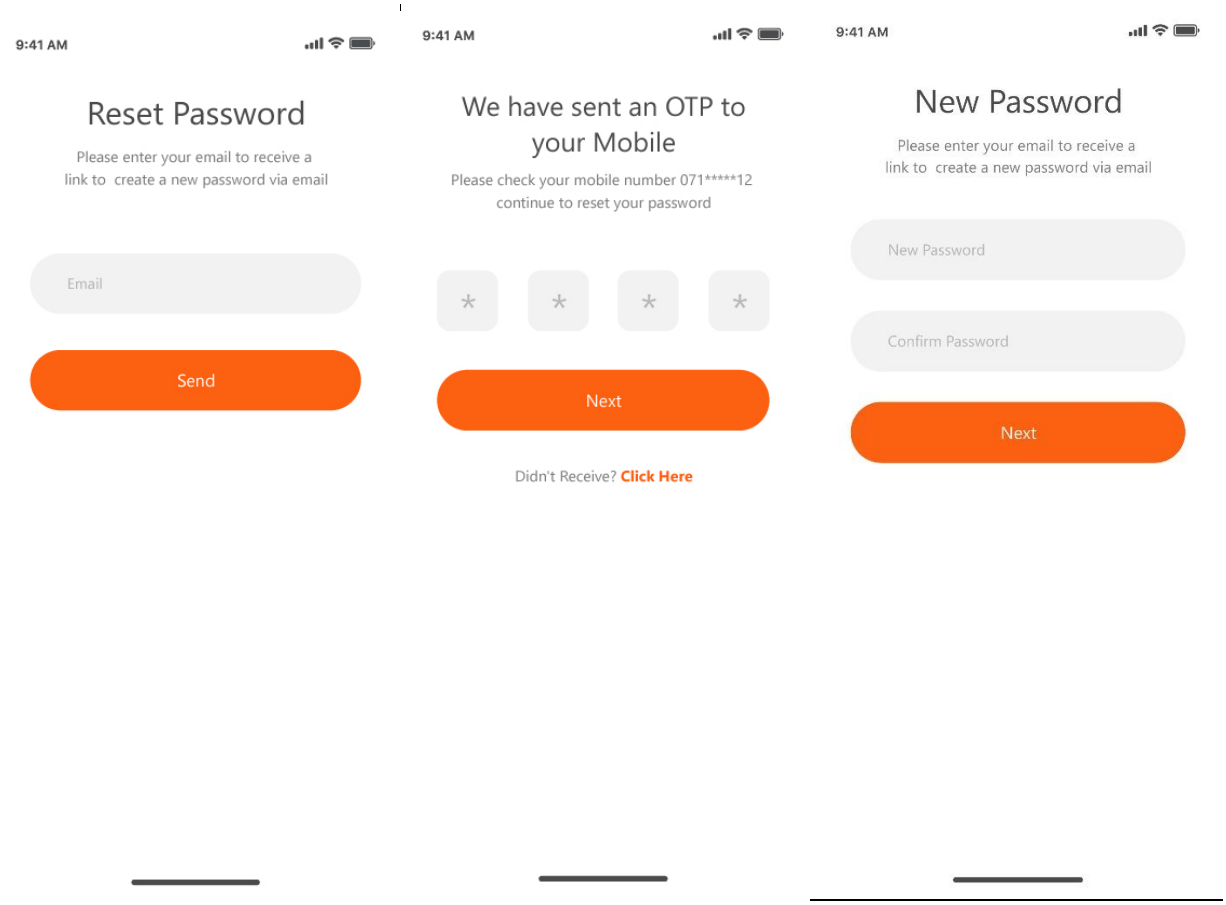


Figure: Rest Password for Customer.

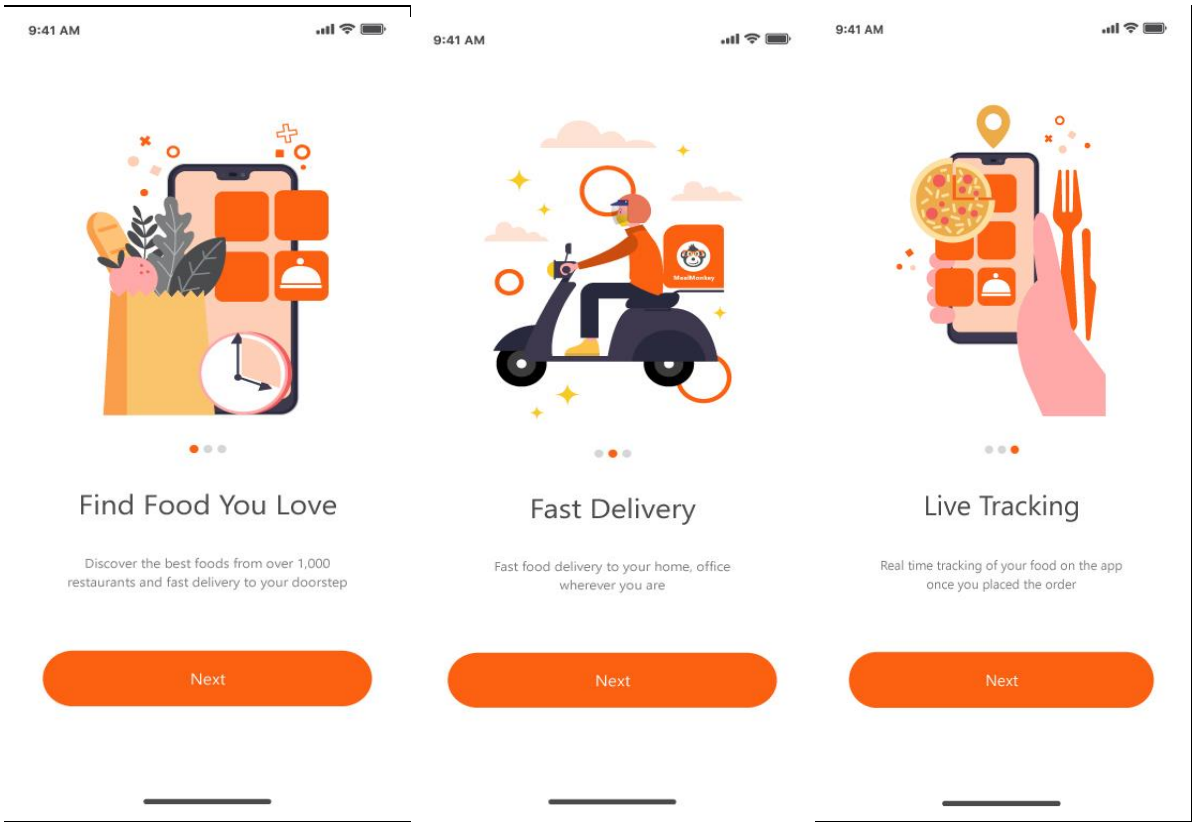


Figure: How it works this app.

Main UI from this:

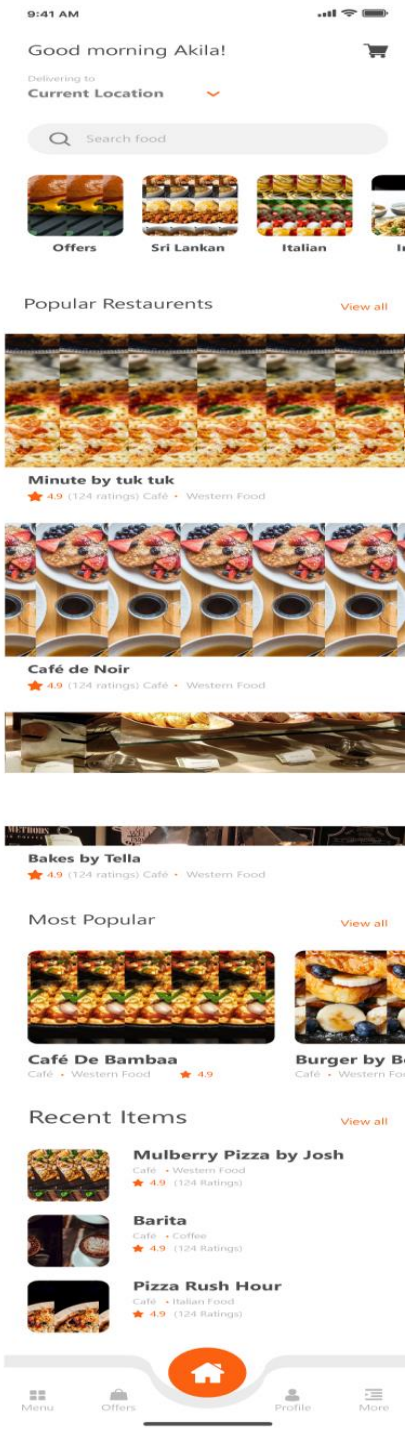


Figure: Main UI

Main Menu

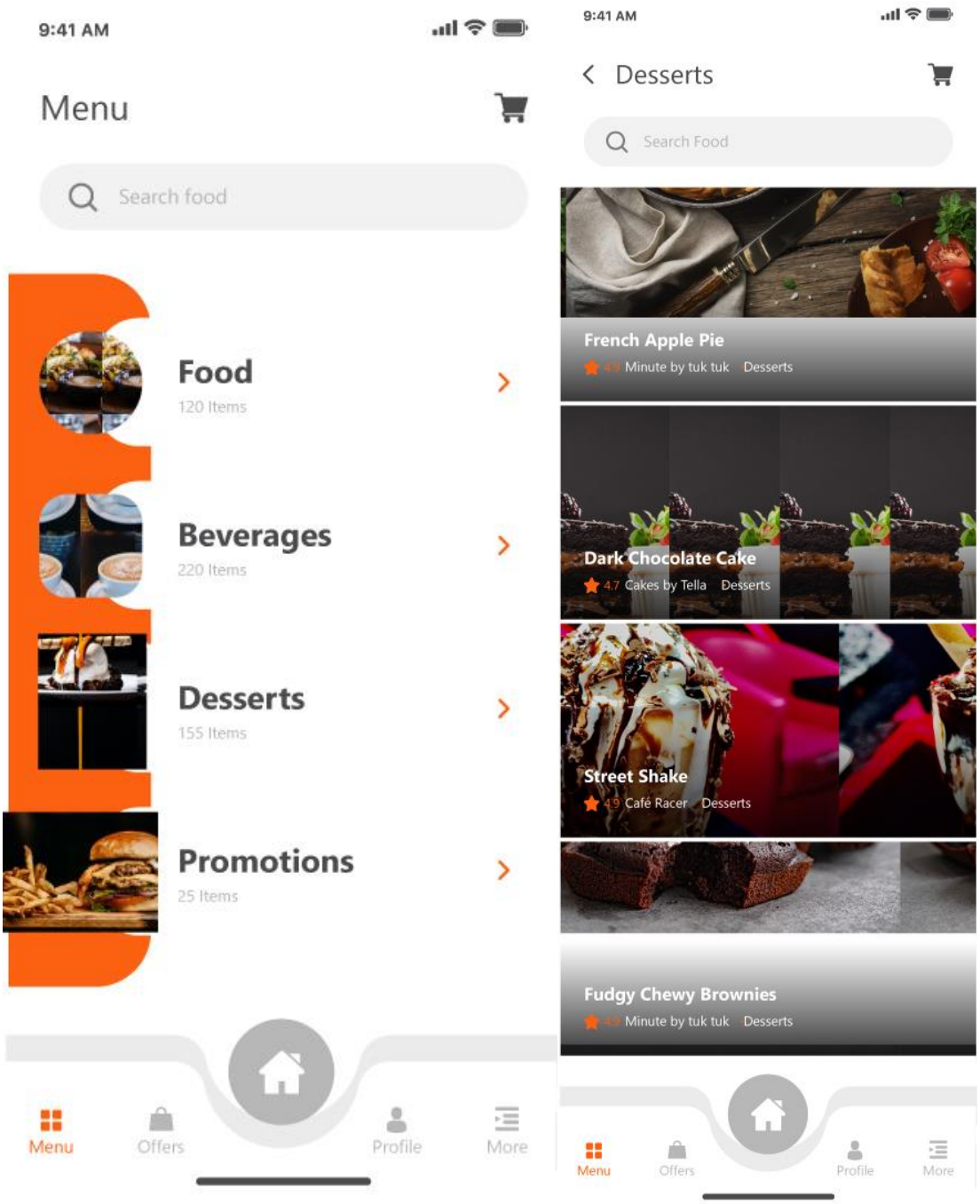


Figure Main Menu and sub menu

Product price and Offer:

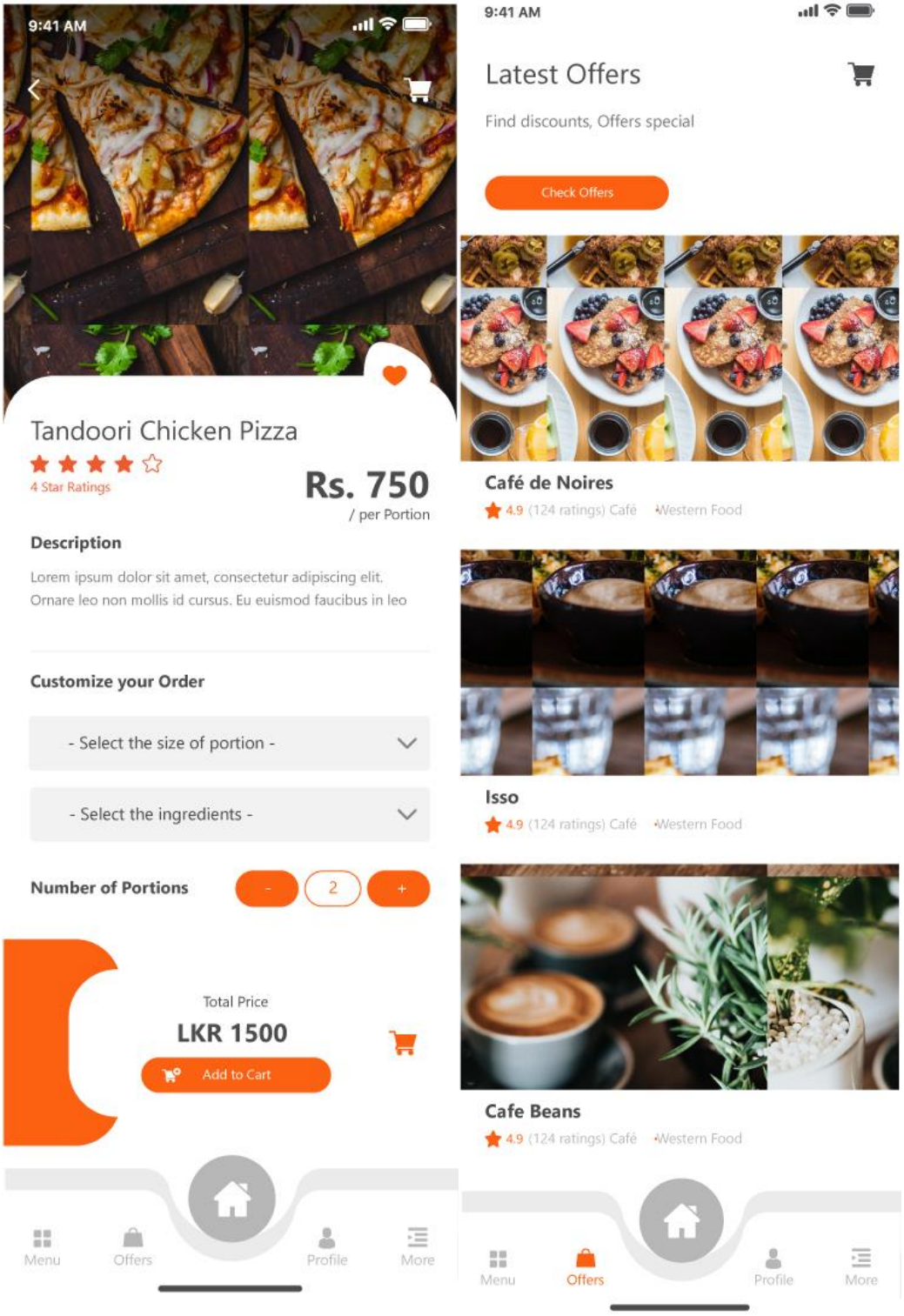


Figure: Product price and discount.

Payment system:

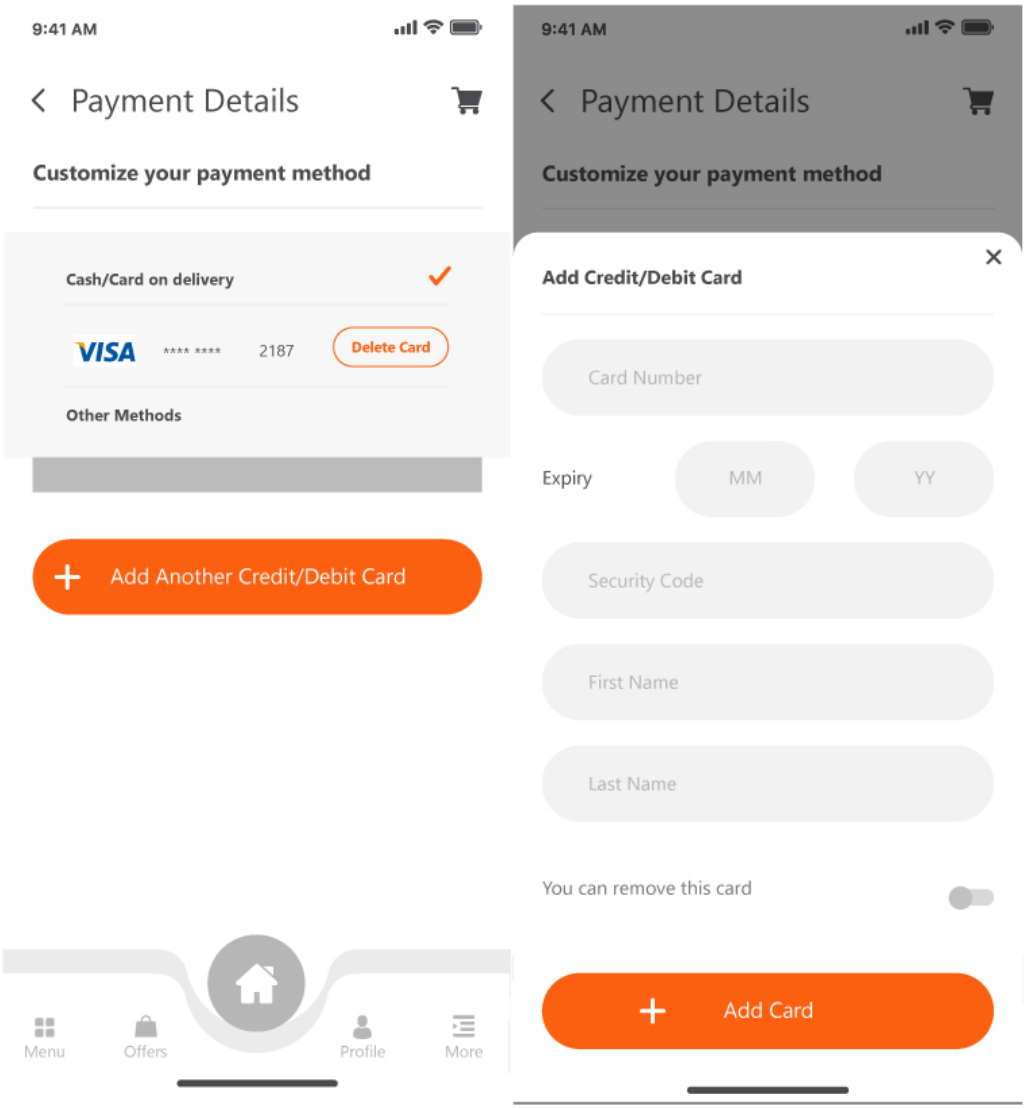


Figure: Payment details.

Notification and details

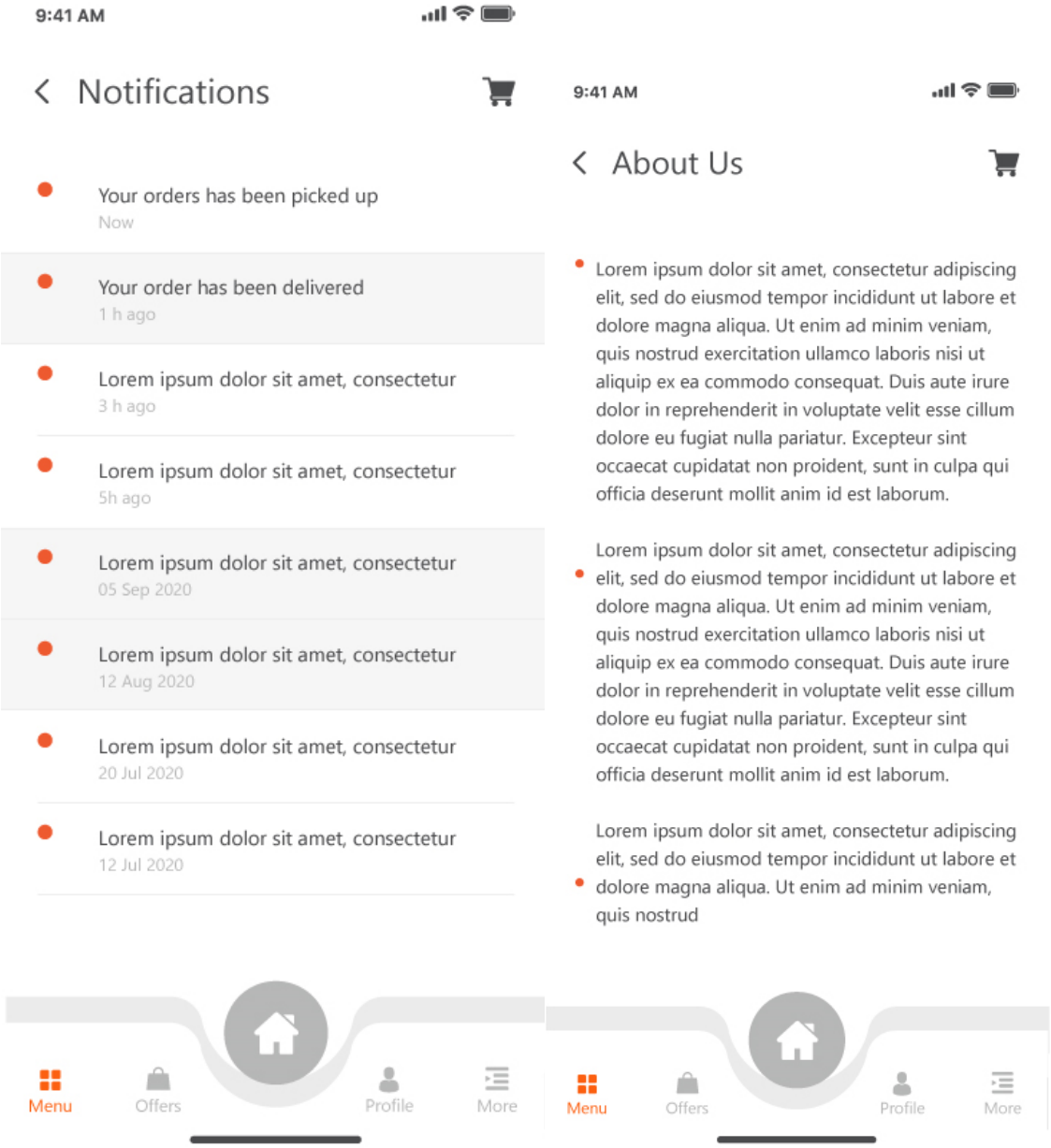


Figure: Notification and details for the company

Inbox and my Order

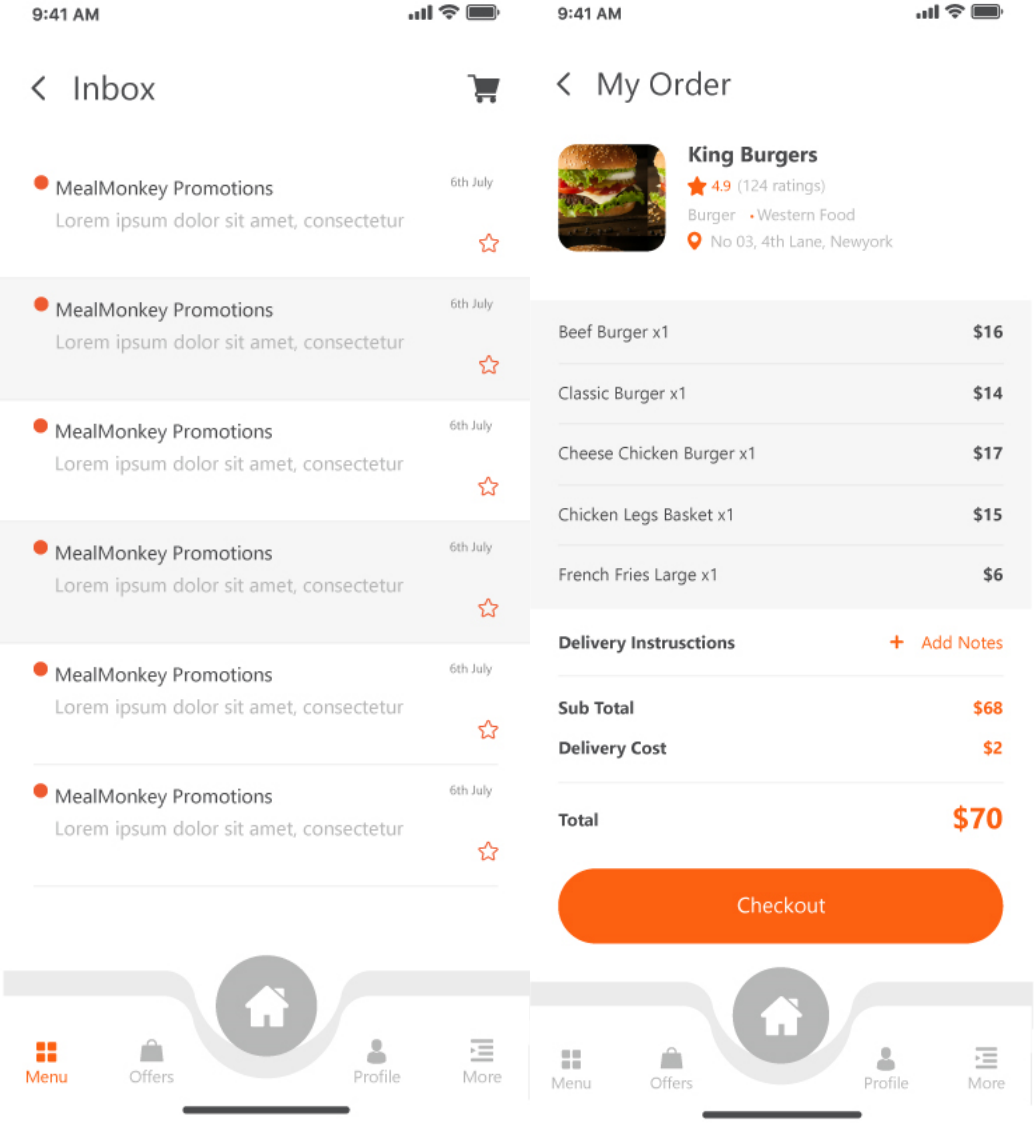
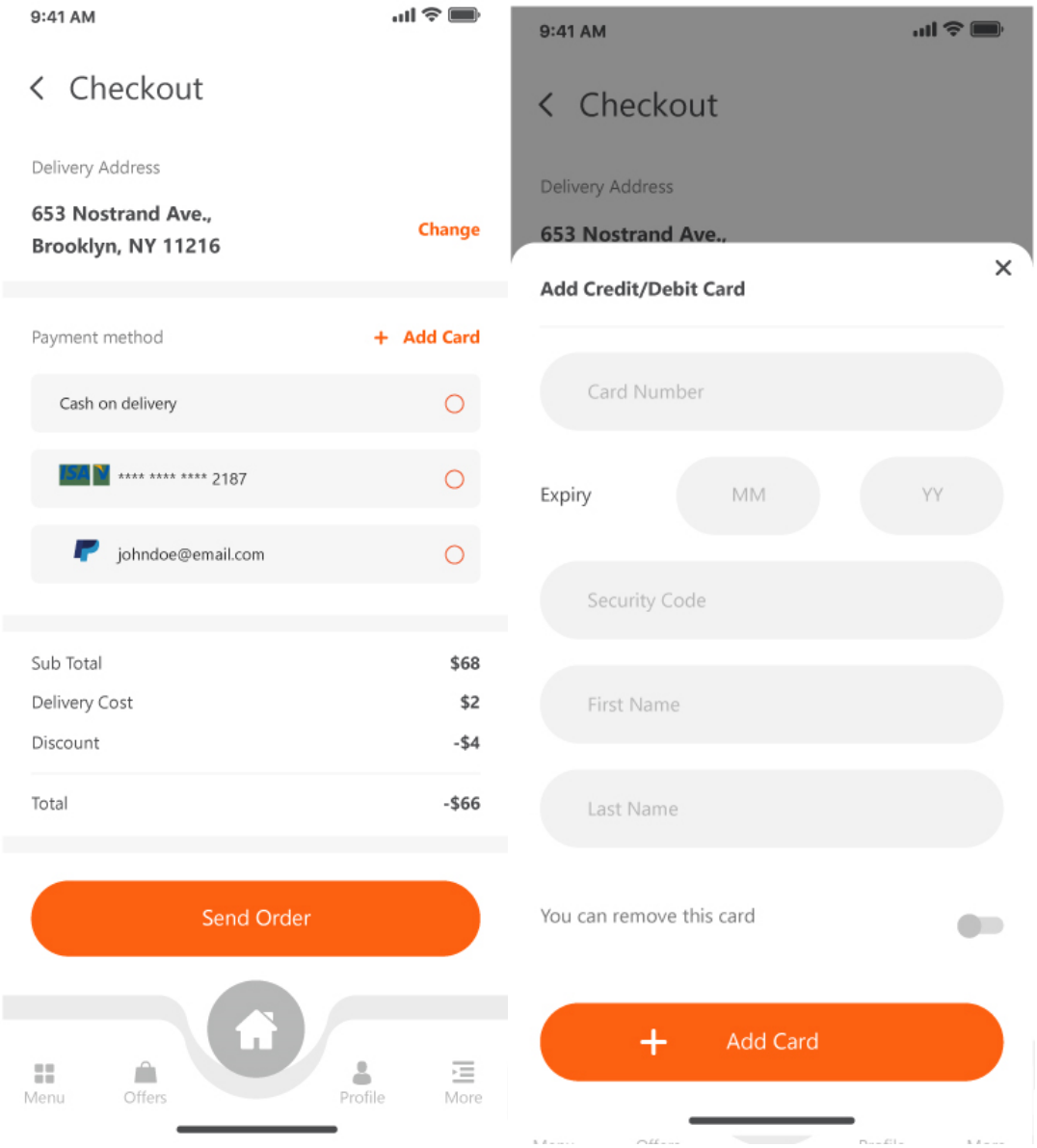
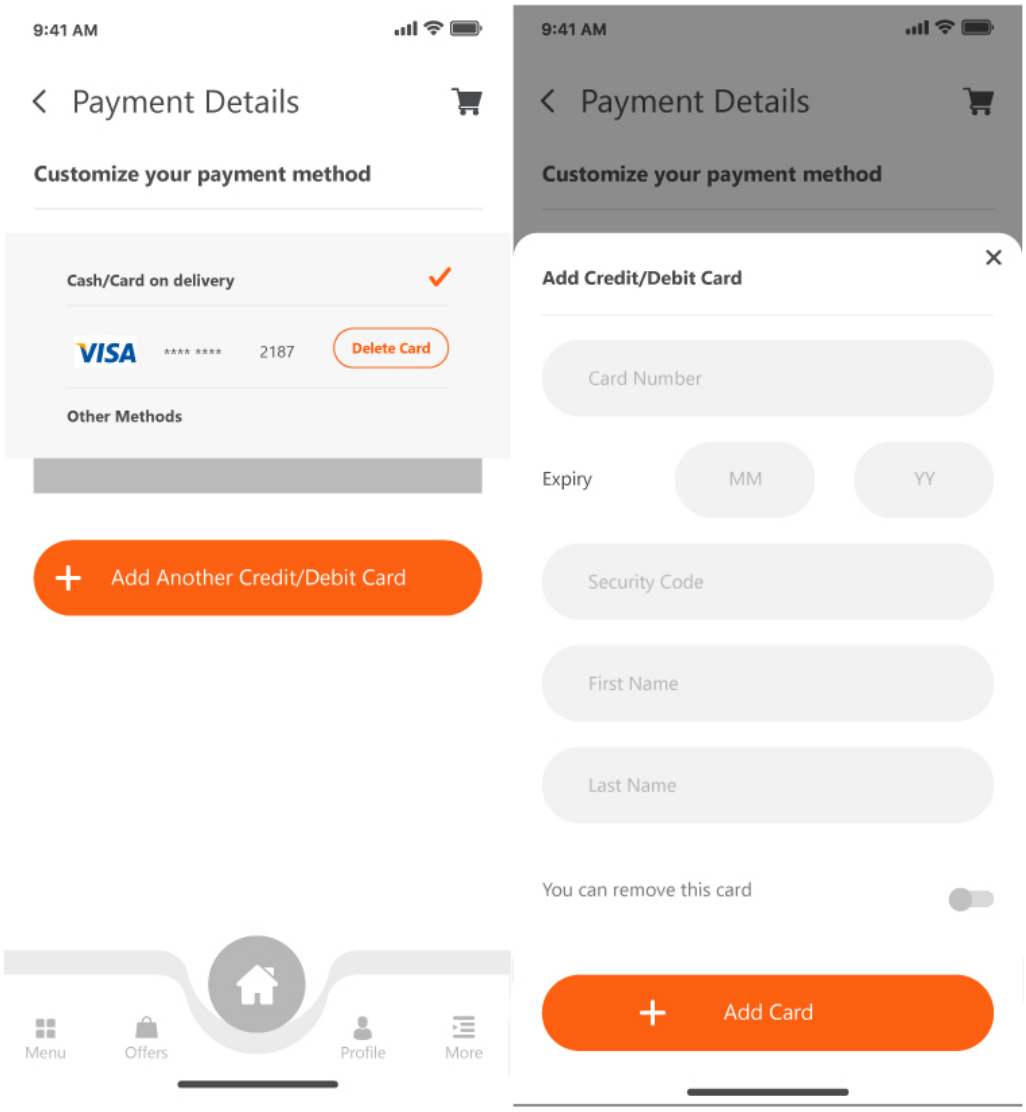
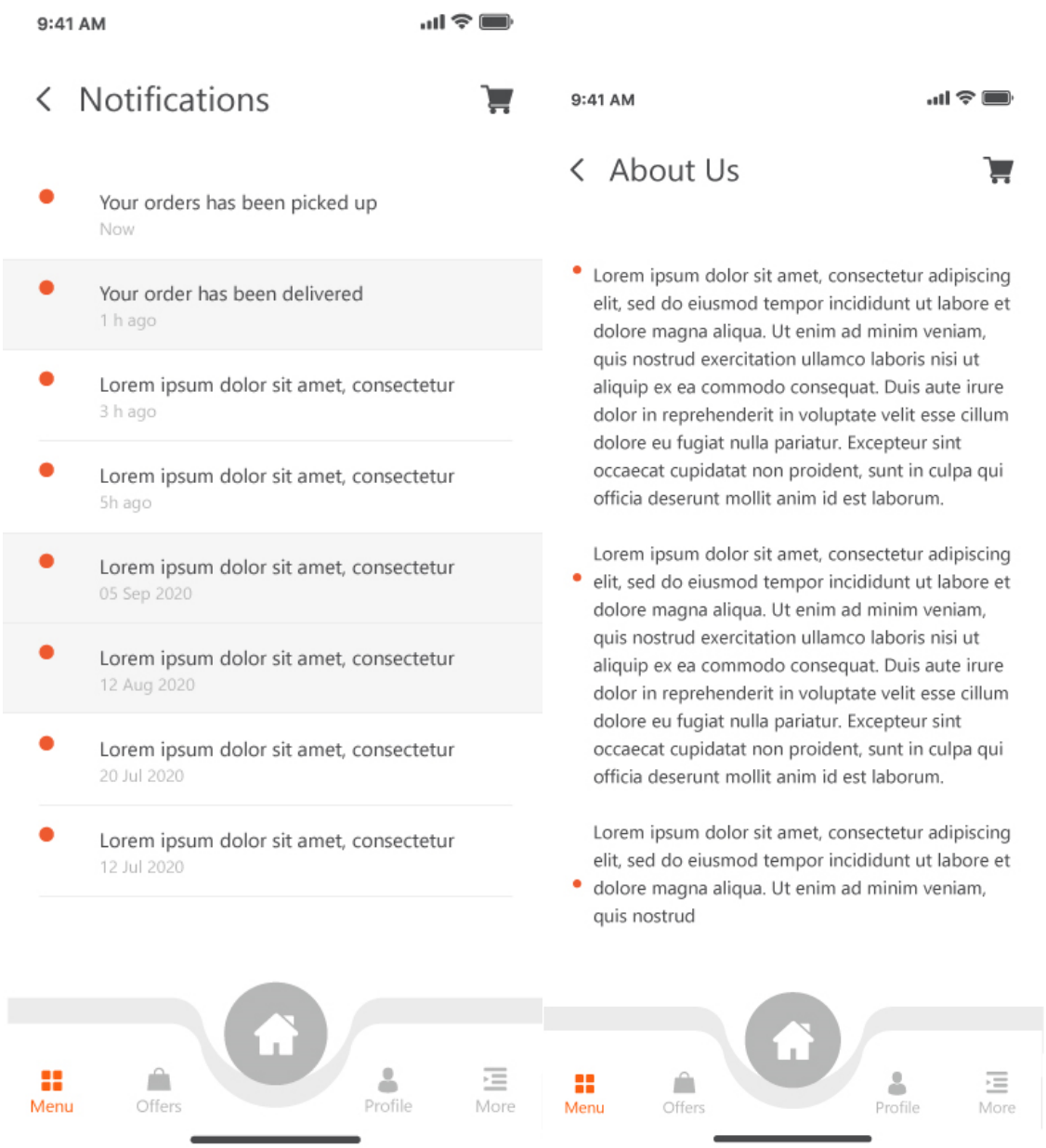


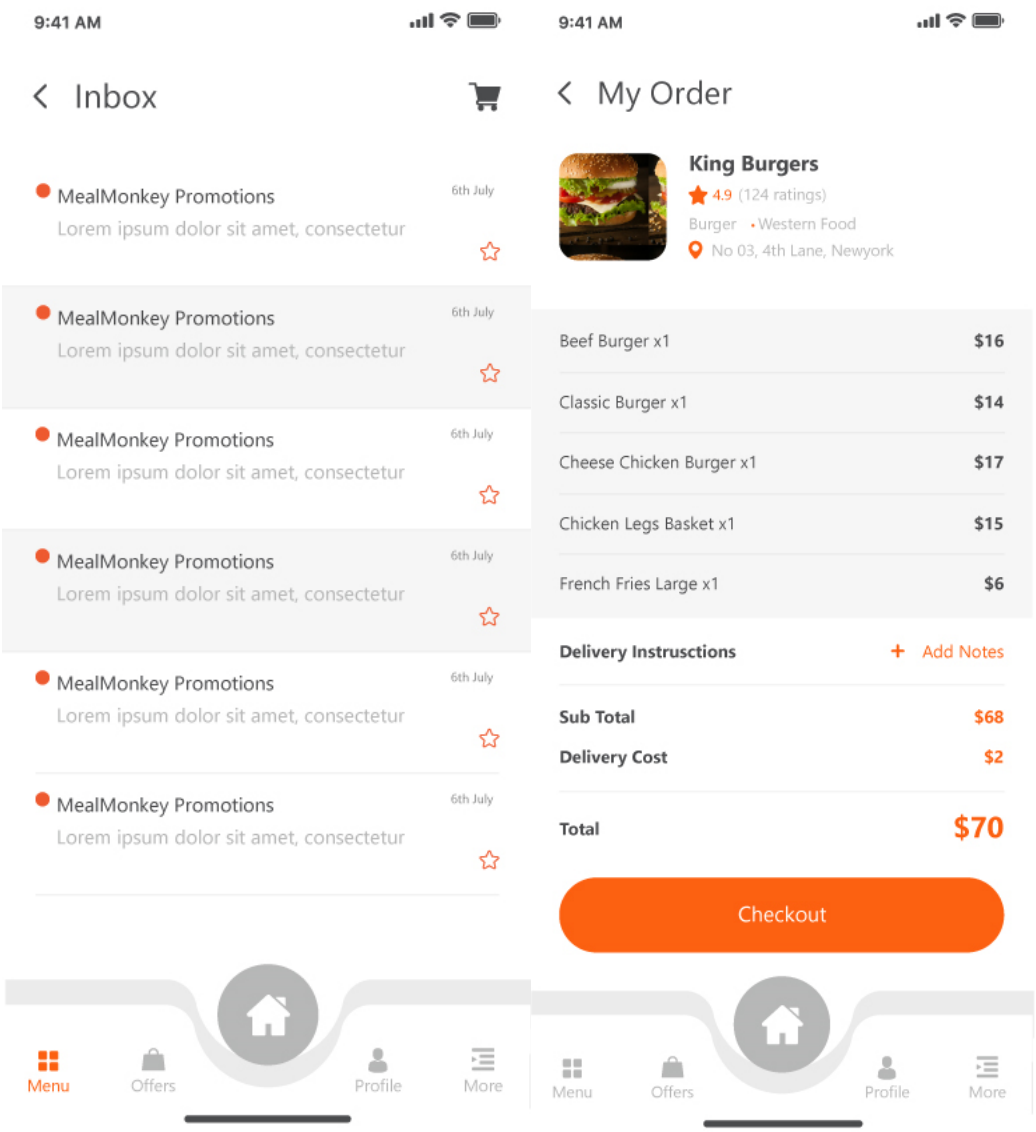
Figure: inbox and order

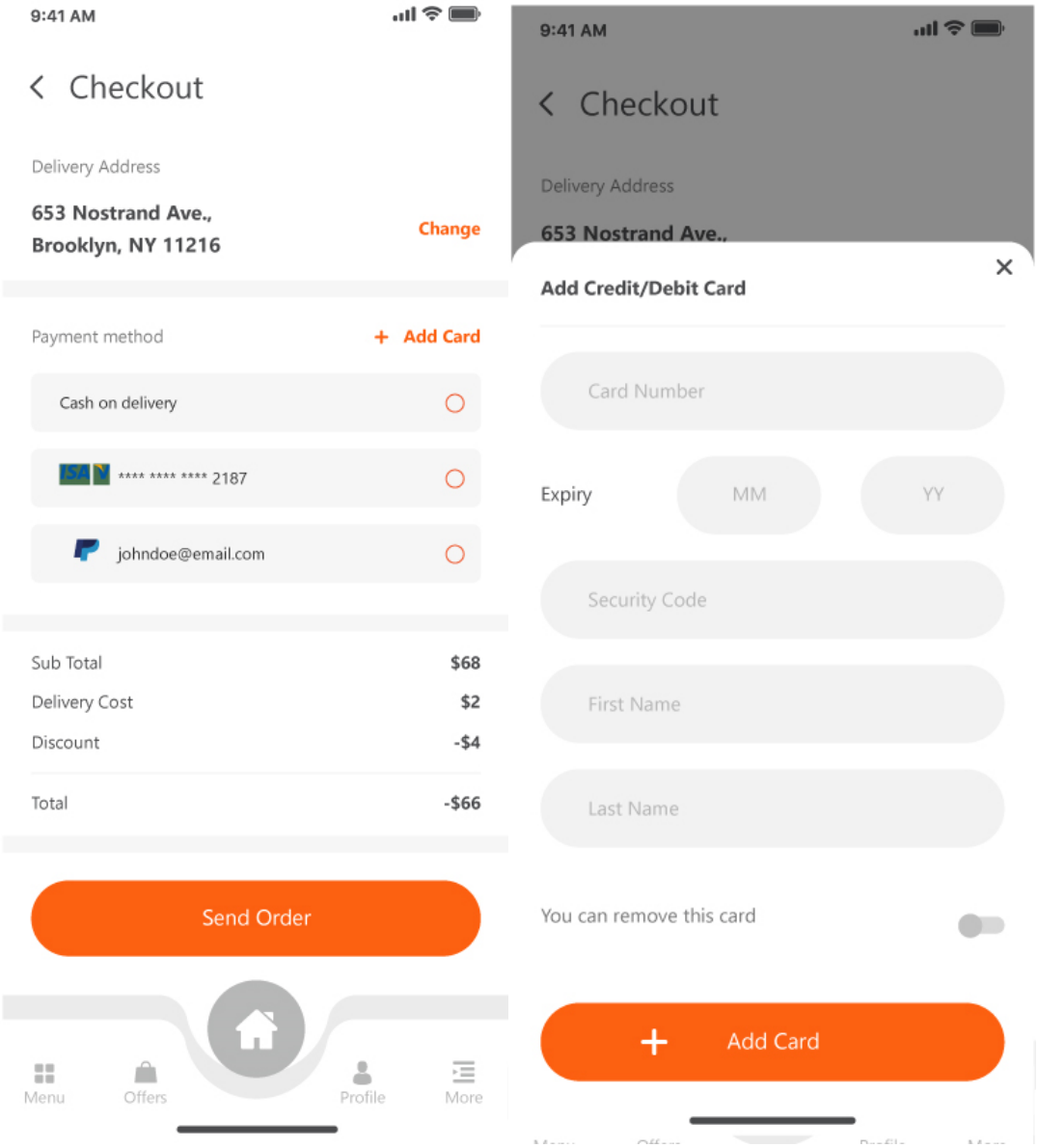
Check out details:



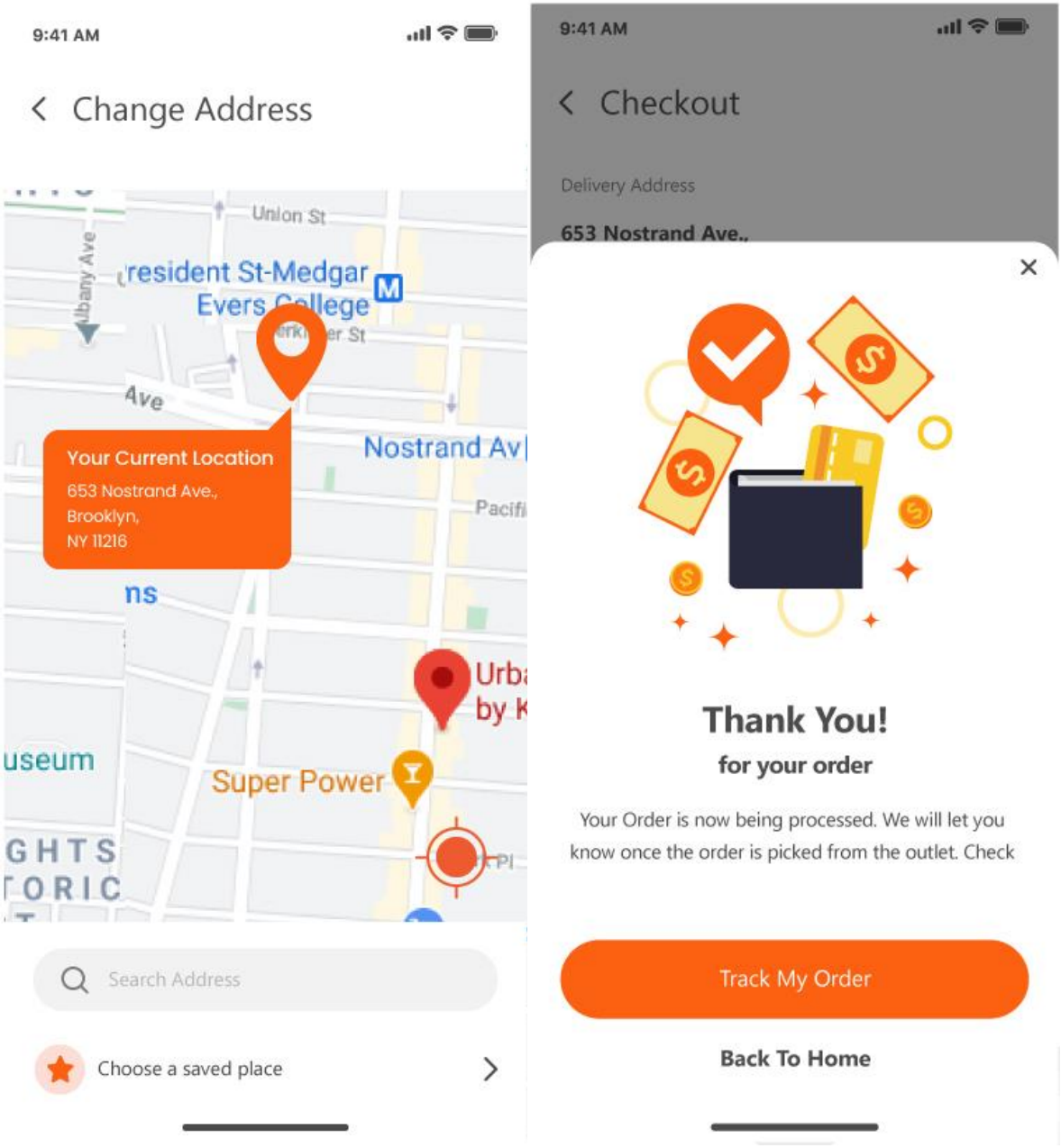

9:41 AM
Payment Details
Customize your payment method
Cash/Card on delivery
VISA **** **** 2187
Delete Card
Other Methods
Add Another Credit/Debit Card
Menu
Offers
Profile
More
9:41 AM
Payment Details
Customize your payment method
Add Credit/Debit Card
Card Number
Expiry
MM
YY
Security Code
First Name
Last Name
You can remove this card
Add Card


9:41 AM
Notifications
Your orders has been picked up
Now
Your order has been delivered
1 h ago
Lorem ipsum dolor sit amet, consectetur
3 h ago
Lorem ipsum dolor sit amet, consectetur
5h ago
Lorem ipsum dolor sit amet, consectetur
05 Sep 2020
Lorem ipsum dolor sit amet, consectetur
12 Aug 2020
Lorem ipsum dolor sit amet, consectetur
20 Jul 2020
Lorem ipsum dolor sit amet, consectetur
12 Jul 2020
Menu
Offers
Profile
More
9:41 AM
About Us
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
Menu
Offers
Profile
More


9:41 AM
Inbox
MealMonkey Promotions
6th July
Lorem ipsum dolor sit amet, consectetur
MealMonkey Promotions
6th July
Lorem ipsum dolor sit amet, consectetur
MealMonkey Promotions
6th July
Lorem ipsum dolor sit amet, consectetur
MealMonkey Promotions
6th July
Lorem ipsum dolor sit amet, consectetur
MealMonkey Promotions
6th July
Lorem ipsum dolor sit amet, consectetur
MealMonkey Promotions
6th July
Lorem ipsum dolor sit amet, consectetur
Menu
Offers
Profile
More
9:41 AM
My Order
King Burgers
4.9 (124 ratings)
Burger • Western Food
No 03, 4th Lane, Newyork
Beef Burger x1 $16
Classic Burger x1 $14
Cheese Chicken Burger x1 $17
Chicken Legs Basket x1 $15
French Fries Large x1 $6
Delivery Instrusctions
+ Add Notes
Sub Total $68
Delivery Cost $2
Total $70
Checkout
Menu
Offers
Profile
More


9:41 AM
Checkout
Delivery Address
653 Nostrand Ave.,
Brooklyn, NY 11216
Change
Payment method
+ Add Card
Cash on delivery
**** **** **** 2187
johndoe@email.com
Sub Total $68
Delivery Cost $2
Discount -$4
Total -$66
Send Order
Menu
Offers
Profile
More
9:41 AM
Checkout
Delivery Address
653 Nostrand Ave..
Add Credit/Debit Card
Card Number
Expiry
MM
YY
Security Code
First Name
Last Name
You can remove this card
Add Card

Delivery details:



\

List Down Entities and Attributes

DATABASE SPECIFICATION.

The database system used to implement the back-end of the system is MySQL.

Access to the system was made possible by a graphical interface (phpMyAdmin)

with an ISAM engine. The database name is master-food and the structure of the data

tables in the database are as follows:

User

Field	Type	Null	Key	Default	Length
Id	Int	No	PRI		11
Username	varchar	No			24
Password	Varchar	No			24
Last-log-	Date	No			
Email	varchar	No			30
Email verification token	varchar				255

Role

Field	Type	Null	Key	Default	Length
Role id	int	no	PRI		13
Role Name	varchar	no			255
Description	varchar	no			255

Address

Field	Type	Null	Key	Default	Length
id	int	no	PRI		13
Zip code	int	no			8
State	varchar	no			25

Order

Field	Type	Null	Key	Default	Length
Id	int	no	PRI		13
Status	varchar	no			25
Total Price	Double	no			
Total item	Double	no			
Total vat	Double	no			

User Id	int	no	Fk		
Payment Id	int	no	Fk		
Address_ id	Int	no	Fk		

Order Item

Field	Type	Null	Key	Default	Length
id	int	no	PRI		13
Total price	Double	no		yes	
Total vat	Double	no		yes	
Total item	Int	No		yes	
Quantity	Int	No		yes	
Order id	Int	No	FK		
Food Id	Int	No	Fk		

Payment

Field	Type	Null	Key	Default	Length
Id	int	no	PRI		13
Total amount	Double	no			
Payment type	Int	No		yes	
Description	varchar	no			

Payment Type

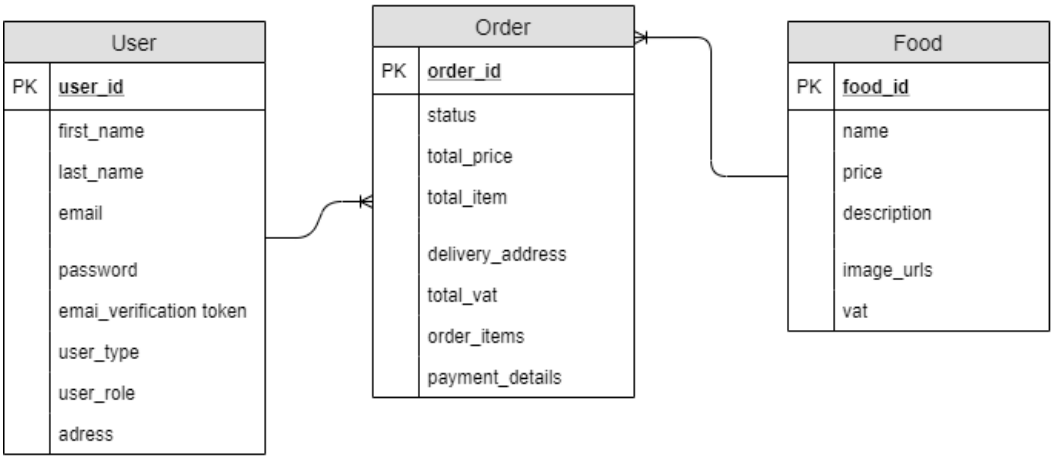
Field	Type	Null	Key	Default	Length
Id	int	no	PRI		13
Name	Varchar	no			60
Details	varchar	no			150

Food

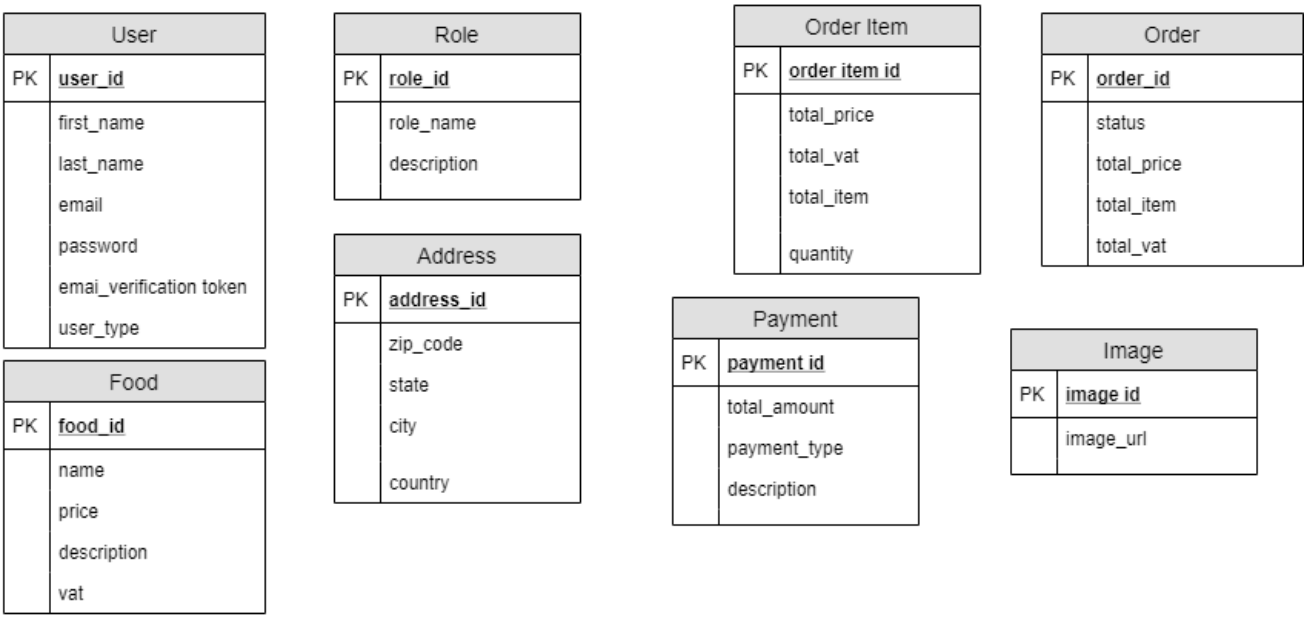
Field	Type	Null	Key	Default	Length
Id	int	no	PRI		13
Name	Varchar	no			60
Price	Double	no		yes	
Vat	Double	no		yes	
Description	varchar	no			255

Schema Diagram

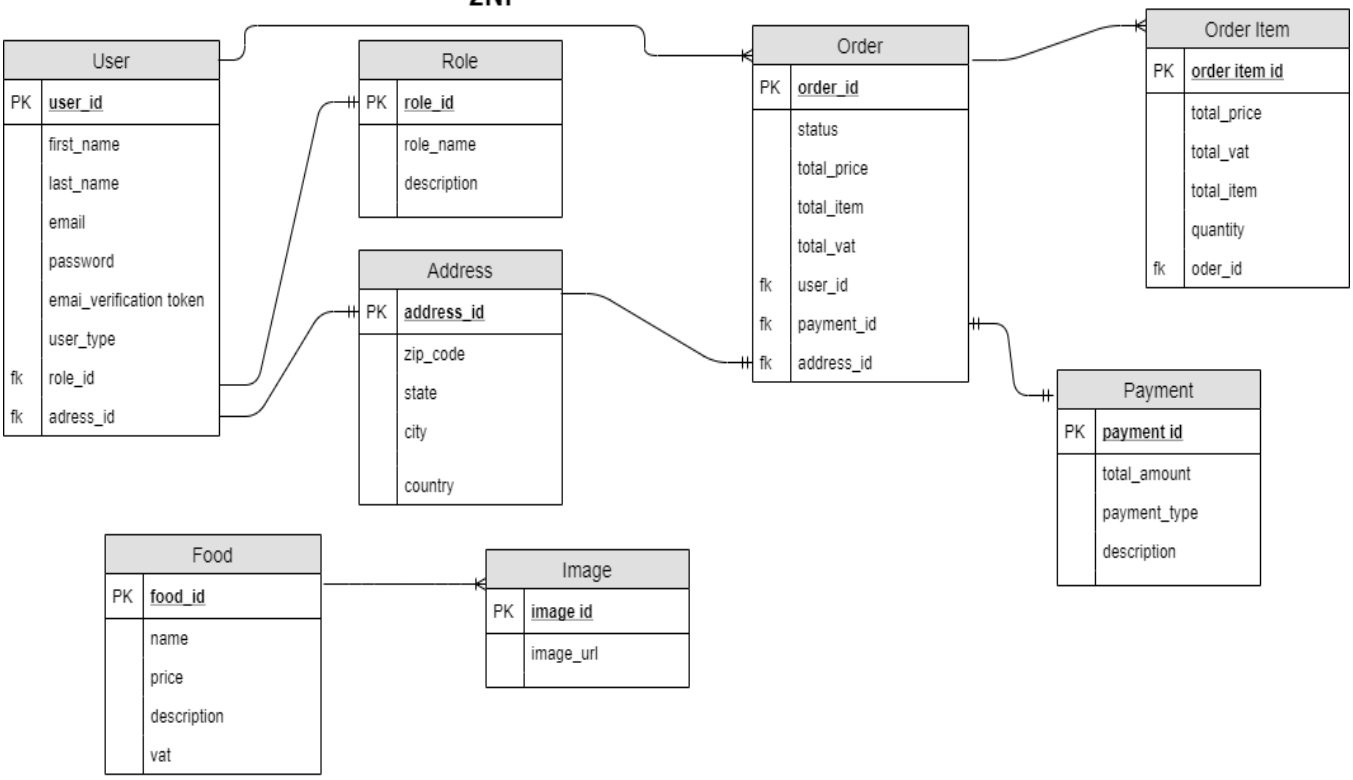
Shema before Normalization



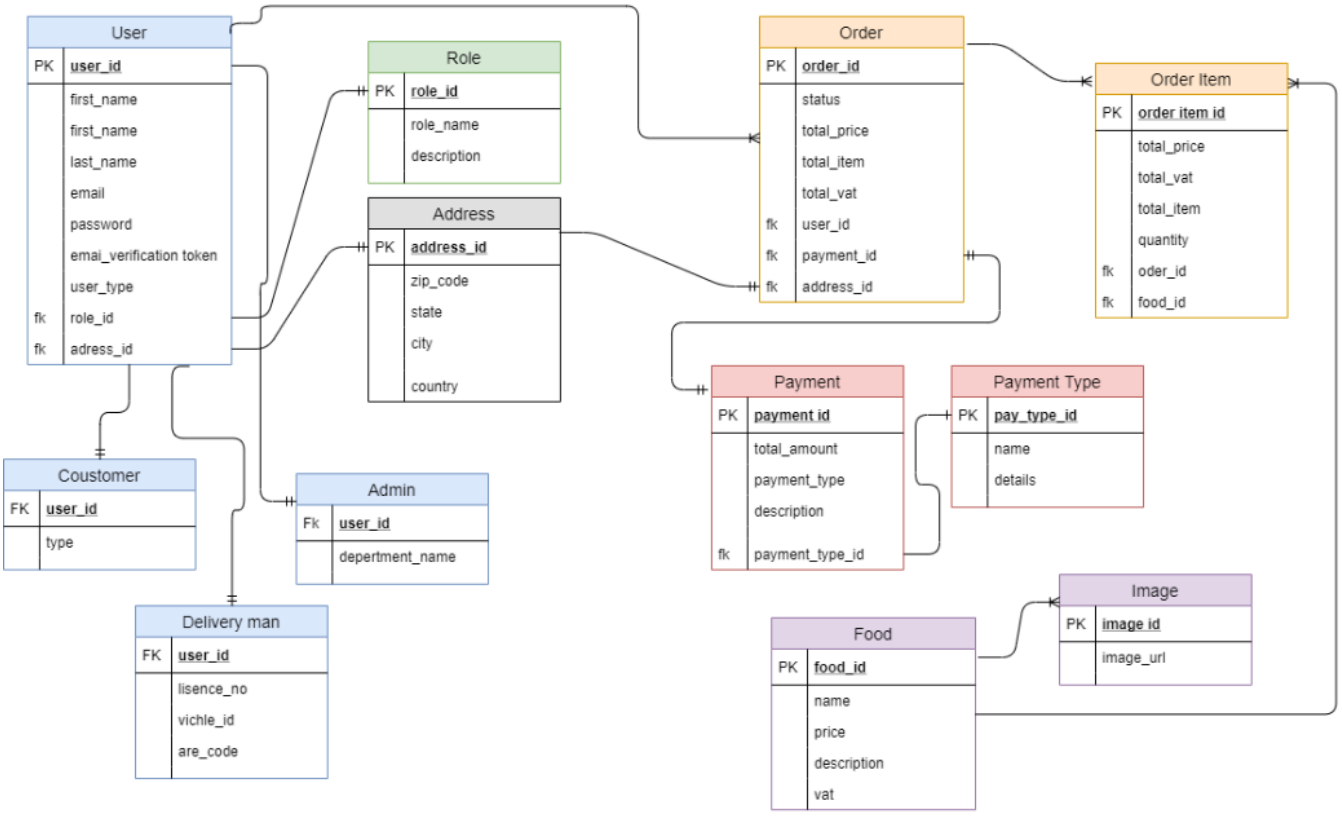
Frist Normal From (1NF)



2NF

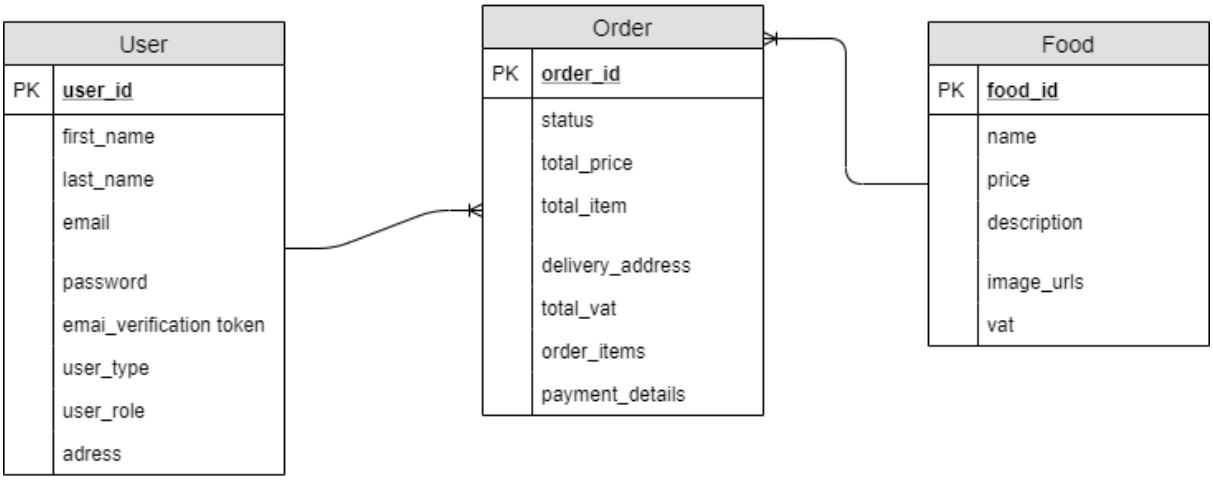

User
PK user_id
first_name
last_name
email
password
emai_verification token
user_type
fk role_id
fk adress_id
Role
PK role_id
role_name
description
Address
PK address_id
zip_code
state
city
country
Order
PK order_id
status
total_price
total_item
total_vat
fk user_id
fk payment_id
fk address_id
Order Item
PK order item id
total_price
total_vat
total_item
quantity
fk oder_id
Payment
PK payment id
total_amount
payment_type
description
Food
PK food_id
name
price
description
vat
Image
PK image id
image_url

3NF

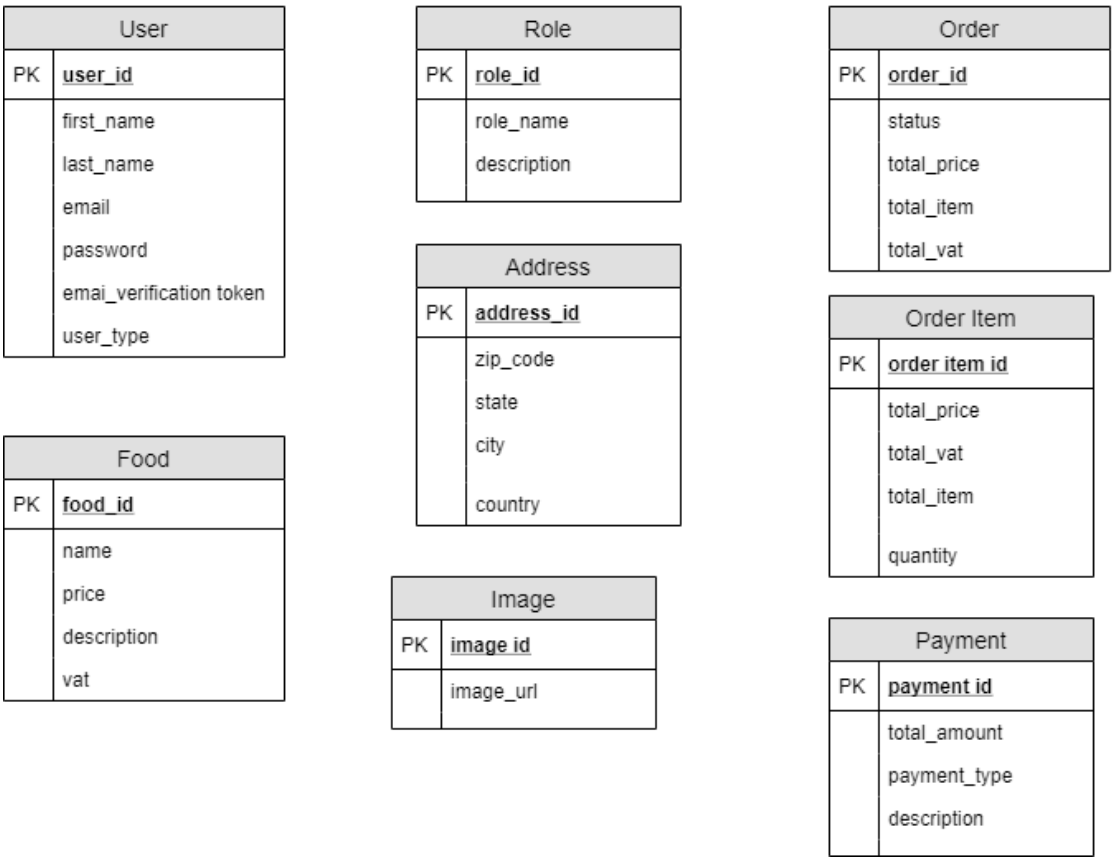

User
PK user_id
first_name
first_name
last_name
email
password
emai_verification token
user_type
fk role_id
fk adress_id
Role
PK role_id
role_name
description
Address
PK address_id
zip_code
state
city
country
Order
PK order_id
status
total_price
total_item
total_vat
fk user_id
fk payment_id
fk address_id
Order Item
PK order item id
total_price
total_vat
total_item
quantity
fk oder_id
fk food_id
Payment
PK payment id
total_amount
payment_type
description
fk payment_type_id
Payment Type
PK pay_type_id
name
details
Coustomer
FK user_id
type
Admin
Fk user_id
depertment_name
Delivery man
FK user_id
lisence_no
vichle_id
are_code
Food
PK food_id
name
price
description
vat
Image
PK image id
image_url

Normalization

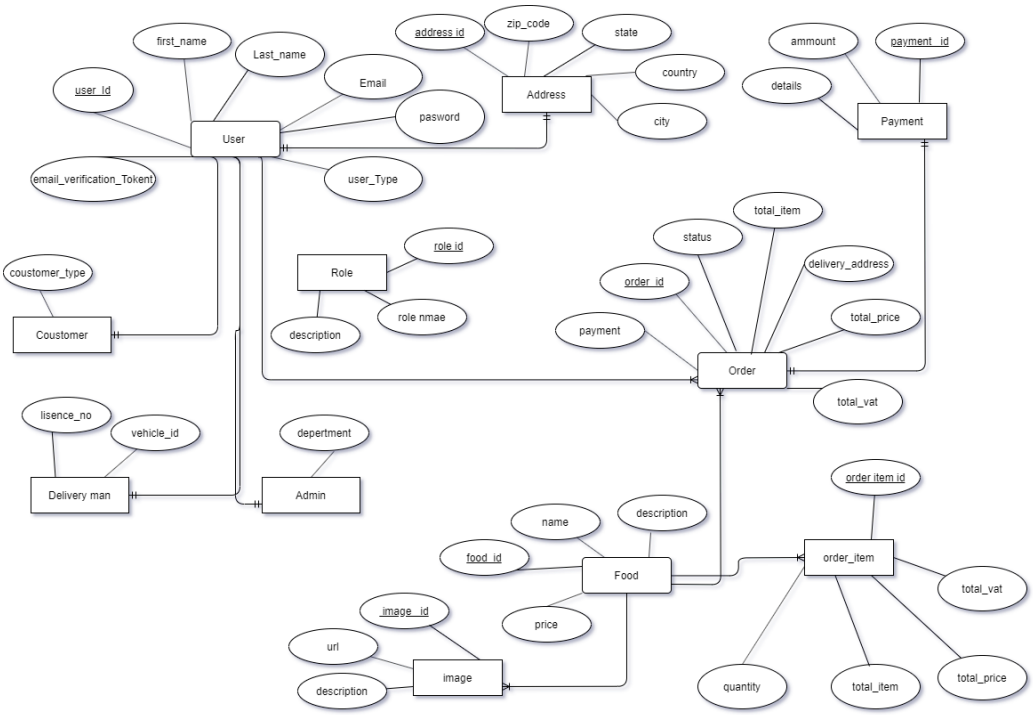
Shema before Normalization



Frist Normal From (1NF)



ERD After Normalization



ERD

Entity Relationship Diagram

E-R Model is a popular high level conceptual data model. This model and its variations are frequently used for the conceptual design of database application and many database design tools employ its concept.

A database that confirms to an E-R diagram can be represented by a collection of tables in the relational system. The mapping of E-R diagram to the entities are:

· Attributes

· Relations

o Many-to-many

o Many-to-one

o One-to-many

o One-to-one

· Weak entities

· Sub-type and super-type

The entities and their relationships between them are shown using the following conventions.

· An entity is shown in rectangle.

· A diamond represent the relationship among number of entities.

· The attributes shown as ovals are connected to the entities or relationship by lines.

· Diamond, oval and relationships are labeled.

· Model is an abstraction process that hides super details while highlighting details relation to application at end.

· A data model is a mechanism that provides this abstraction for database application.

· Data modeling is used for representing entities and their relationship in the database.

· Entities are the basic units used in modeling database entities can have concrete existence or constitute ideas or concepts.

· Entity types or entity set is a group of similar objects concern to an organization for which it maintains data,

· Properties are characteristics of an entity also called as attributes. · A key is a single attribute or combination of 2 or more attributes of an entity set is used to identify one or more instances of the set.

· In relational model we represent the entity by a relation and use tuples to represent an instance of the entity.

· Relationship is used in data modeling to represent in association between an entity set.

· An association between two attributes indicates that the values of the associated attributes are independent.

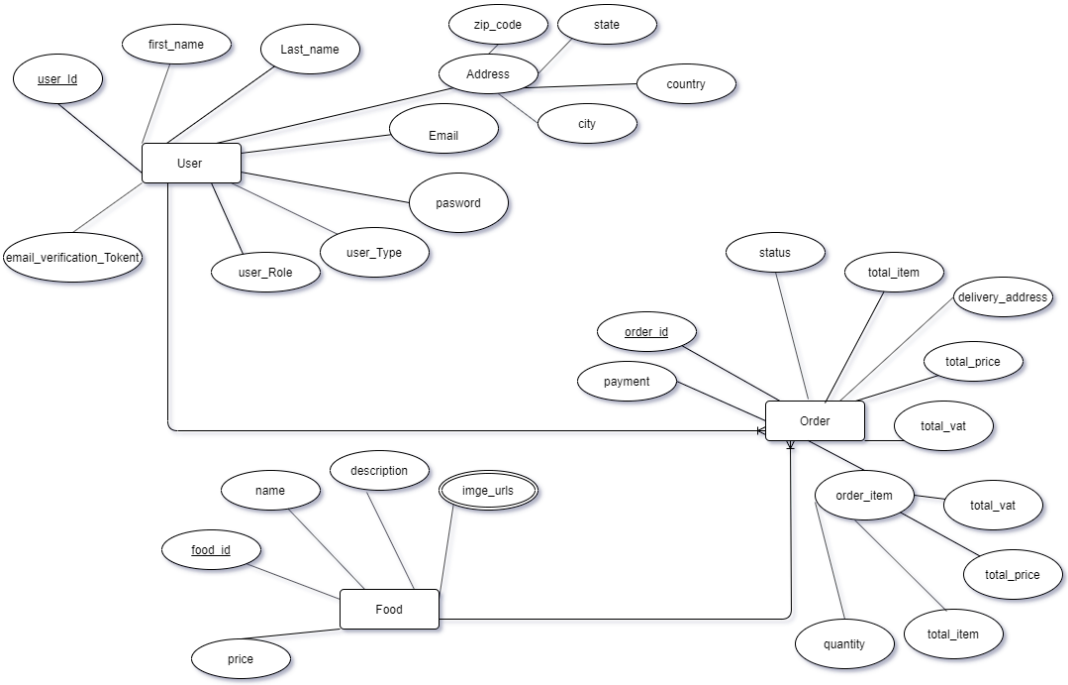


Figure: ERD before normalization

Learning Experience

The project has gone through a number of actions to produce a complicated solution for the online meal ordering system. As stated in Chapter 1.2, a set of objectives were defined after a study of the project's goal and research direction. All of the operations carried out during the project were aimed at achieving these goals. The built prototype program met these objectives at the end of the project using the following methods:

• Objective #1 was met by examining previous works for automating the restaurant food ordering procedure. In addition, the technologies for developing web applications are briefly reviewed.

The Agile Development method of Extreme Programming was used to achieve

Objective #2 In addition, the system is analyzed and designed using SSADM techniques.

• Goal #3 was achieved by using Laravel 5.4 and Bootstrap 4 to build the system.

• By integrating the Facebook API into the system,

objective #4 was met. • To ensure that the prototype system is as robust as feasible,

objective #5 was addressed through a variety of testing methodologies.

The project took a long time to complete. It was attempted to incorporate as many features as feasible within the time constraints. The Functional Requirements were met satisfactorily. Some of the system's non-functional requirements have not been implemented. These requirements are the most important and reflect the most important qualities. Due to time constraints, some needs are not implemented. However, because they are lower priority features, their loss would not cause substantial operational concerns. In the future, these functionalities may be introduced.

Conclusion

After a decade of technological growth and invention, people are able to perform their tasks more conveniently and efficiently. Many other industries have employed management systems to help their businesses thrive for a long time, and the food and beverage industry is following suit. By completely employing the system at the end of this project, the system will be able to minimize and replace human manpower tasks, reduce transaction time, and provide reports for further management purposes.

Obviously, the proposed approach can help enhance the restaurant's efficiency, which has a direct impact on the restaurant's profitability. Furthermore, because the technology has already facilitated the majority of the business processes, it can assist restaurants in lowering their operating costs in terms of manpower. As a result, it is thought that the approach can help the restaurant's company thrive over time.

On the other side, modern technology makes the criterion for portability simple to meet. As a result, portability has become one of the factors that must be considered throughout the creation of a system. Because mobility provides a number of advantages to users while using the system, such as convenience, accessibility, and ease of communication, among others. As a result, mobility has had such an impact on society that everyone now prefers to do their tasks using a portable device.

To meet all of these requirements, our suggested technique combines a mobile food orderings system with a computer-based restaurant management system. The combination of both elements creates a system that allows users to have a portable experience, in which they may complete their food orders using their smartphone or tablet. Furthermore, restaurants manage their daily operations using the computer platform since computers have additional capabilities such as a larger screen, other compatible systems that can assist in restaurant management, and other drivers that need to interface with that necessary hardware.

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