

# Restaurants Management Software

## Overview

A software to manage restaurants internally by monitoring the status of the staff , ingredients and income and externally by marketing the items and managing customers orders and payment. .

## System request

### Project sponsors

- Mohamed Khaled Fared
- Mohamed Khaled Ibrahim
- Mohamed Khaled Omar
- Mohamed Saber Elsayed
- Mohamed Salah Mohamed

### Business needs

- Monitor the restaurant status
- Making orders through the app is easier than phone calls
- Increase restaurants sales
- Relieving the pressure on restaurants through our app

## Business requirements

### Team Members:

- Mobile App Developer
- Backend Developer
- UI/UX Designer
- Software Tester
- Security Engineer

### Hardware Requirements:

- Laptop for each team member
- Dedicated server for hosting

### Support:

- Establish a support team to provide assistance and troubleshooting.

### Software Testing:

- Perform unit testing, integration testing, and user acceptance testing.

## Business value

Table 1.1

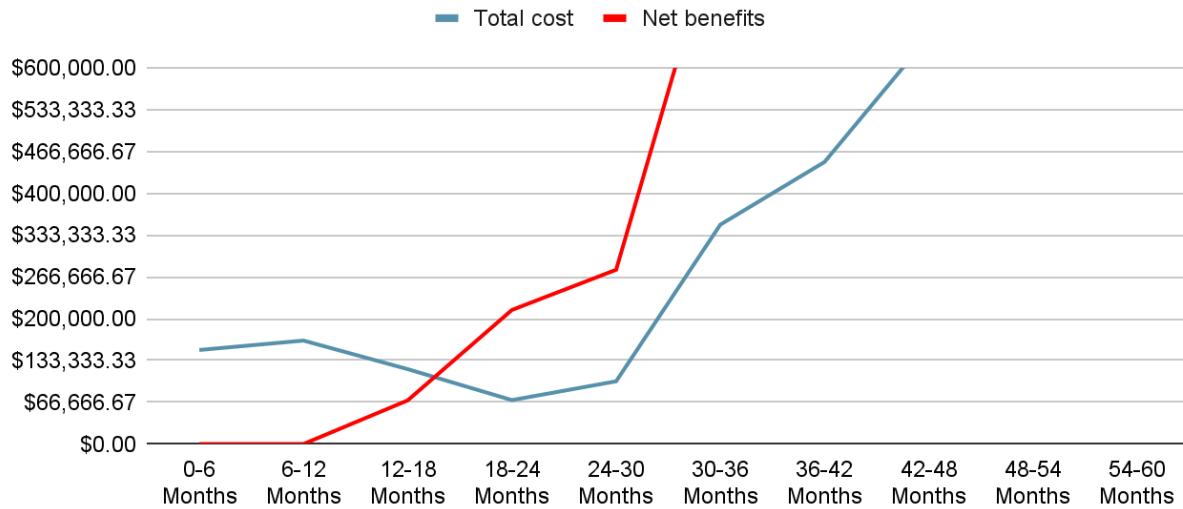
Client Type	Price per Month
Small Restaurant	\$30
Medium Restaurant	\$90
Large Restaurant	More than (\$150)

Note: In Table 1.2, the distribution of clients in each year (25% small, 25% medium, 50% large) of the types in Table 1.1.

Time period	Total benefits	Total cost	Net benefits (\$)	Number of Customers	BEP	ROI(%)
0-6 Months	\$0	\$150,000	\$0	0	No	-%100
6-12 Months	\$75,600	\$165000	-\$89400	120	No	
12-18 Months	\$189,000	\$119400	\$69600	300	Yes	
18-24 Months	\$283,860	\$70000	\$213,860	450	Yes	
24-30 Months	\$378,000	\$100,000	\$278,000	700	Yes	
30-36 Months	\$1,197,000	\$350,000	\$847,000	1900	Yes	
36-42 Months	\$2,268,000	\$450,000	\$1,818,000	3600	Yes	
42-48 Months	\$4,536,000	\$650,000	\$3,886,000	7200	Yes	
48-54 Months	\$8,190,000	\$990,000	\$7,200,000	13000	Yes	
54-60 Months	\$15,750,000	\$1,700,000	\$14,050,000	25000	Yes	
<b>Total</b>	<b>\$32,867,460</b>	<b>\$4744400</b>	<b>\$28,258,060</b>			<b>%6.27</b>

Table 1.2

### Timeline of net profits



### Constraints:

- Budget
- Deadline

## Feasibility analysis

### Technical feasibility

#### Software layout:

- Dart
- Flutter framework

#### Backend:

- Rest API
- AWS(cloud server)
- AWS Management Console

#### UI/UX:

- Figma

### Economic feasibility

#### Budget:

- 160000\$

#### Time:

- 2-3 months

## Organizational feasibility

### Project Manager:

- Mohamed khaled fared

### Project Champion:

- Mohamed khaled omar

### Users:

- Restaurant owner and staff
- Restaurant customers

### Other stakeholders:

- Mohamed khaled Ibrahim
- Mohamed saber elsayed
- Mohamed salah mohamed

Functional Requirements		Non-Functional Requirements
<b>Internal:</b>		
<b>Registration</b> <ul style="list-style-type: none"> <li>• Username or Email Address</li> <li>• Password</li> <li>• Location</li> </ul>	<b>Ingredient status</b> <ul style="list-style-type: none"> <li>• amount of ingredients</li> <li>• Orders</li> <li>• received ingredients</li> </ul>	<b>Performance</b> <ul style="list-style-type: none"> <li>• The system should be responsive, with fast order processing times and minimal latency</li> </ul>
<b>Login</b> <ul style="list-style-type: none"> <li>• Username Or ID</li> <li>• Password</li> </ul>	<b>Income Monitoring</b> <ul style="list-style-type: none"> <li>• Bills (IN/OUT)</li> </ul>	<b>Scalability</b> <ul style="list-style-type: none"> <li>• The system should be scalable to accommodate increasing numbers of users, orders, and transactions as the business grows.</li> </ul>
<b>Staff Roles</b> <ul style="list-style-type: none"> <li>• Jobs in restaurant</li> </ul>	<b>most ordered</b> <ul style="list-style-type: none"> <li>• Orders</li> <li>• Feedback from customers</li> </ul>	<b>Operational</b> <ul style="list-style-type: none"> <li>• The system should be available and operational during the restaurant's operating hours, with minimal scheduled downtime for maintenance or updates.</li> </ul>
<b>Staff Status</b> <ul style="list-style-type: none"> <li>• staff members</li> <li>• presence and departure times</li> </ul>		

## Functional Requirements

External:

### Logger & Analysis

- Log any activity in restaurant system:

### Display items

- Items [name - photos - price - Ingredients]

### multi language:

- Userlanguage
- Language

### finished order

- time of order making
- Push notification in app to notice customer that his order is finished
- Order ID

### Offers

- Promo code generation
- Code
- Restaurant Offers

### order preferences:

- order placement [table-delivery takeaway]
- additions

### Payment

- Payment Info
- Payment Type ( Cash , Online)

### Feedback:

- Rating
- Customer Review

### Promotions:

- most ordered ,
- offers
- Based on user orders

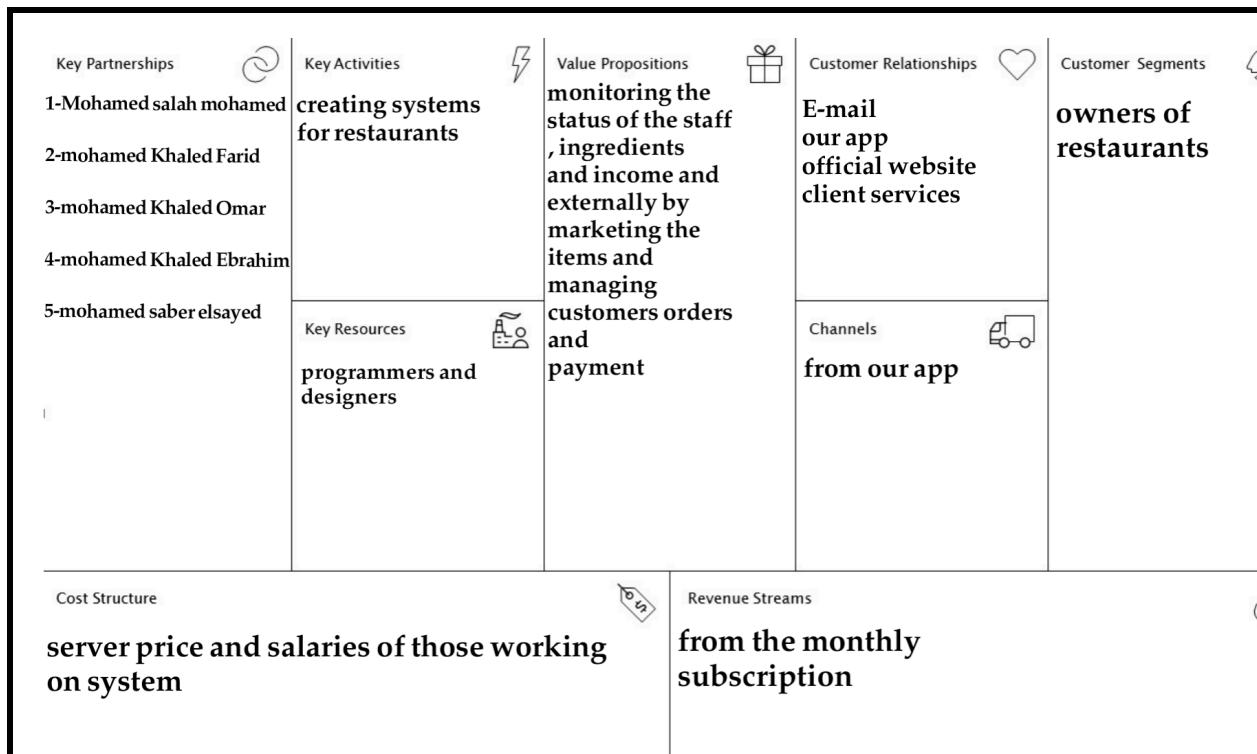
### Favourites

- customer favourite

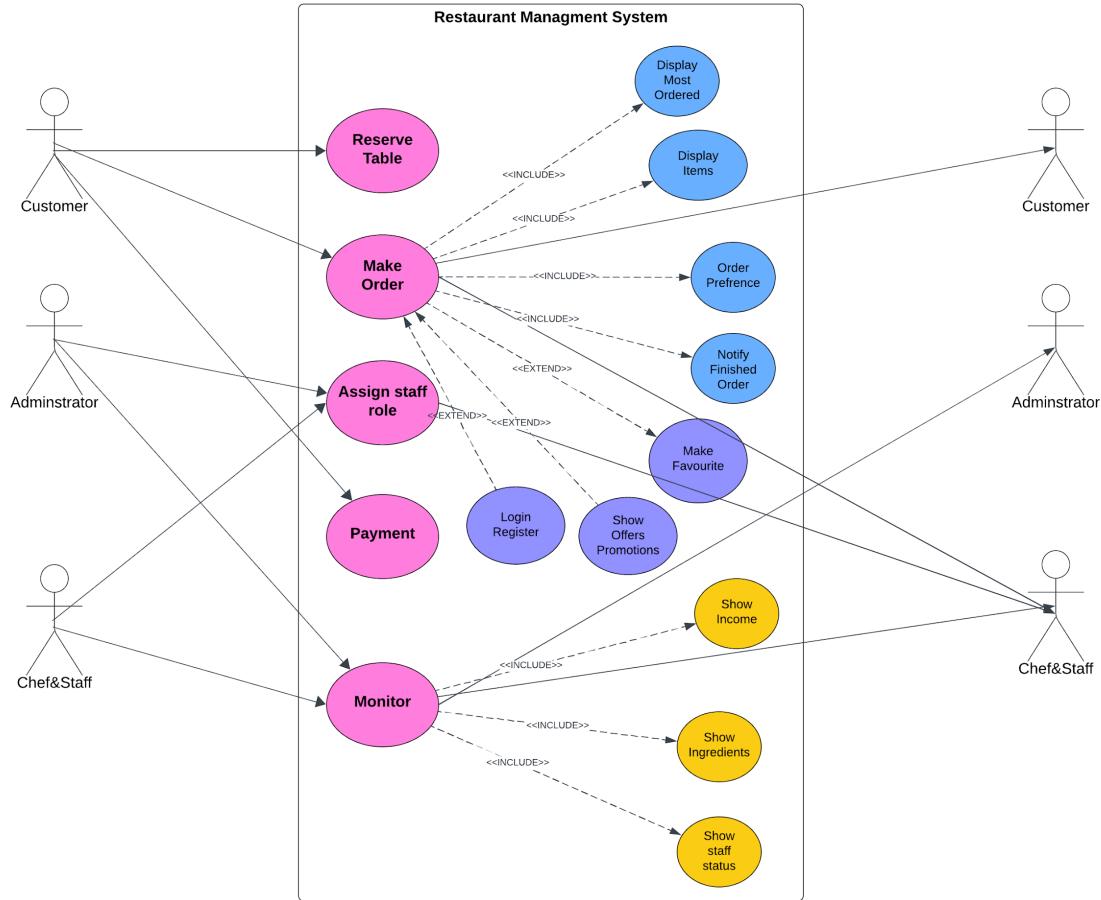
### table reservation

- Time Of reservation
- Number of tables
- Number of individuals
- Reservation type

## Business model:



## Use case diagram



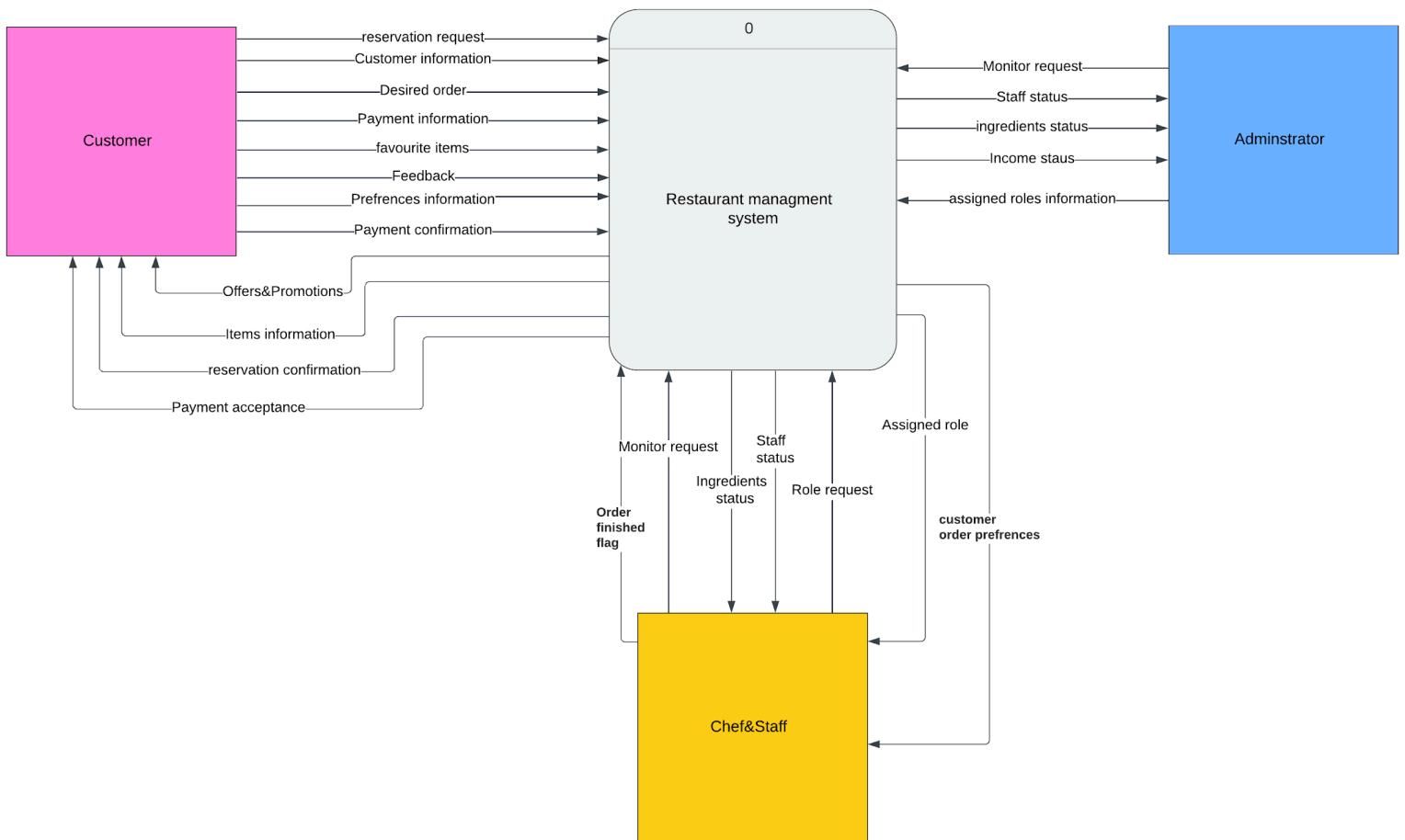
<b>Use Case Name :</b> Make Order	<b>ID :</b> UC_2	<b>Priority :</b> High
<b>Actor :</b> Customer		
<b>Description :</b> This use case describes a customer placing an order at a restaurant through the program system.		
<b>Trigger :</b> Customer accesses the restaurant program system to place an order. <b>Type :</b> External		
<b>Preconditions :</b> <ul style="list-style-type: none"> <li>- Restaurant program system is available.</li> <li>- Menu items are listed and up-to-date.</li> <li>- Customer is logged in (if required).</li> </ul>		
<b>Normal Course :</b> <ol style="list-style-type: none"> <li>1. System displays available menu options.</li> <li>2. Customer selects desired menu items.</li> <li>3. Customer specifies any customizations or special requests.</li> <li>4. Customer confirms the order.</li> <li>5. System processes the order and notifies the kitchen staff.</li> <li>6. Kitchen staff prepares the order.</li> <li>7. System notifies the customer when the order is ready for pickup or delivery.</li> <li>8. Customer receives the order.</li> </ol>		
<b>Alternative course :</b> <p>1_ if customer is not logged in -&gt; System prompts the customer to log in or continue as a guest.</p>		
<b>Postconditions :</b> <ul style="list-style-type: none"> <li>- Order details are stored in the system.</li> <li>- Kitchen staff are notified of the new order.</li> <li>- Customer receives confirmation of the order.</li> </ul>		
<b>Exceptions :</b> <p>- E1: Invalid menu selection:</p> <ol style="list-style-type: none"> <li>1. System displays a message indicating the selected menu item is not available or invalid.</li> <li>2. Customer revises the order.</li> </ol>		

**- E2: System error:**

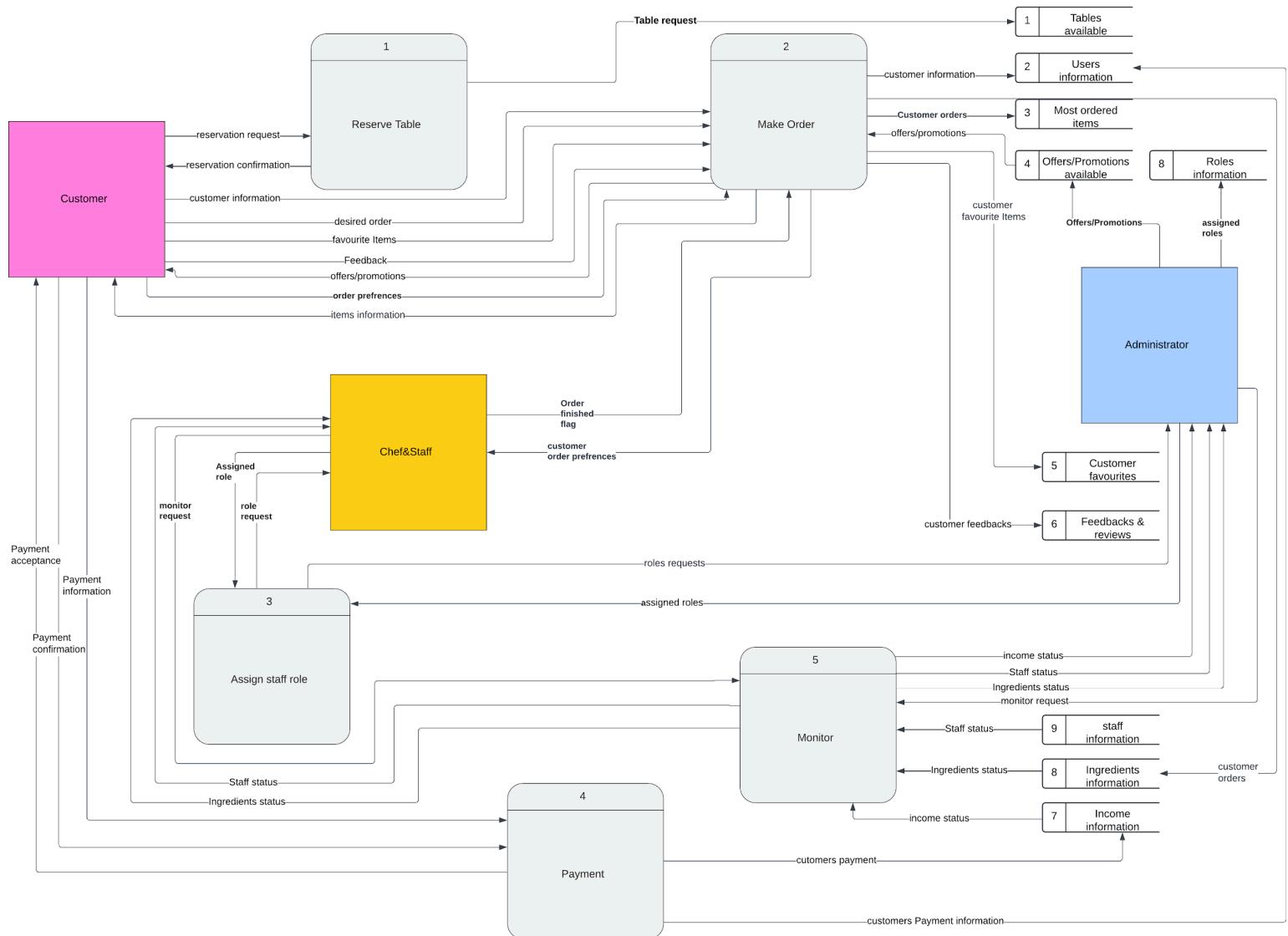
1. System displays an error message.
2. Customer contacts support for assistance.

<b>Summary Inputs</b>	<b>Source</b>	<b>Outputs</b>	<b>Destination</b>
<ul style="list-style-type: none"><li>- Customer selections</li><li>- Customizations</li><li>- Special requests.</li></ul>	- Customer	<ul style="list-style-type: none"><li>- Order confirmation</li><li>- notification of order readiness.</li></ul>	<ul style="list-style-type: none"><li>- Restaurant program system</li><li>- Kitchen staff</li></ul>

## Context diagram

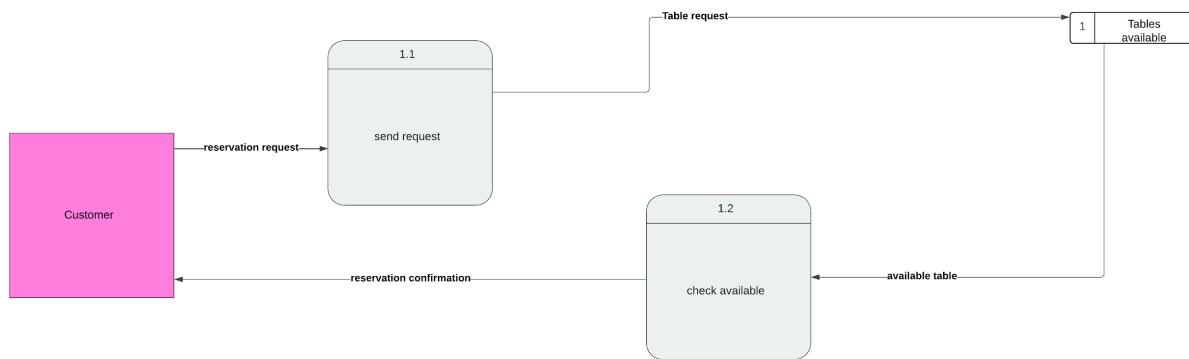


## Data flow level 0 diagram

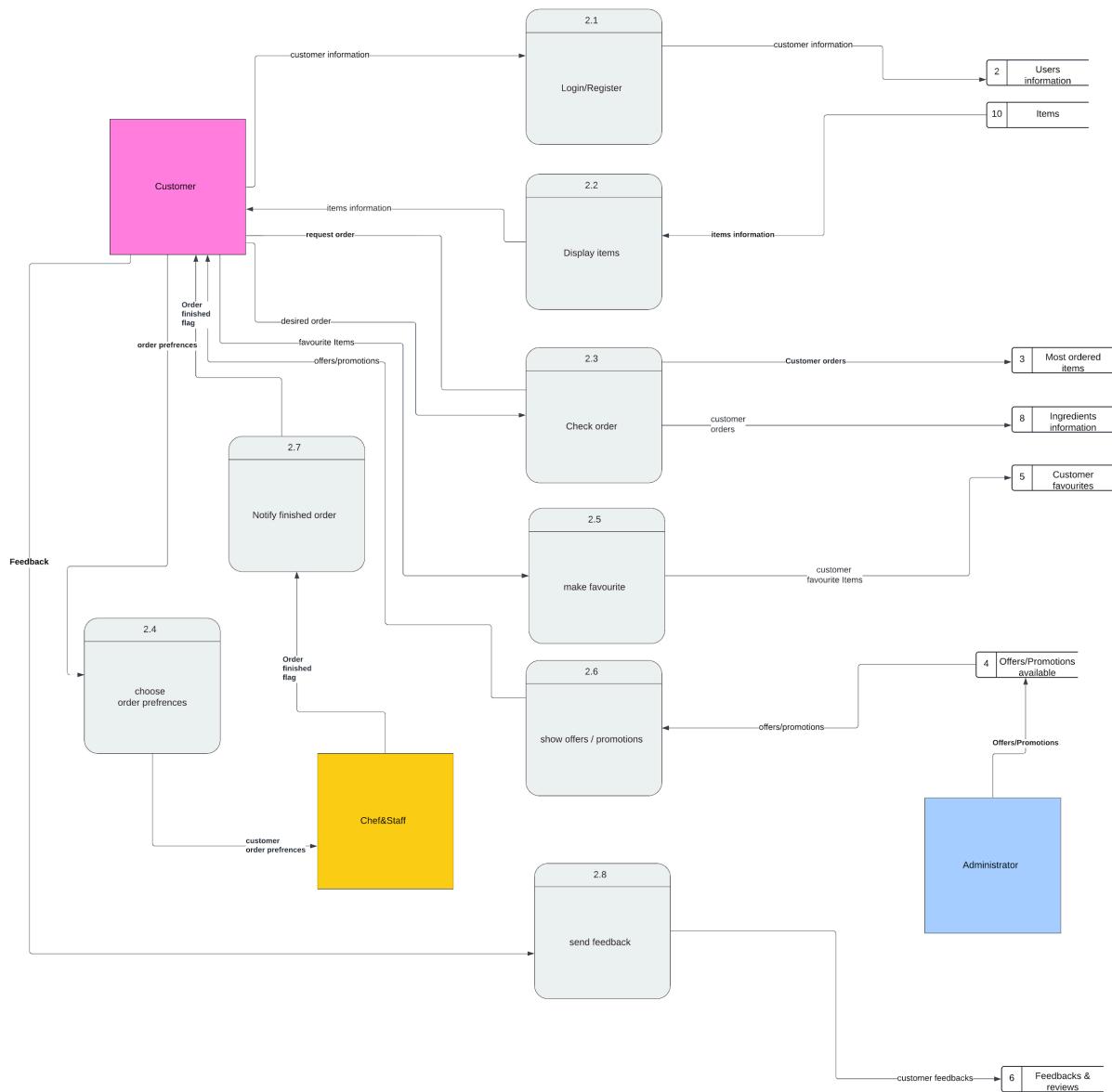


## Data flow level 1 diagram

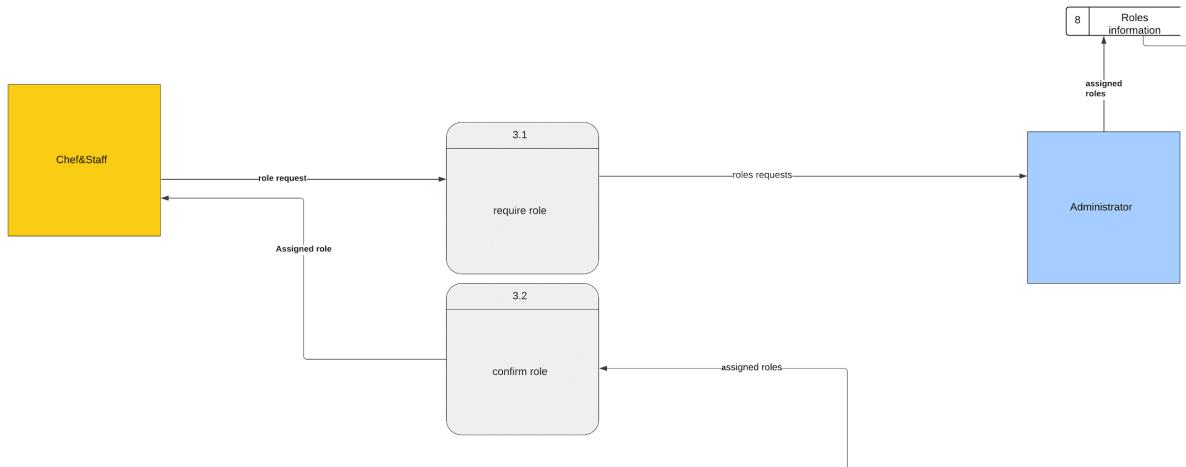
### Use case 1



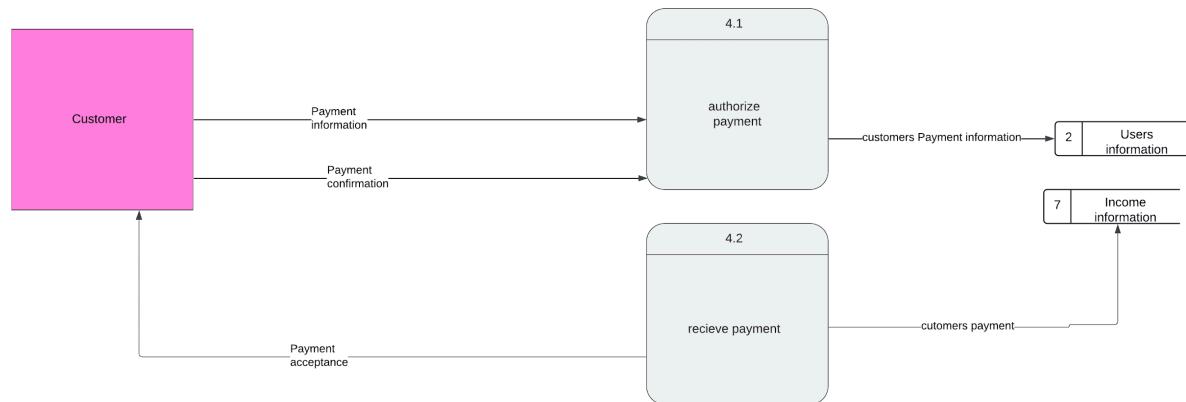
## Use case 2



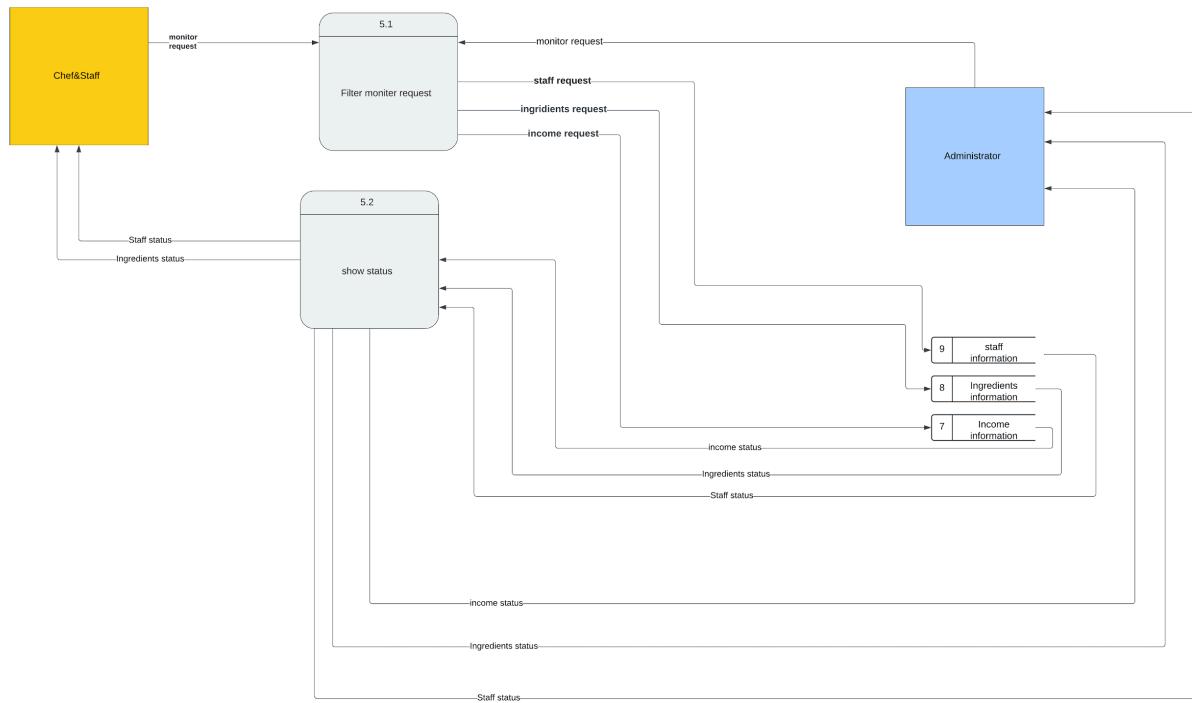
### Use case 3



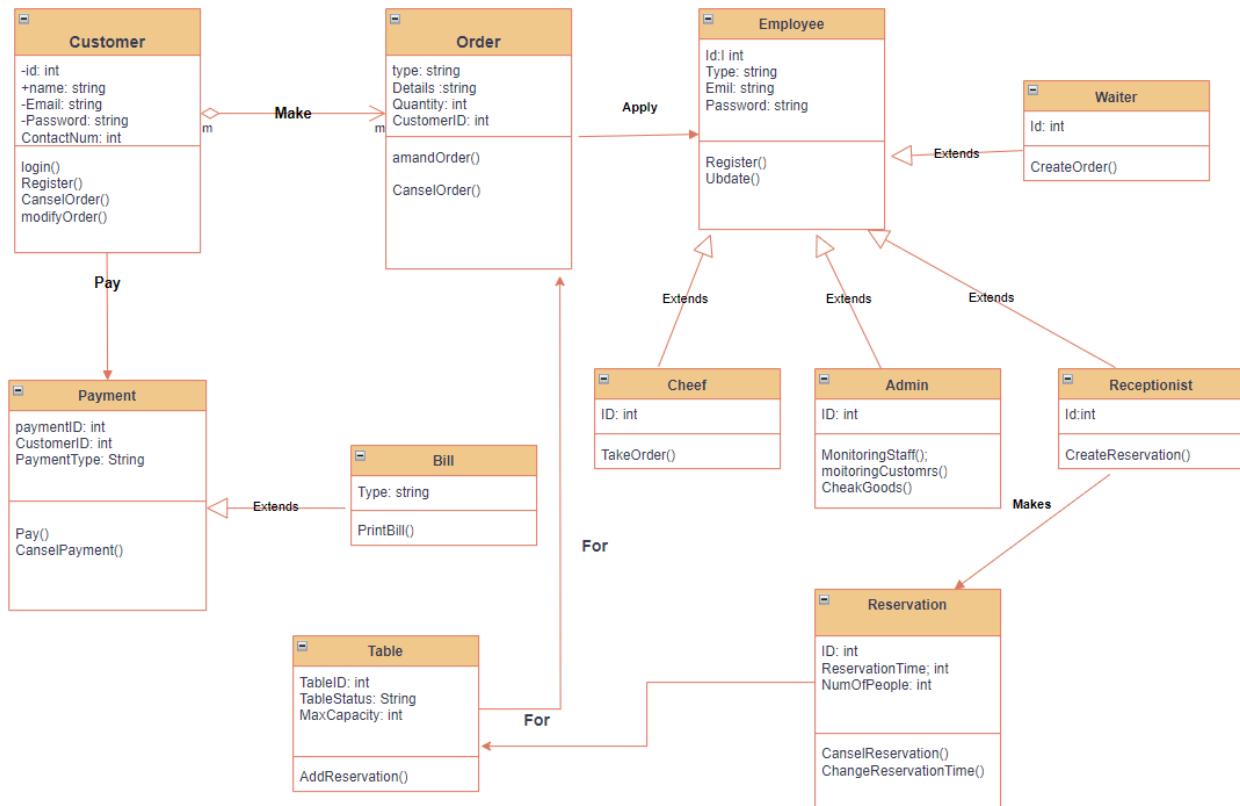
### Use case 4



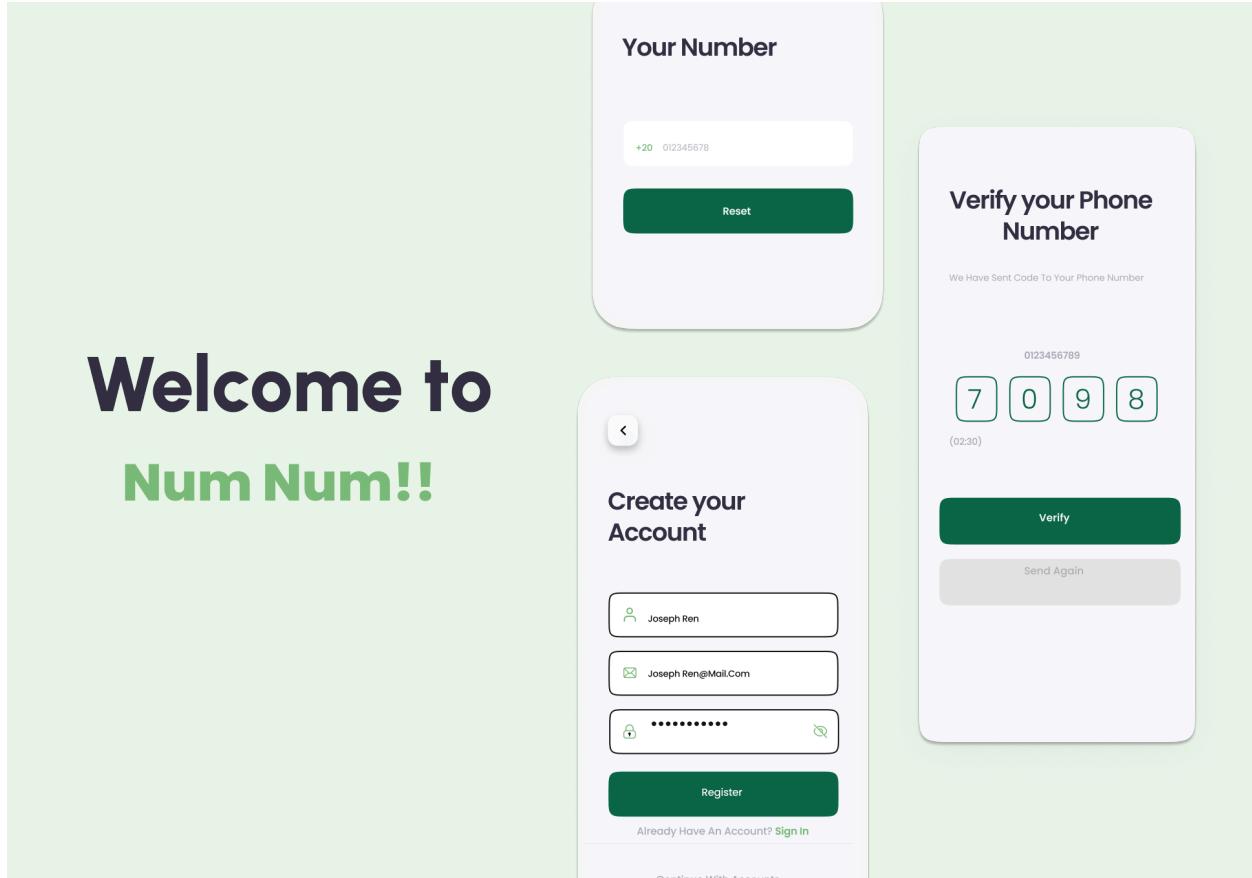
## Use case 5

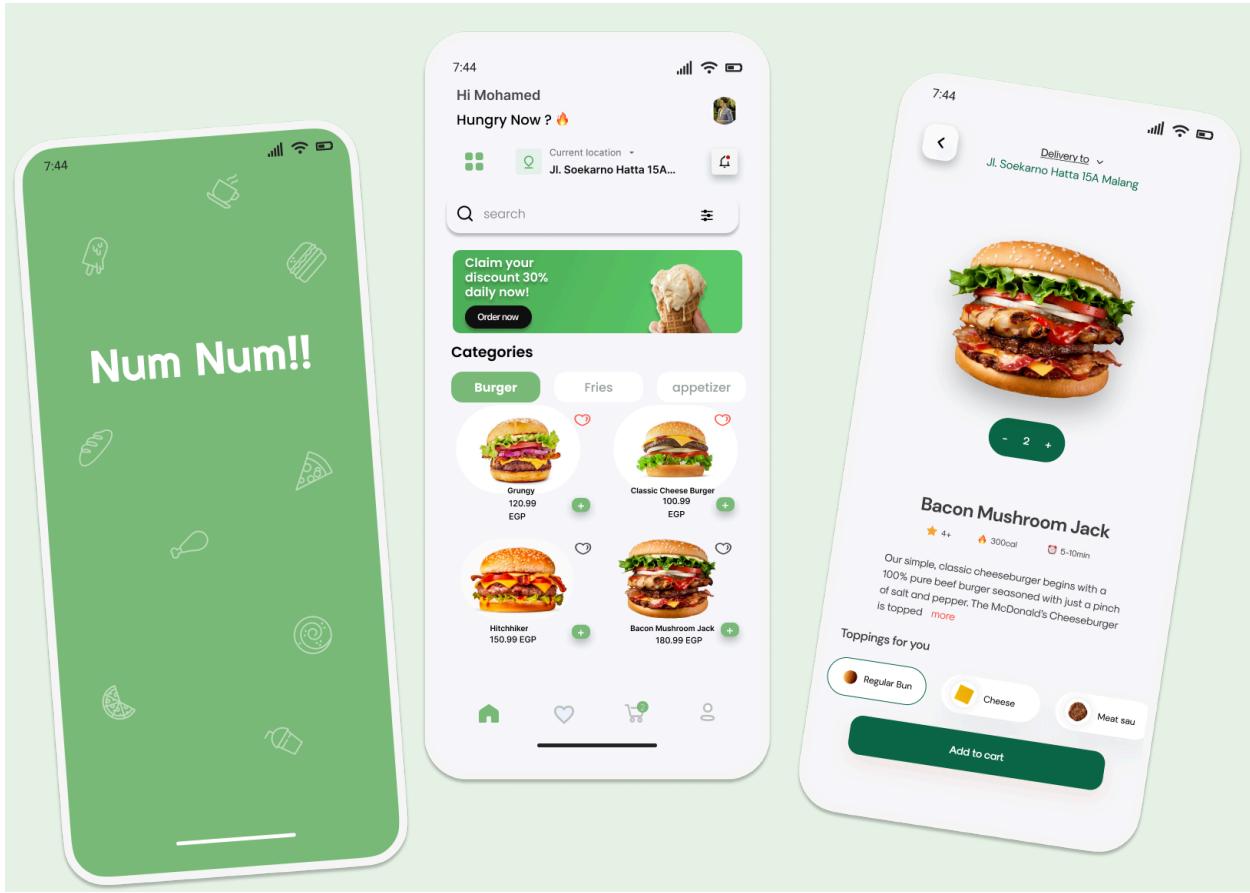


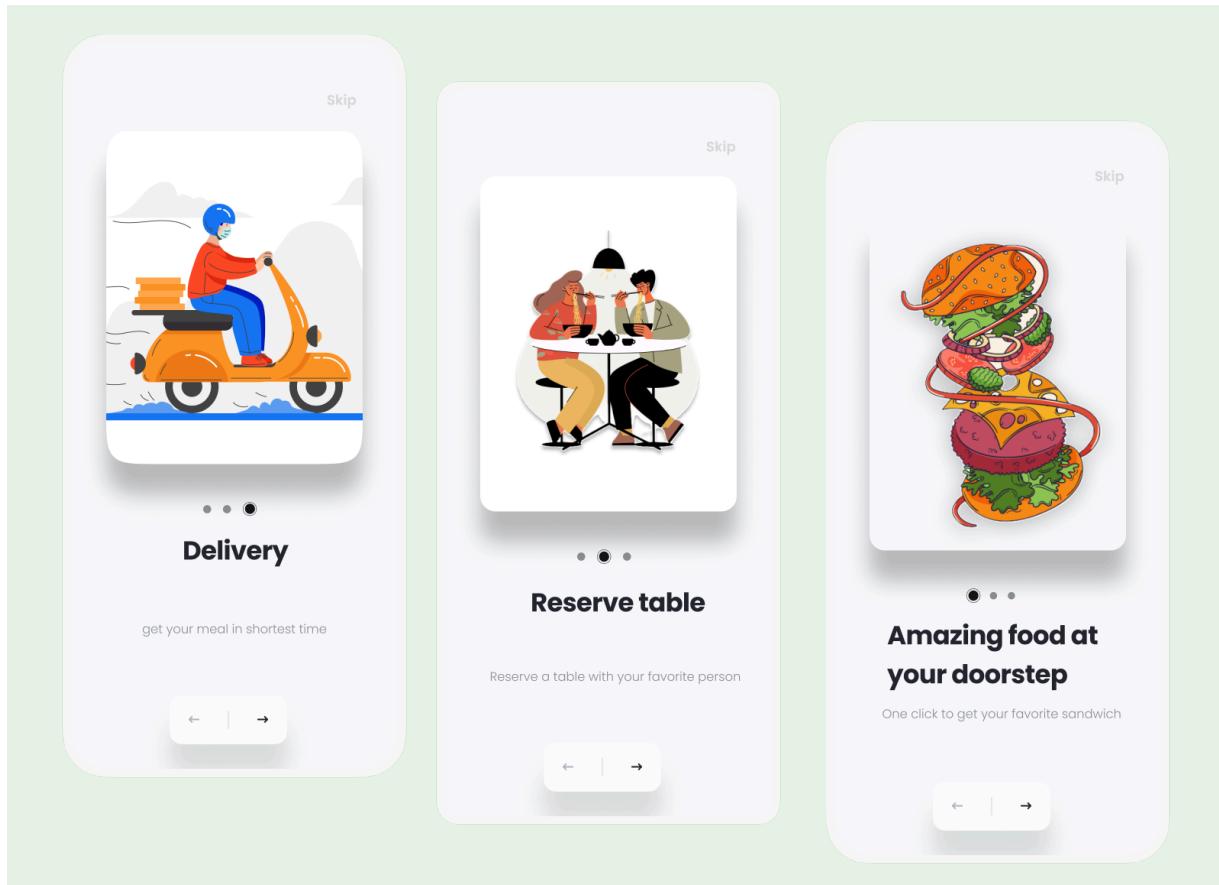
## Class diagram

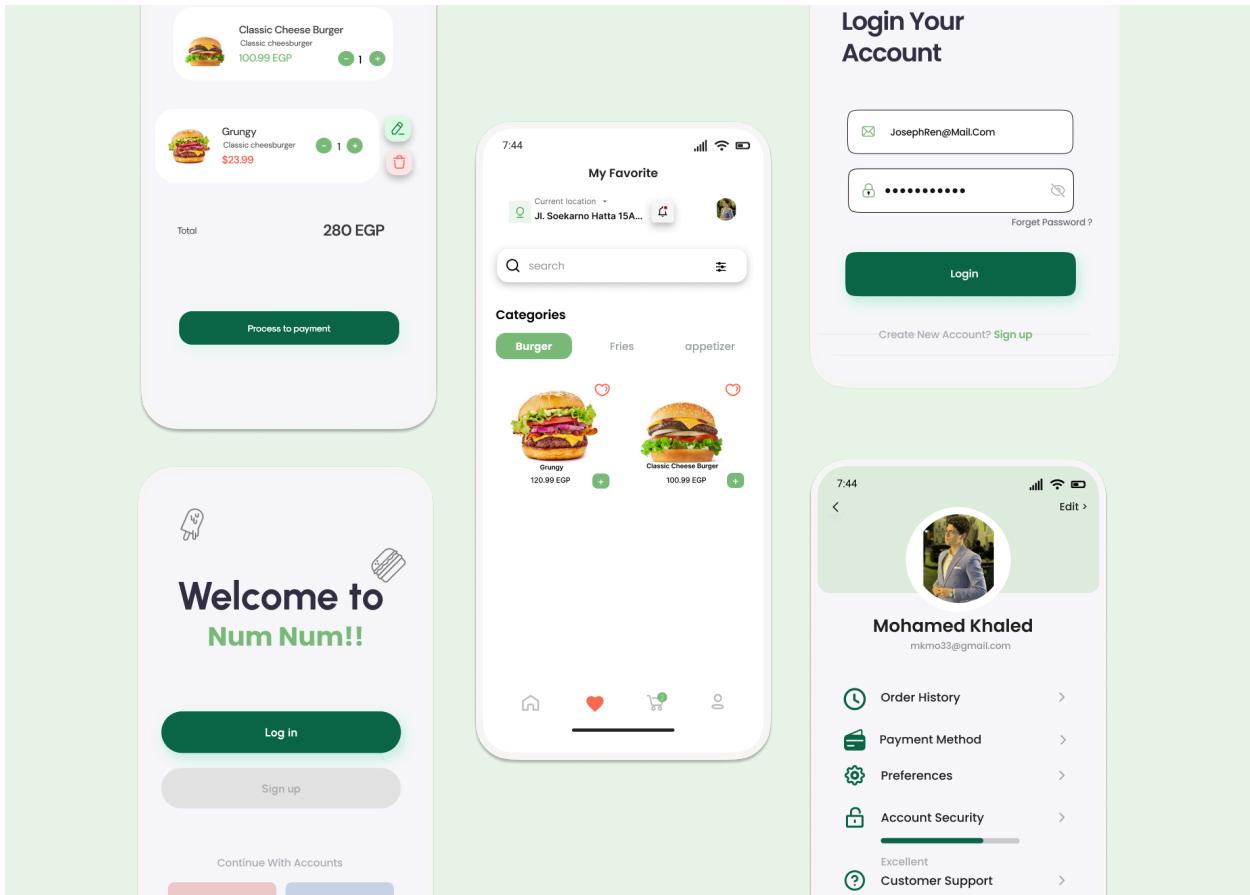


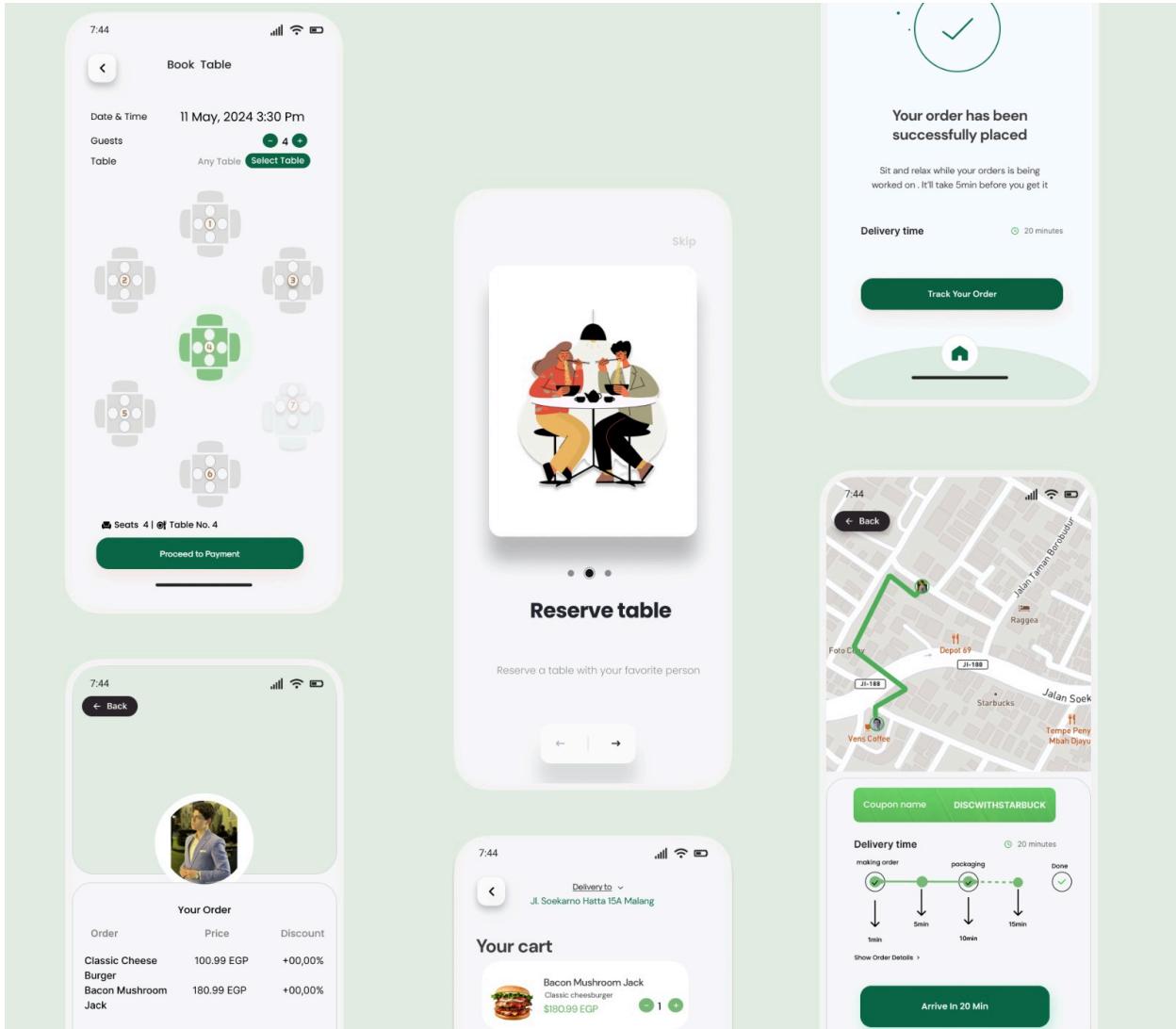
## UI Mockups:



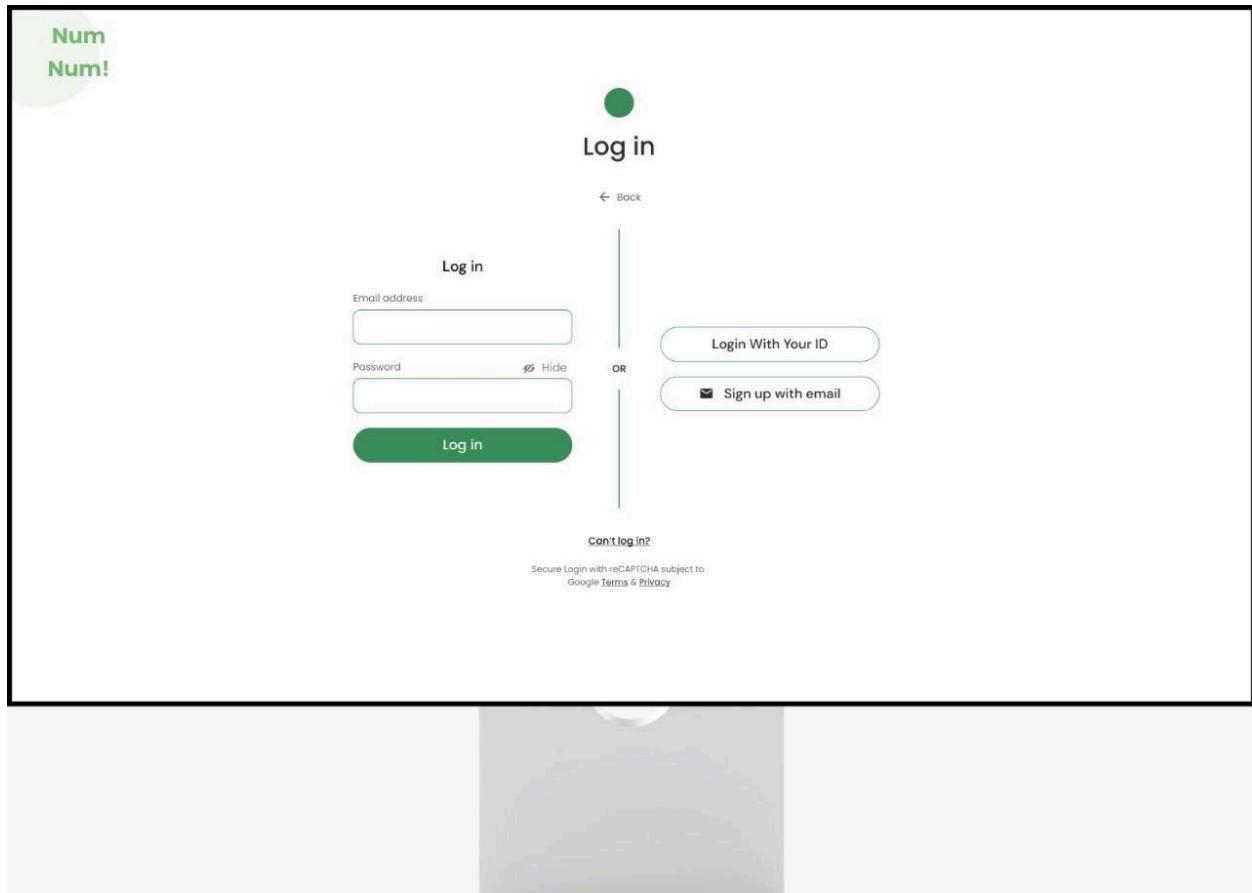








# View Demo



**Num Num!**

ID : OPD01  
Hello, Mohamed

Search (Bell icon) (User icon)

Total order Received: 5,000 (▲ 25%)

Delivered Food: 2,300 (▲ 30%)

Total Customers: 1500 (▼ 12%)

Work day: Friday | View all | 10 May, 2024

On Leave Today: Scott Kerr, Zoey Hull

Today: View all

**Staff Members** See More >

- Cheyenne Bautista - Shift Manager (S102202)
- Kendrick Green - Master chef (MC00P2)
- Pablo Roberson - Chef (C000P3)
- Karen Black - Waiter (SB3024)
- Brylee Leonard - Waiter (SB3021)

**Inventory** View all

Low in Stock: 02 item's

- Beef Meat: 90% Available: 40kg Need to order: 10kg
- Bacon Slices: 100% Available: 20kg Need to order: 3kg
- Mushrooms: 100% Available: 12kg Need to order: Full
- cheddar cheese: 100% Available: 10kg Need to order: 2kg
- Burger buns: 100% Available: 7kg Need to order: 03kg
- Lettuce: 100% Available: 3kg Need to order: 03kg
- Sauces: 100% Available: 3 Sauces Need to order: 7 Sauces

**Revenue** 250,000 EGP **Expenses** 51,000EGP

**Logger**

Orders Payments Users Staff Scheduling

Search All Pending Done Cancel

+ New Order

User	Order ID	Items	Status	Action
Tanya Leon	Order id: 745632	6 Item's	Pending	<span>View</span> <span>Invoice</span>
Brandon Oneal	Order id: 745632	1 Item's	Pending	<span>View</span> <span>Invoice</span>
Michaela Schneider	Order id: 856252	5 Item's	Pending	<span>View</span> <span>Invoice</span>
Cornelius Hopkins	Order id: 125898	3 Item's	Done	<span>View</span> <span>Invoice</span>
Talon Roberson	Order id: 635852	2 Item's	Cancel	<span>View</span> <span>Invoice</span>