NOAKHALI SCIENCE AND TECNOLOGY UNIVERSITY

SESSION: 2017-2018

PROJECT REPORT

ON

"RESTAURANT MANAGEMENT SYSTEM"

INSTITUTE OF INFORMATION TECHNOLOGY

NOAKHALI-3814

SUPERVISED BY

Tasniya Ahmed
Lecturer-IIT
NSTU-3814

SUBMITTED BY

Md. Al Adnan –MUH1825008M

Tahrim Kabir-BKH1825013F

DATE OF SUBMISSION

28-09-2021

CONTENTS

1. **Introduction** 3
2. **Software Development Life Cycle** 5
3. **Requirement Analysis** 8
4. **SYSTEM DESIGN** 10
5. **Data Definitions And Form Design** 15
6. **Software Design(User Manual)** 18
7. **Maintenance** 28
8. **Conclusion** 29
9. **Limitations** 30
10. **Future Plans** 30
11. **Reference** 30

1. Introduction

1.1 Introduction

Online Restaurant Management System is the process of ordering food from a website also booked restaurant table seat. The product can be either ready-to-eat food. The aim of developing Online Restaurant Management project is to replace the traditional way of taking orders with computerized system. Also we can booked our table easiest. Another important reason for developing this project is to prepare order summary reports quickly and in correct format at any point of time when required. Our Restaurant name is "**KHANDHANI FOODIE'S**"

Online Restaurant Management has a very lot of scope. This PHP project can be used by any restaurants or fast foods for customers for keeping their order records. This project is easy, fast and accurate. It requires less disk space. Online Restaurant Management uses MYSQL Server as backend so there is not any chance of data loss or data security. A customer can choose to have the food delivered or for pick-up. The process consists of a customer choosing the restaurant of their choice, scanning the menu items, choosing an item, and finally choosing for pick-up or delivery. Payment is then administered by paying with a credit card or debit card through the app or website or in cash at the restaurant when going to pickup. The website and app inform the customer of the food quality, duration of food preparation, and when the food is ready for pick-up or the amount of time it will take for delivery

1.2 Objective

The main objective of this system is to manage the details of item category, food, delivery address, order, delivery boys details, user's details and shopping cart. It manages all the information about item category, customer, shopping cart, item category. The project is totally built at administrative end and thus only the administrator is guaranteed the access for any changes, user's can just login there account's and enjoy there foods. The purpose is to build and application program to reduce the managing the item category, food customers. It tracks all he delivery address ordered.The following are the objectives this would bring:

- ✓ The home page of this web interfile provides an avenue where customers will be able to gather more and reliable information about our restaurant.

- ✓ The products and services offered would provide the customers with all the different categories of available products that they can choose and select from.
- ✓ This will provide a user friendly environment between the customer, delivery boy and administrator thus increasing the efficiency of the food ordering system.
- ✓ There will also be an online purchase form with which valued customers will be using to get in touch with any of their request whenever the need arises.
- ✓ It will also help for easy retrieval of orders made by the customers.

1.3 Needs of Online Restaurant Management System

Helps customer to order their food at any time. The customers will be able to order their favorite dishes at any point of time, and as we have pointed out earlier, that time is a minimal option, and restaurants must have a specified system through which they can serve a huge number of customers while making their work smoother. Khandani Foodies is one of the best platforms which provides all of these platforms along with numerous innovative features which has turned countless small and large businesses into an inspiring leader in the online marketplace.

1.4 Scope of the project

In this project, a Online restaurant is designed to enable customers order for food, can booked table and get it delivered accordingly and also to reduce the long queues of customers at the counter ordering for food and to reduce the work lord on the employees. The following things are among other things that are discussed and what the website would handle:

- ✓ About KHANDHANI FOODIE'S
- ✓ The food and the services offered there
- ✓ Online purchase
- ✓ Type of food provided

1.5 Overview of Document

In **chapter 1** we talk about basic things of our project report, what is online restaurant management system, scope of this project, objective of this document etc. we also give an overall preview of this document in this chapter.

In **Chapter 2** we describe how we analysis the system model, which model we follow to do this project. According to the software development life cycle we follow the waterfall model for

complete our project.

In **Chapter 3** we describe the requirements gathering procedure and its constraints. Methodological explanation of the project battered near peripheral viewers. This section includes information such as data requirements, functional requirements and an over-all narrative of the system and its interaction with users from the perspective of the customer.

In **Chapter 4** we describe the system design parts designed by unified model language, we fully document this part to understand easily for the users.

In **Chapter 5** we discuss and give some tables structures and screenshots of our system for the form design and helps customer to use this system easily.

In **Chapter 6** we describe the maintenance procedure of this project. We also discuss about the activities and problem phases of maintenance.

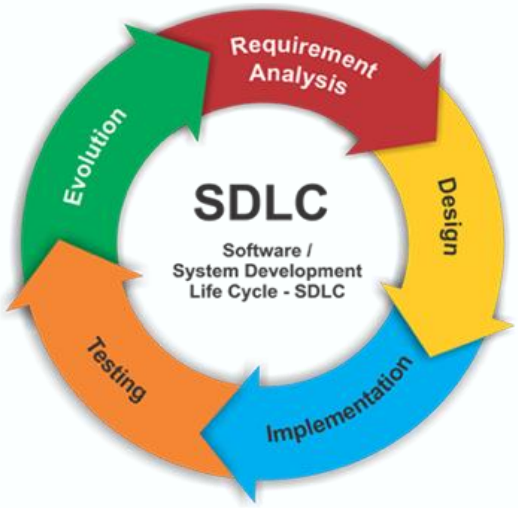
In **Chapter 7** Provide live screenshot's of this project.

Finally at the end in **Chapter 8** we give the conclusion of this document and talk about limitations and future plans what we will implement in future we hope so

2. Software Development Life Cycle

1. SDLC

The software industry includes many different processes, for example, analysis, development, maintenance and publication of software. This industry also includes software services, such as training, documentation, and consulting. Our focus here about software development life cycle (SDLC). So, due to that different types of projects have different requirements. Therefore, it may be required to choose the SDLC phases according to the specific needs of the project. These different requirements and needs give us various software development approaches to choose from during software implementation



2. Waterfall Model Design

As Waterfall Model is more traditional and easy to gather requirements and analyzing system, so we choose this model according to complete this project. This technique works well for big projects that may take numerous months to progress.

The Waterfall Model was first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases. Waterfall model is the earliest SDLC approach that was used for software development .The waterfall Model illustrates the software development process in a linear sequential flow; hence it is also referred to as a linear-sequential life cycle model. This means that any phase in the development process begins only if the previous phase is complete. In waterfall model phases do not overlap. Waterfall approach was first SDLC Model to be used widely in Software Engineering to ensure success of the project. In "The Waterfall" approach, the whole process of software development is divided into separate phases. In Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially. Following is a diagrammatic representation of different phases of waterfall model

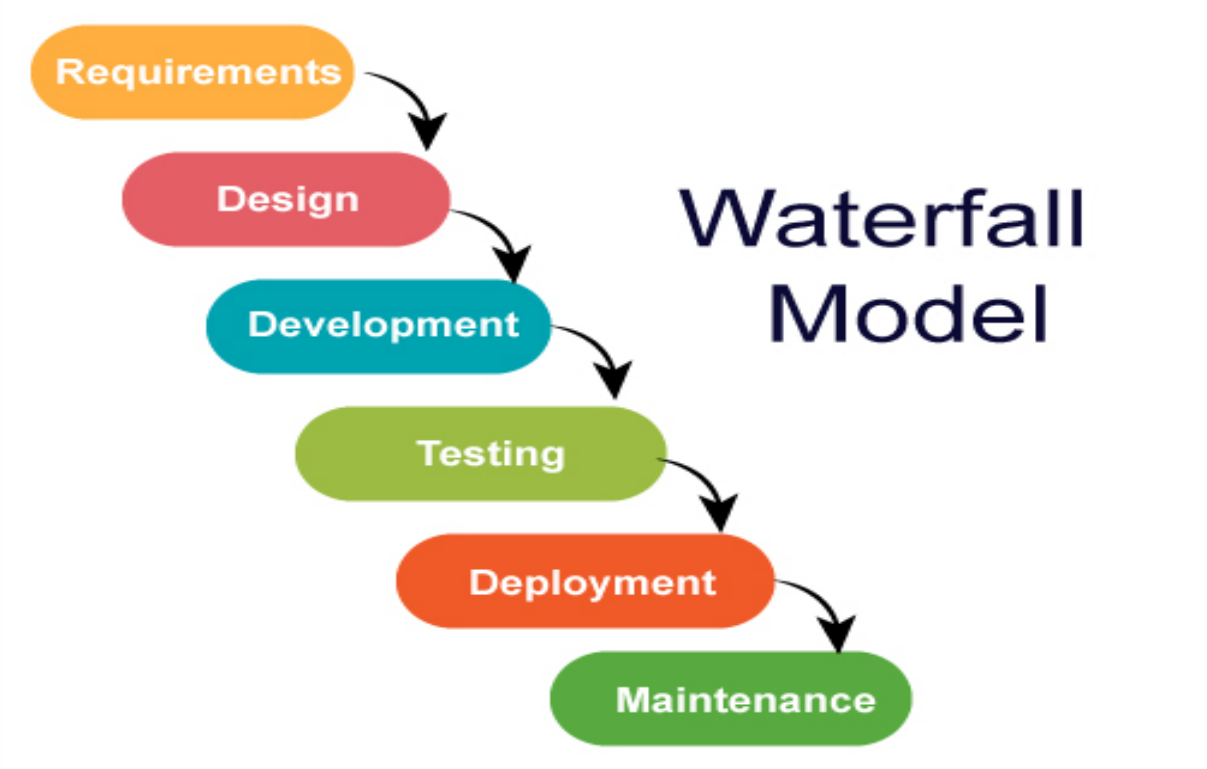


Figure 2.Waterfall Model

3. Waterfall Model Phases

The sequential phases in Waterfall model are:

1.Requirement Gathering and analysis: All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.

2. System Design: The requirement specifications from first phase are studied in this phase and system design is prepared. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture.

3.Implementation: With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.

4.Integration and Testing: All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

5.Deployment of system: Once the functional and non-functional testing is done, the product is deployed in the customer environment or released into the market.

6.Maintenance: There are some issues which come up in the client environment. To fix those

issues patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

All these phases are cascaded to each other in which progress is seen as flowing steadily downwards (like a waterfall) through the phases. The next phase is started only after the defined set of goals are achieved for previous phase and it is signed off, so the name "Waterfall Model". In this model phases do not overlap.

3. Requirement Analysis

1. What is Requirement Analysis?

Requirements analysis in systems engineering and software engineering, encompasses those tasks that go into determining the needs or conditions to meet for a new or altered product or project, taking account of the possibly conflicting requirements of the various stakeholders, analyzing,documenting,validating and managing software or system requirements. Requirements analysis is critical to the success or failure of a systems or software project. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design.

2. System Requirements:

Our system can be used in windows XP, windows 7, and windows 8 with 32 bit, and 64 bit operating system and also supported for other platform such as Linux OS X.

- ✓ For Windows XP based computers, a 486 / 66 MHz or higher processor with 8 MB.
- ✓ For Windows 7 and Windows 8 based computers, higher processor with 2 GB ram.

3. Software Requirements:

- ✓ **Web server software:** Apache Tomcat, Xampp.
- ✓ **Tools:** Atoms
- ✓ **Server side scripting tool:** PHP-5.6.
- ✓ **Database tools:** MYSQL DBMS.
- ✓ **Compatible operating system:** Windows, Mac,Android.
- ✓ **Front end design tool:** Html5, CSS3, Java script, Bootstrap, J Query.
- ✓ **Software tools:** Revolution Slider

4. Hardware Requirements:

- ✓ Hardware recommend by all the software needed.

- ✓ **RAM:** 256MB or more
- ✓ **Hard Drive:** 10 GB or more
- ✓ Communication hardware to serve client request

5. User Requirements:

To deliver the best service to the users we tried to find out the users necessities which are below:

1. Administrator Aspect:

- ✓ Monitoring the whole system from admin panel.
- ✓ Taking back up of the database.
- ✓ Creating, deleting and modifying the records.
- ✓ Add users for the admin panel.
- ✓ Keeping the customer's record like their details.
- ✓ Organizing their member registration system.
- ✓ Approve the notice to post.
- ✓ Monitoring the transaction system.
- ✓ Monitoring the customer's review.
- ✓ Monitoring delivery boy.
- ✓ Monitoring

2. Customer Aspect:

- ✓ Signing in and signing up to the system.
- ✓ Changing their password.
- ✓ Resetting forgot password.
- ✓ Order Food
- ✓ Track delivery Boy.

3. Delivery Boy Aspect

- ✓ Signing in and signing up to the system.
- ✓ Changing their password.
- ✓ Resetting forgot password.
- ✓ Share Location
- ✓ Manage Current Assign Order.

6. Functional Requirements

In Software engineering and systems engineering, a functional requirement defines a function of

a system or its component. A function is described as a set of inputs, the behavior, and outputs. Functional requirements may be calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish.Behavioural requirements describing all the cases where the system uses the functional requirements are captured in use cases. Functional requirements are supported by non-functional requirements (also known as quality requirements), which impose constraints on the design or implementation (such as performance requirements, security, or reliability). Generally, functional requirements are expressed in the form "system must do ", while non-functional requirements are "system shall be ". The plan for implementing functional requirements is detailed in the system design. The plan for implementing non-functional requirements is detailed in the system architecture. As defined in requirements engineering, functional requirements specify particular results of a system. This should be contrasted with non-functional requirements which specify overall characteristics such as cost and reliability. Functional requirements drive the application architecture of a system, while non-functional requirements drive the technical architecture of a system .

7. Non-functional Requirements

In systems engineering and requirements engineering, a non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. They are contrasted with functional requirements that define specific behavior or functions. The plan for implementing functional requirements is detailed in the system design. The plan for implementing non-functional requirements is detailed in the system architecture, because they are usually Architecturally Significant Requirements.

4.SYSTEM DESIGN

1. Use-Case Diagram for Online Restaurant Management System

In software and systems engineering, a use case is a list of actions or event steps, typically defining the interactions between a role and a system, to achieve a goal.

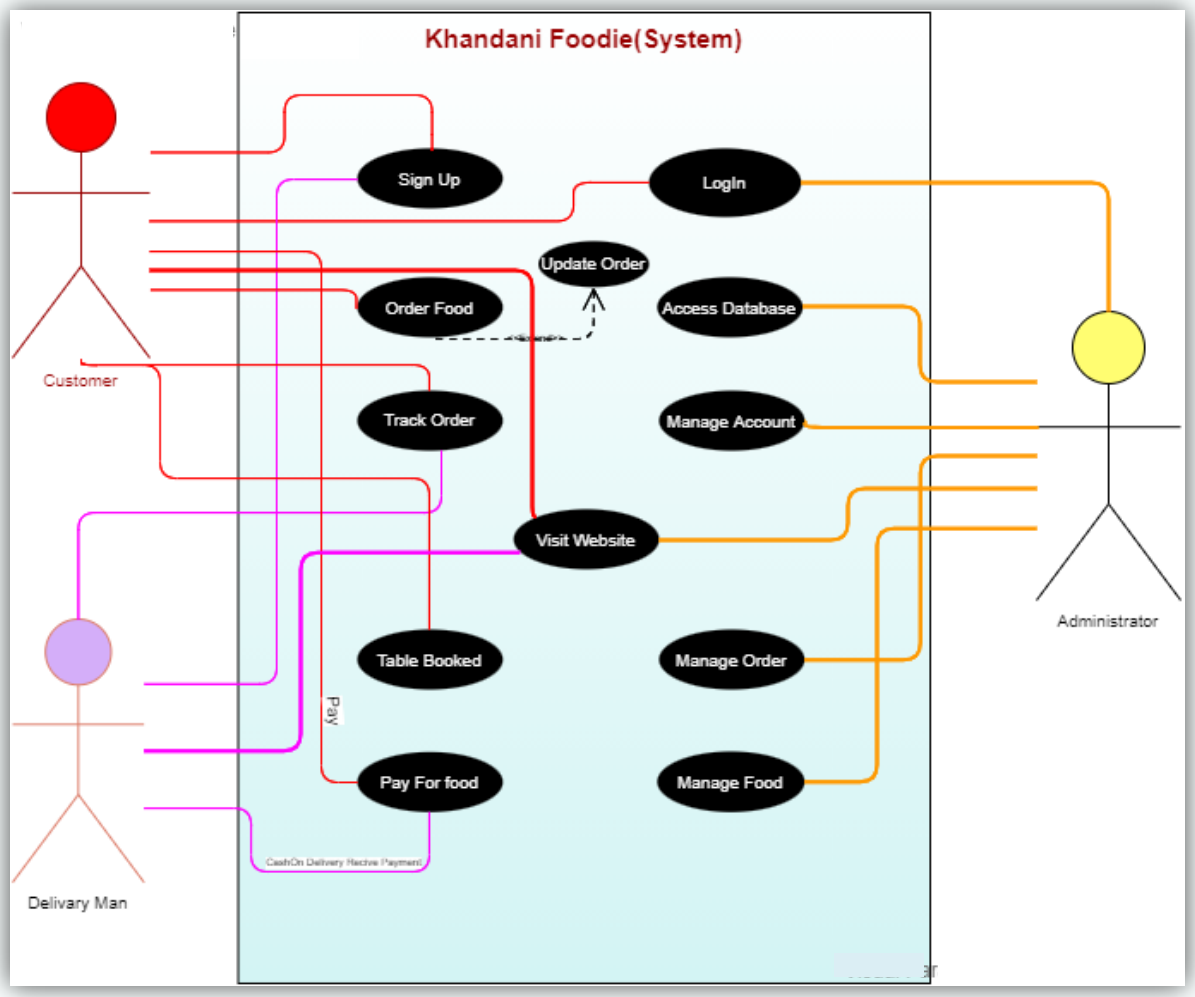


Figure : Use Case Diagram For Restaurant Management System

2. Class Diagram of Online Restaurant Management System

A class diagram is a diagram used in designing and modeling software to describe classes and their relationships. ... The diagram shows the names and attributes of the classes, connections between the classes, and sometimes also the methods of the classes.

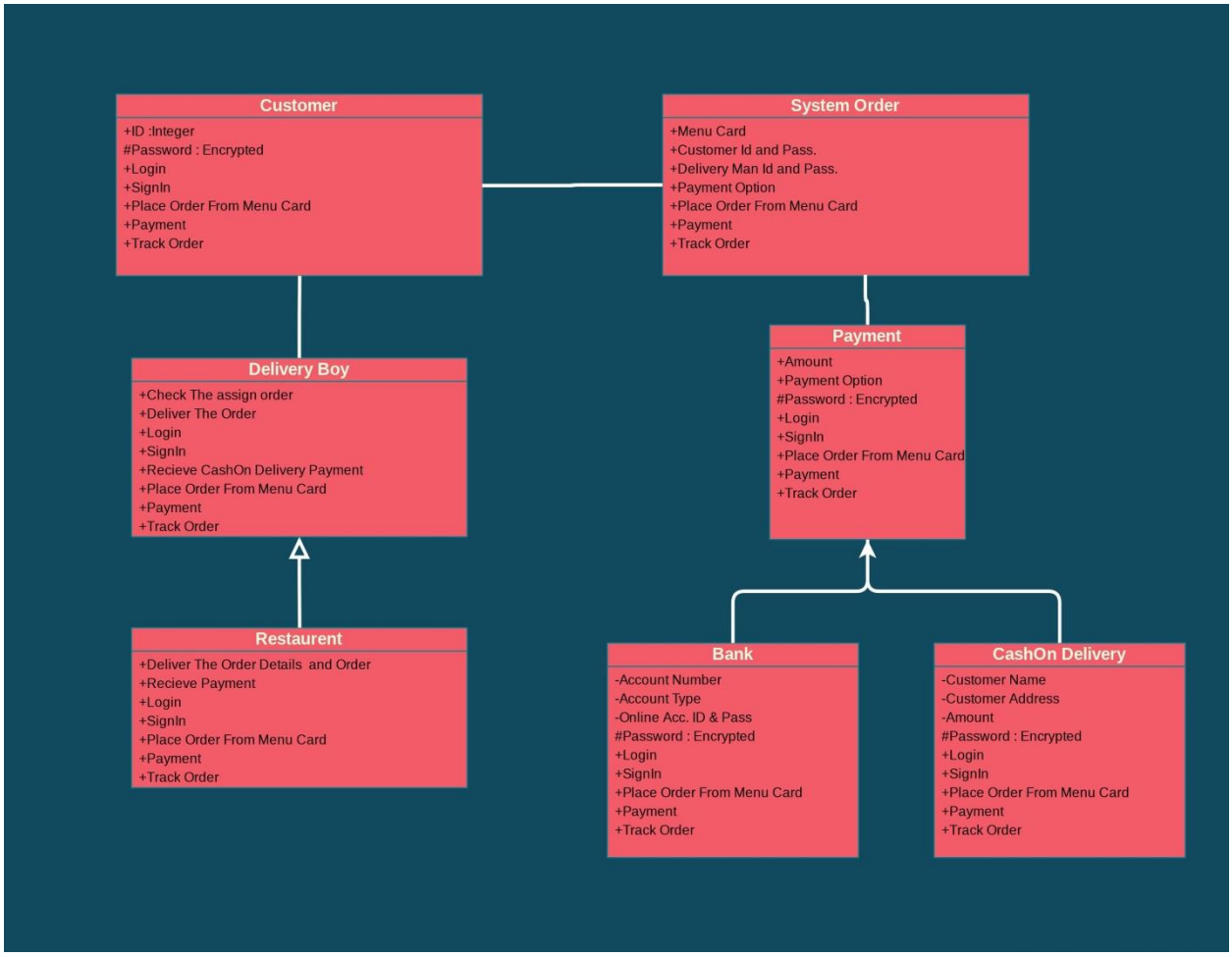


Figure: Class Diagram of Online Restaurant Management System

3. Sequence Diagram

A Sequence diagram is an interaction diagram that shows how objects operate with one another and in what order. It is a construct of a message sequence chart. A sequence diagram shows object interactions arranged in time sequence

1. Sequence Diagram for Customer

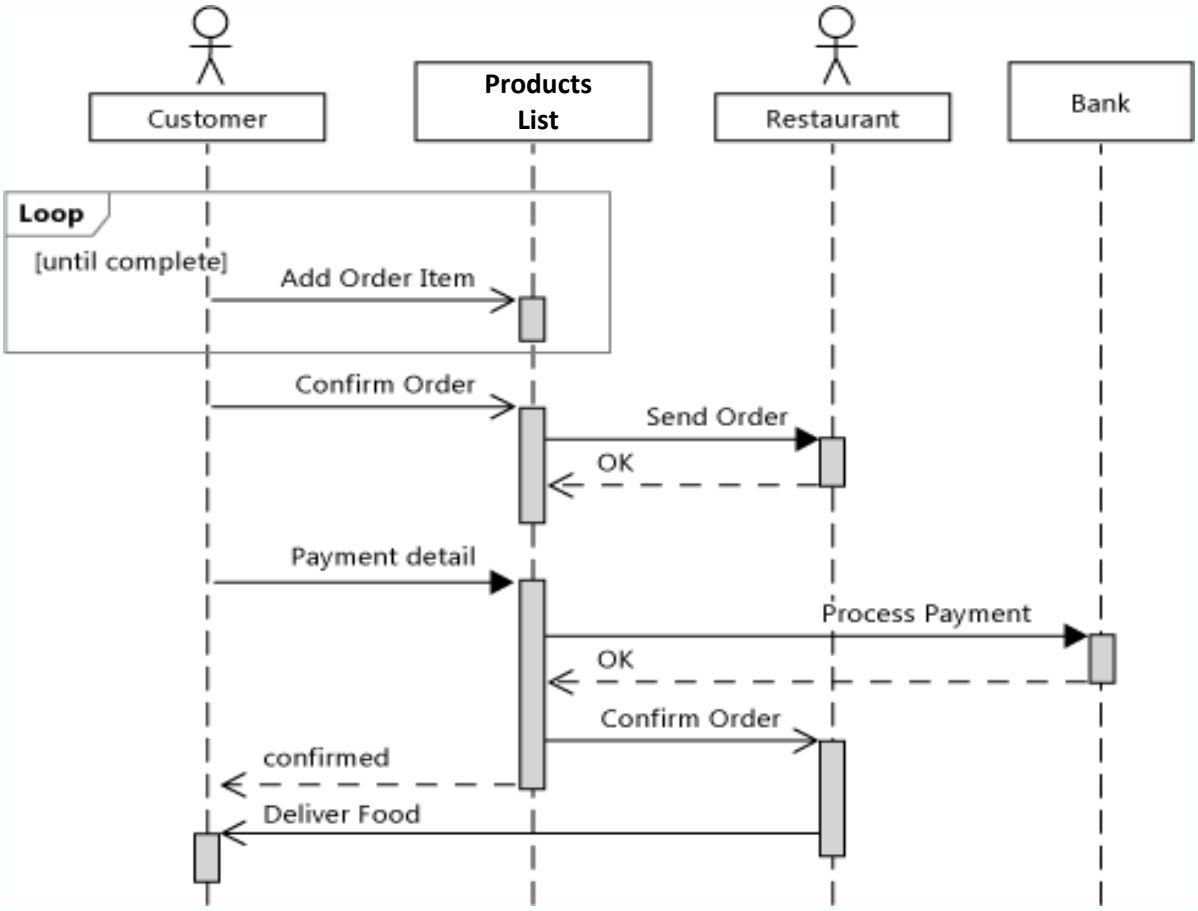


Figure :Sequence Diagram for Customer

4. Entity-Relationship Model

An entity-relationship diagram (ERD) is a data modelling technique that graphically illustrates an information system's entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure.

1. Entity-Relational Diagram for Online Restaurant Management System

An entity-relationship diagram (ERD) is a data modeling technique that graphically illustrates an information system's entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure

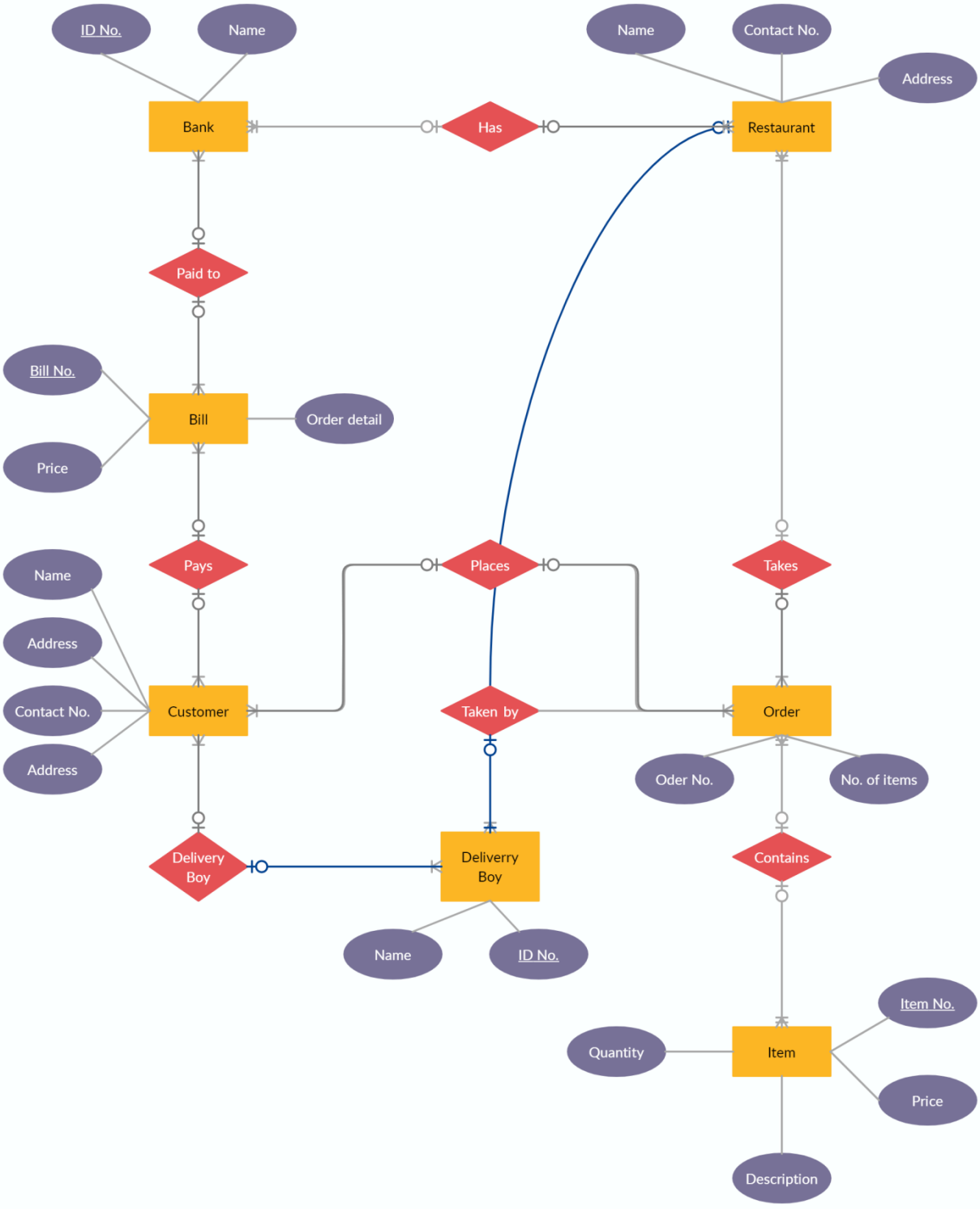


Figure: Entity-Relational Diagram for Online Restaurant Management System

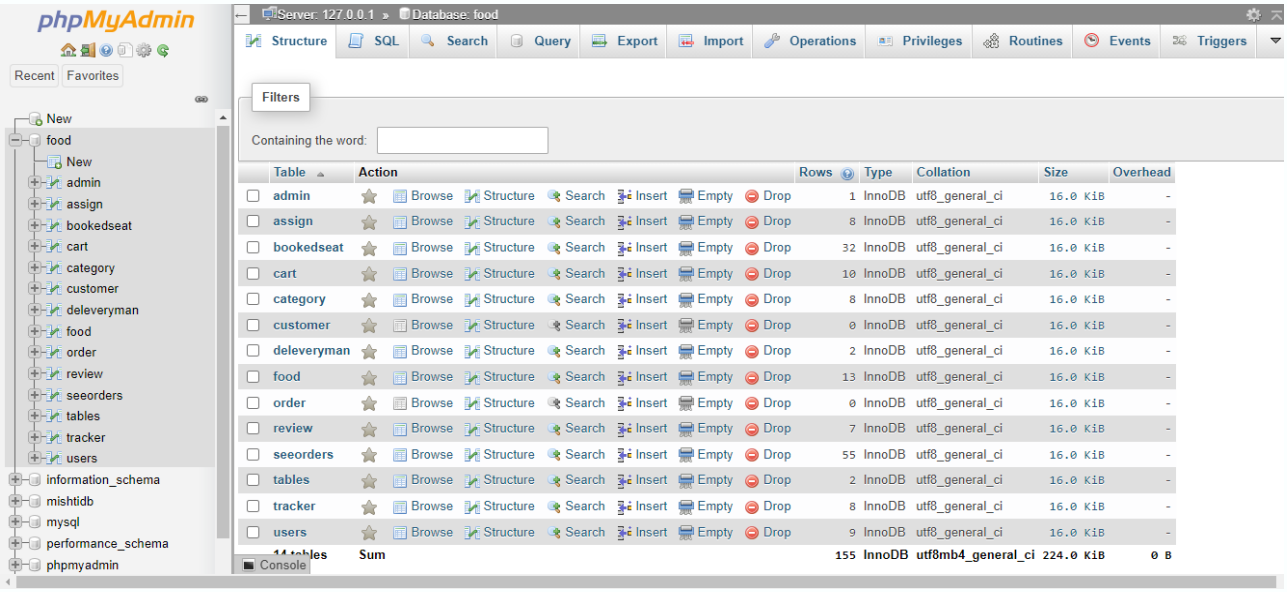
5. Data Definitions And Form Design

1. Data Definition

This section describes the tables those are used in the online restaurant management system.

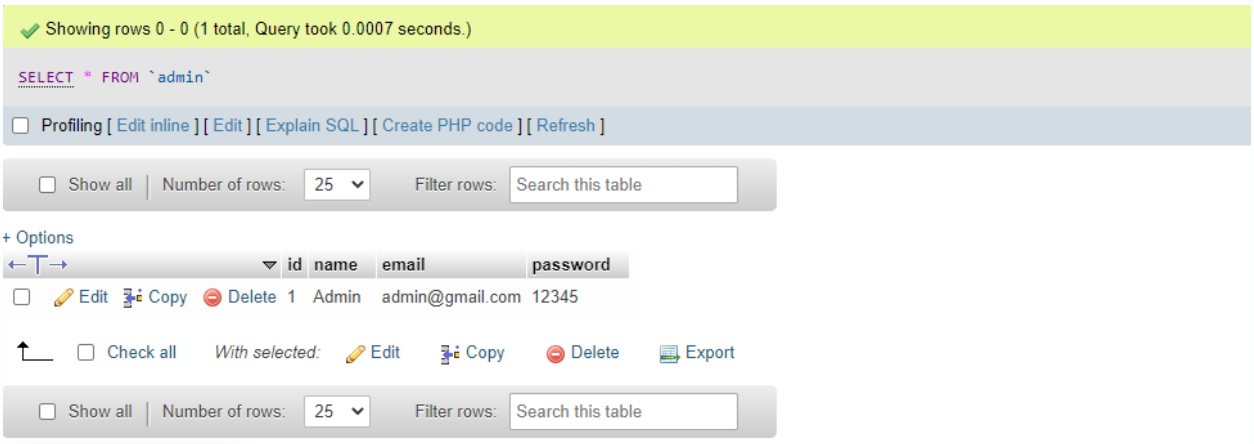
In this Section We Show Database Restaurant Online Management System Table.

2. Table Structure For Full Database

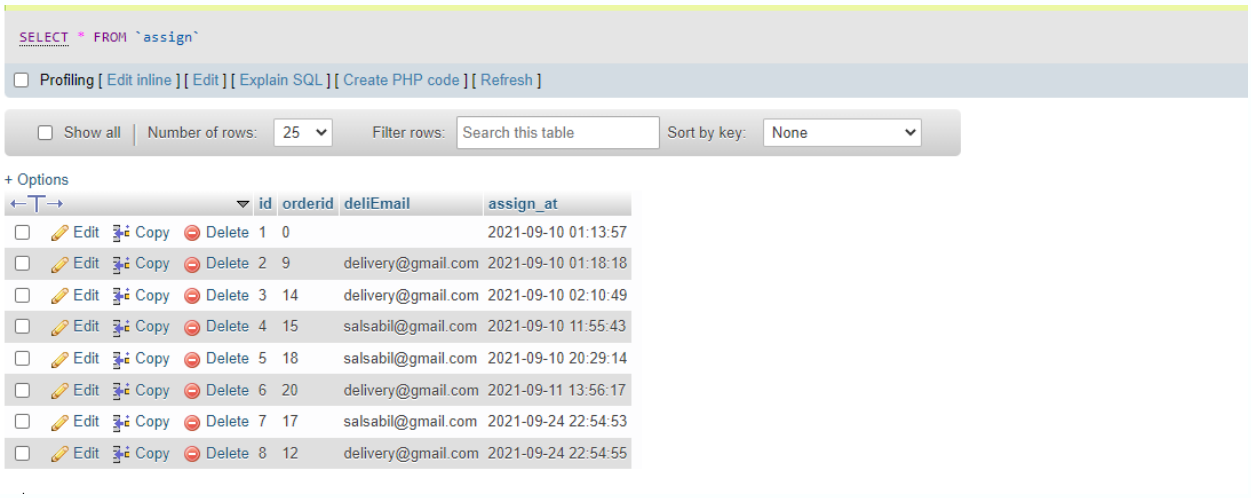


Here all our data stored.

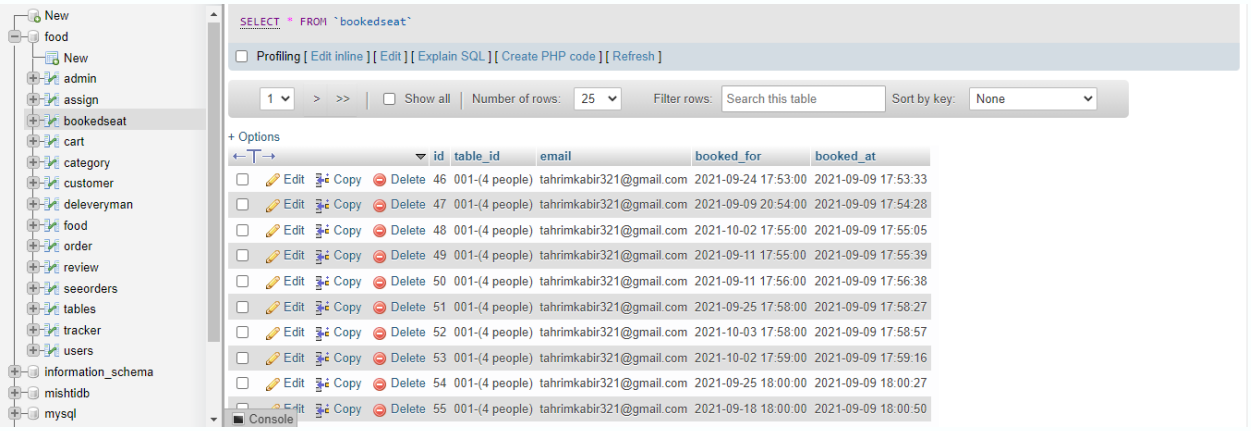
3. Table Structure For Admin Data



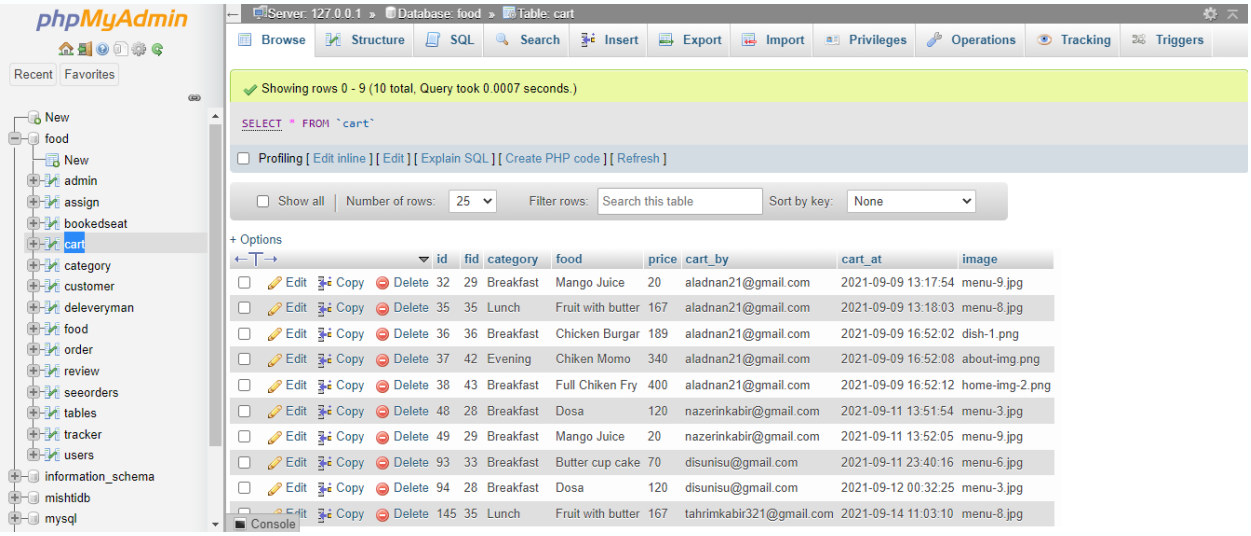
4. Table Structure For Assign Delivery Boy



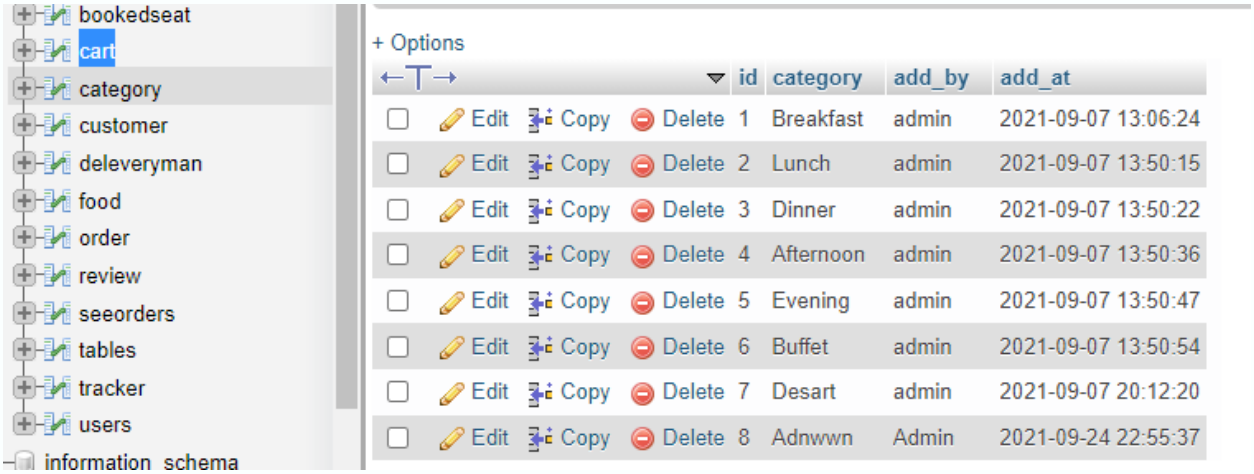
5. Table Structure For Booked Table Seat



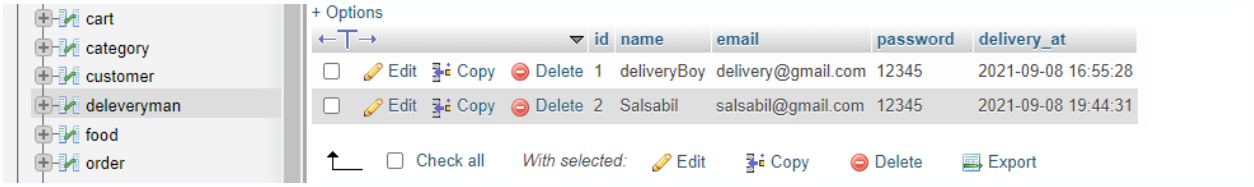
6. Table Structure For Adding Cart



7. Table Structure For Food Category

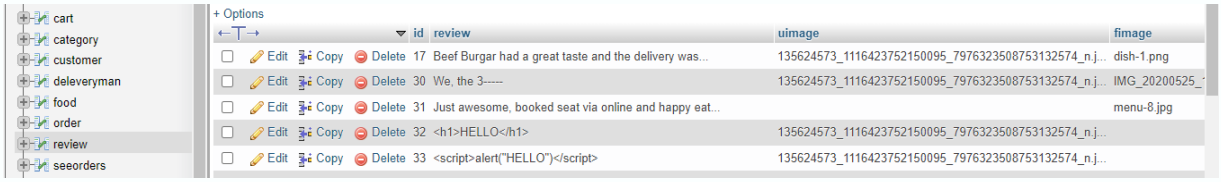


8. Table Structure For Delivery Boy Info

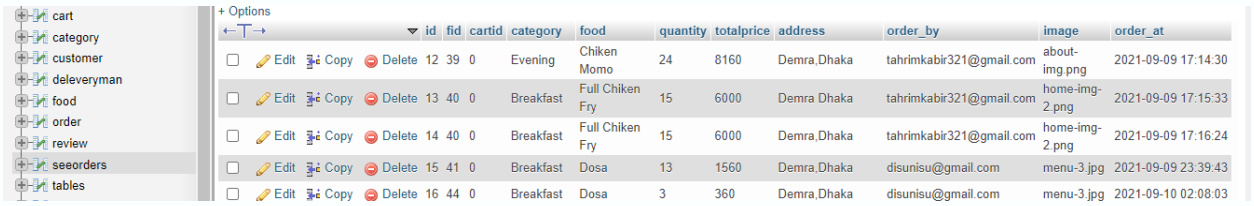


9. Table Structure For Types Of Food

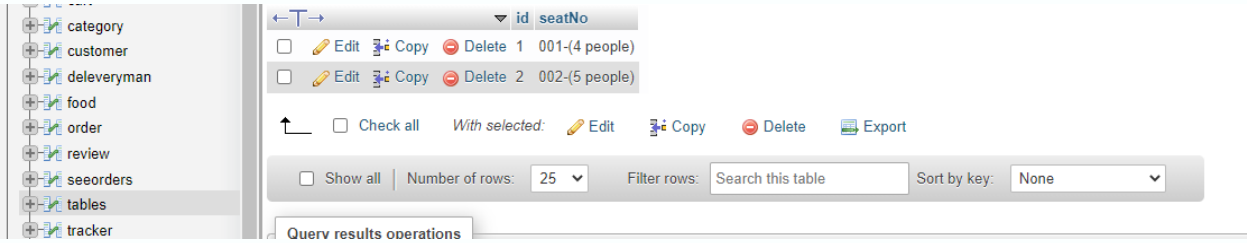
10. Table Structure For Customer Review Collection



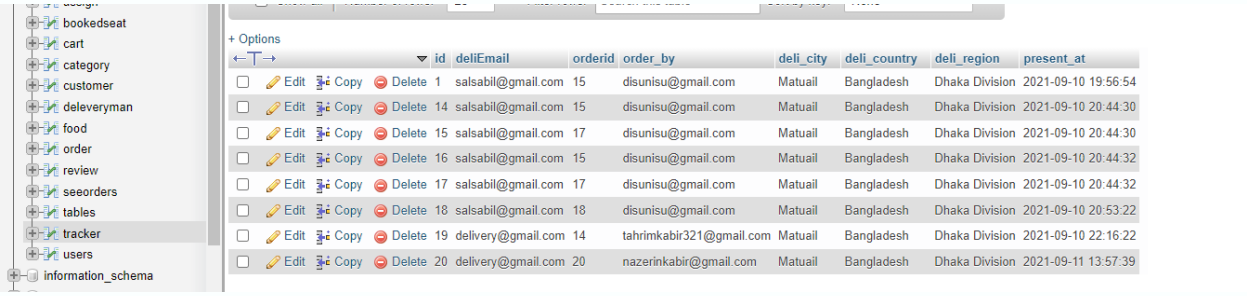
11. Table Structure For See Orders



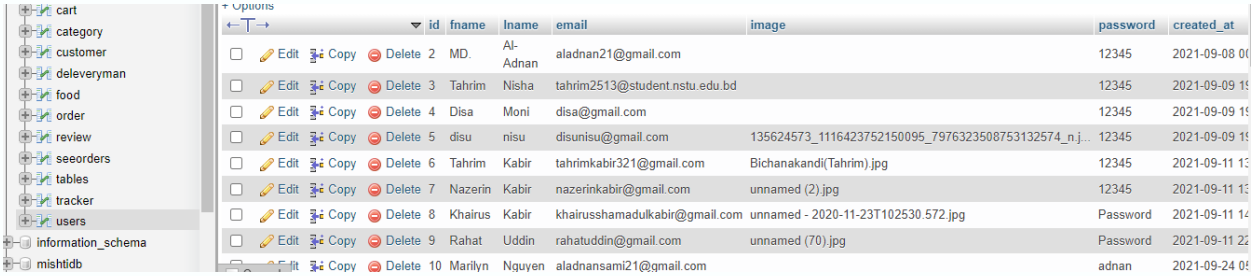
12. Table Structure For Booked Table Seat



13. Table Structure For Tracking Customer Location



14. Table Structure For All Customer



6. Software Design(User Manual)

1. Structure of the project

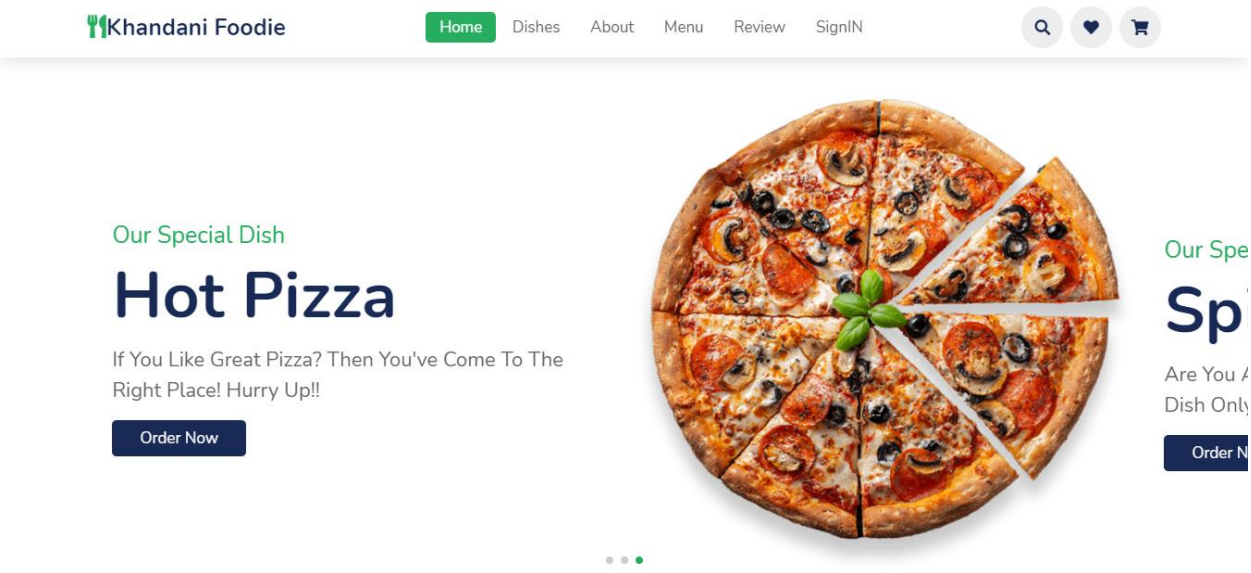
- **Before Login**
  - ✓ Home
  - ✓ Dishes
  - ✓ Menu
  - ✓ Review
  - ✓ Order
  - ✓ Sign IN
  - ✓ Cart

- **After Admin Login**
  - ✓ Add Category
  - ✓ Add Food
  - ✓ Booked Seat
  - ✓ Add Delivery Man
  - ✓ Assign Delivery
  - ✓ Log Out
- **After Customer Login**
  - ✓ Track Your Order
  - ✓ Menu
  - ✓ Book Seat
  - ✓ Review
  - ✓ Cart
  - ✓ Sign Out
- **After Delivery Man Login**
  - ✓ Order's To Deliver
  - ✓ Track me
  - ✓ Sign Out

2. User manual of the project

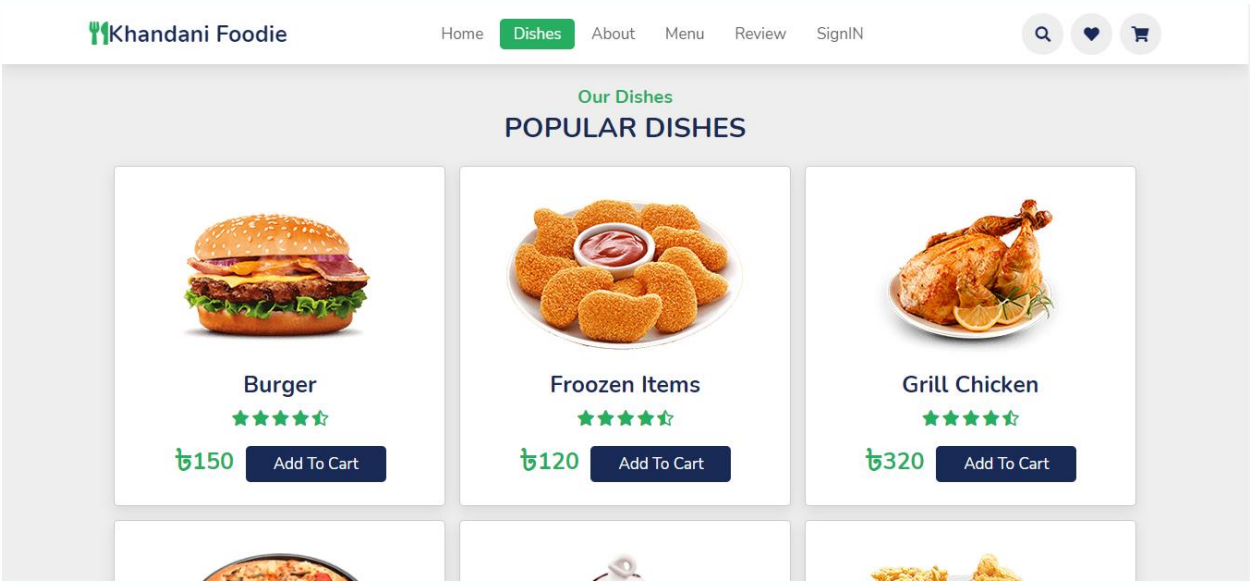
1. Home page

A home page or a start page is the initial or main web page of a website or a browser. The initial page of a website is sometimes called main page as well. Every person can see this page even when someone doesn't login.



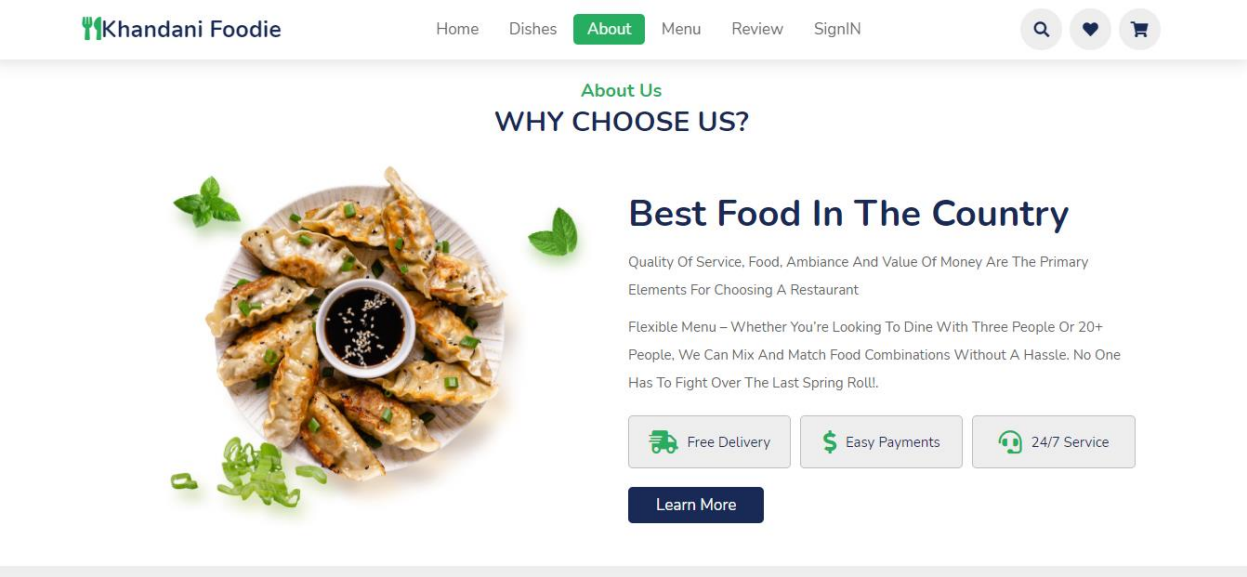
2. Dishes

Here all person can see our today's popular dishes. Also can order our popular dishes.



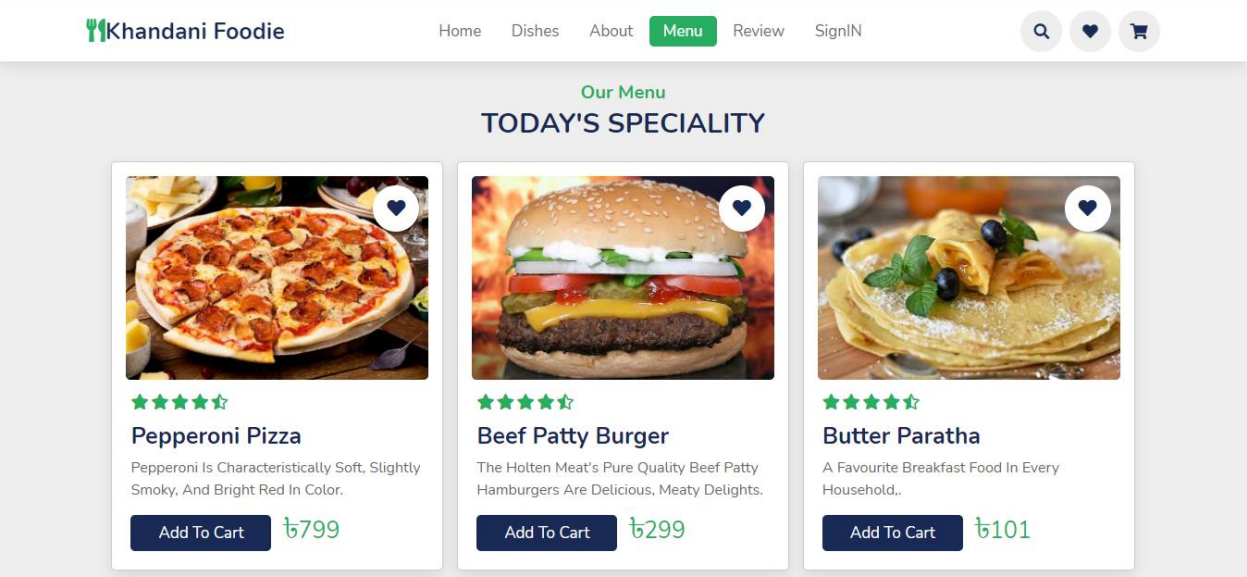
3. About Us

About Us pages should provide information about the Restaurant.



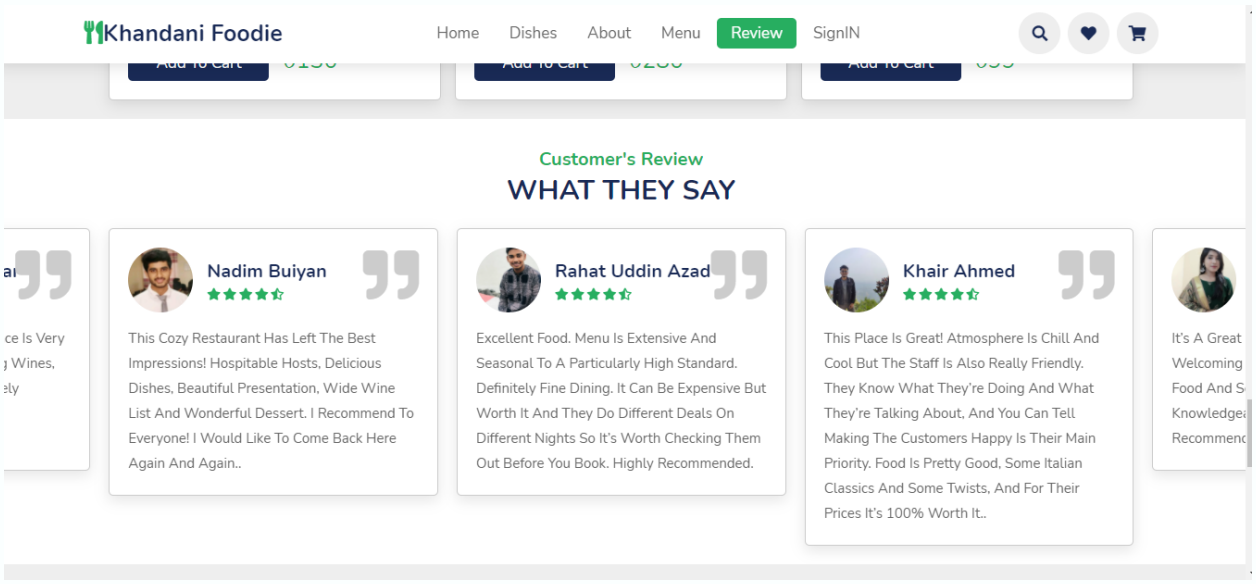
4. Menu

Menu section should provide information about the Today's menu of our restaurant.



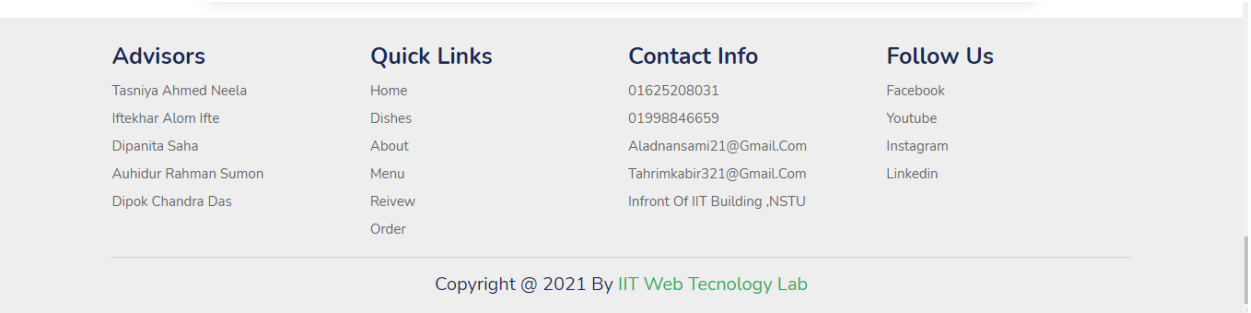
5. Review

This section is our ex customer review part. They can usually feedback their experience.



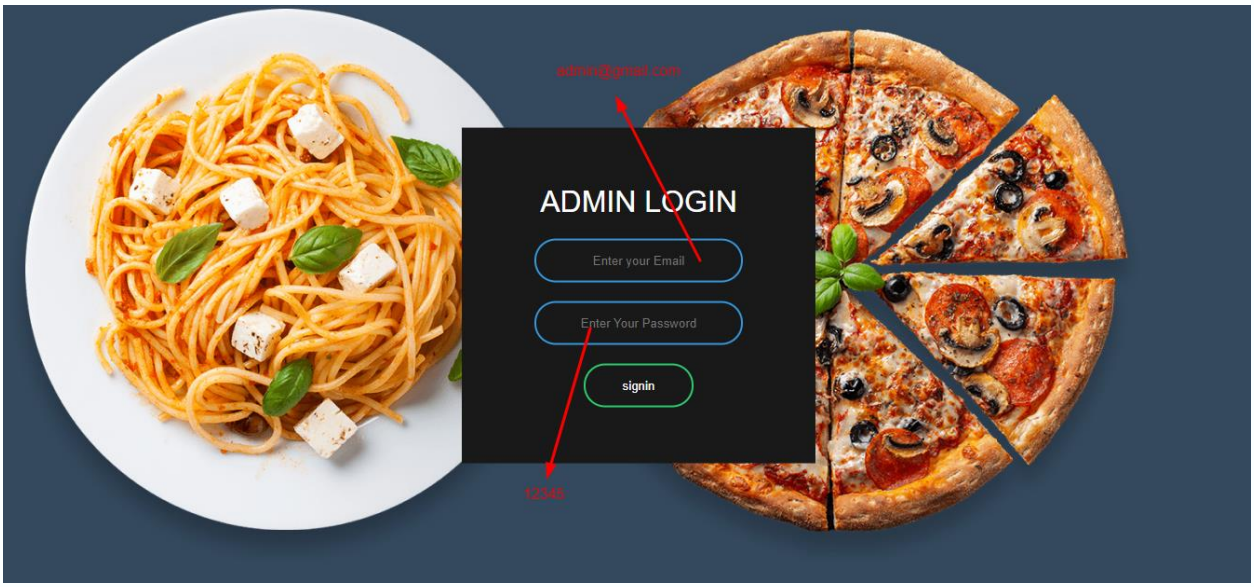
6. Footer Section

In our footer section, Everyone can see our pages social media link, contact us information and also see our respected advisors.



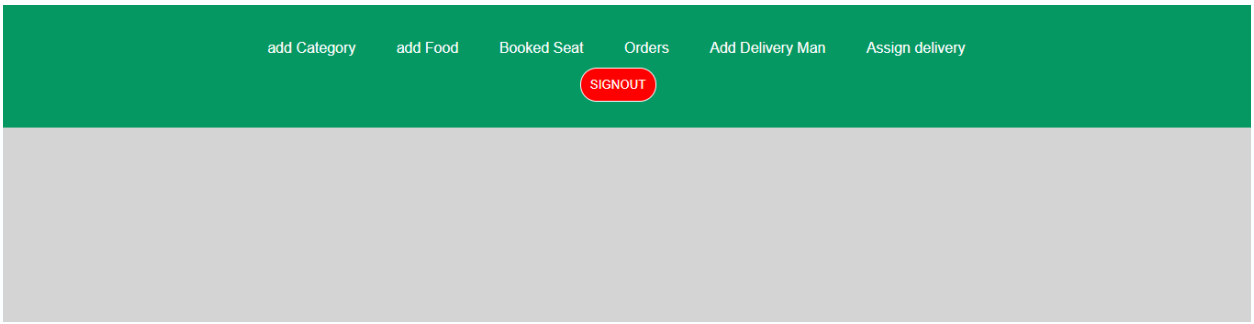
7. Admin Login

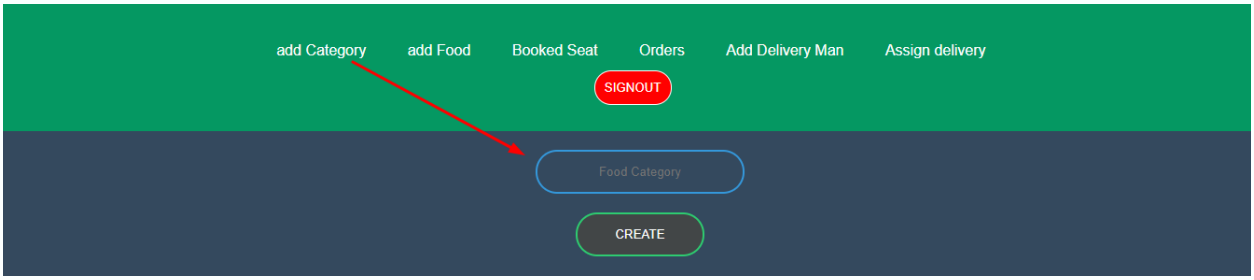
When Admin log in to the system they use separate link, like office.php , when admin enter the link they see form, where the input there user email and password and enter the system.

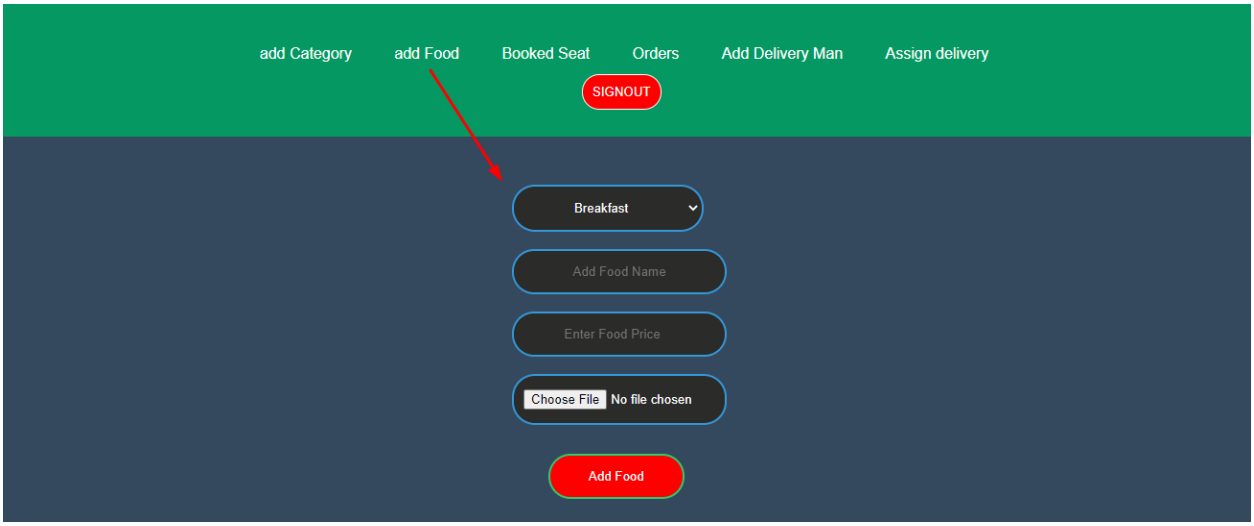


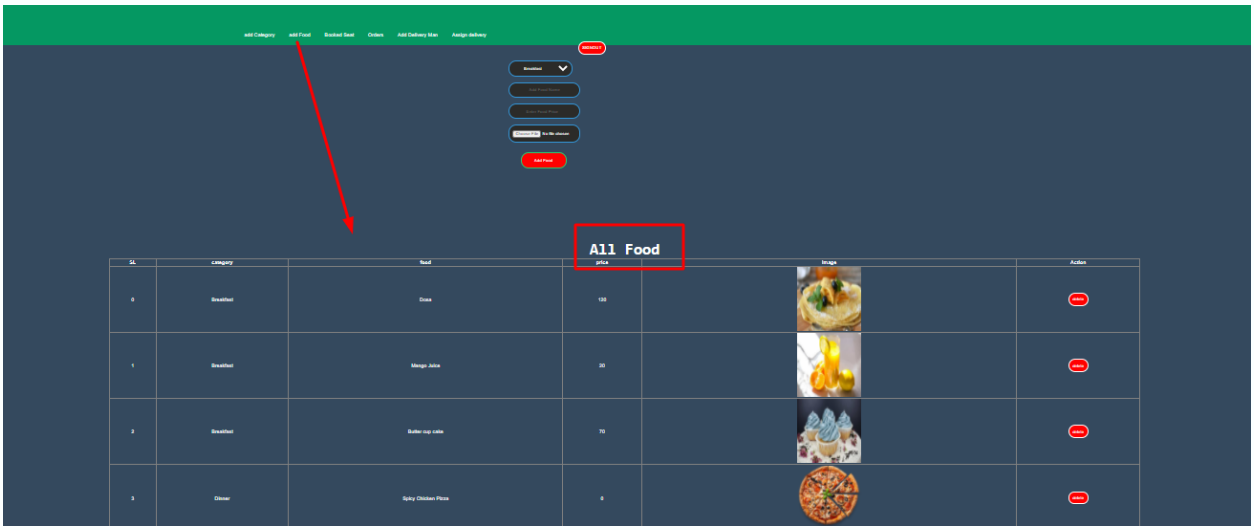
8.**Admin Interface**

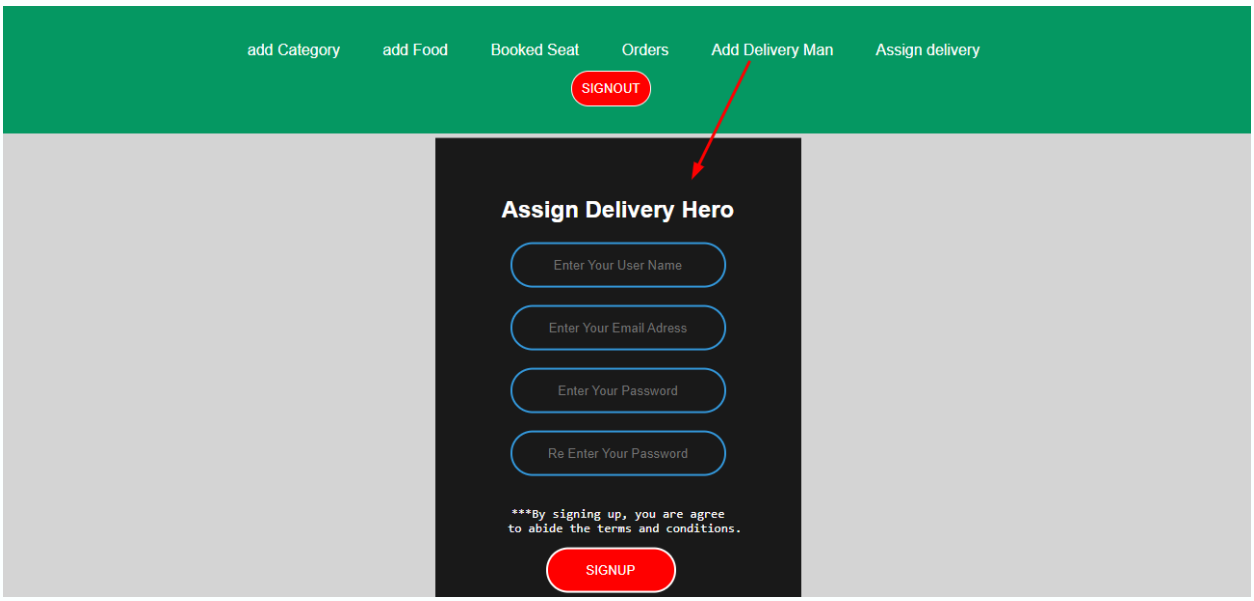
When Admin Log into there interface they can manage whole system, they can add food category, Update menu card , order list, booked seat list. Also Assign Delivery Man For his Specific Task.

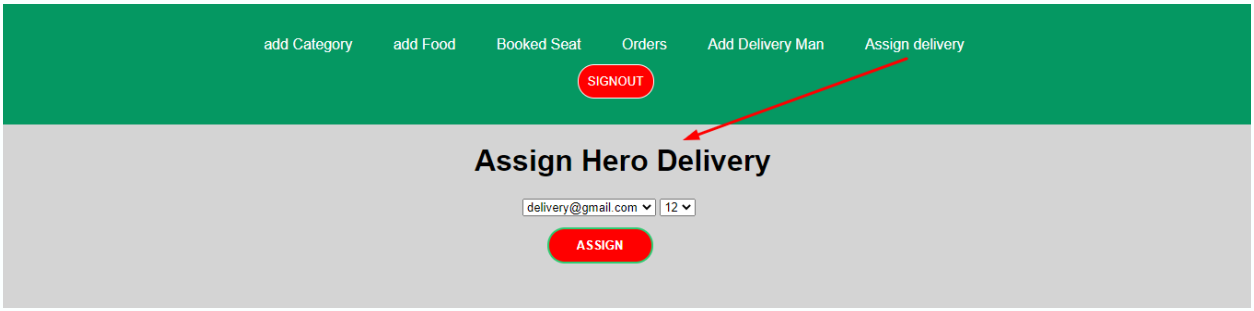


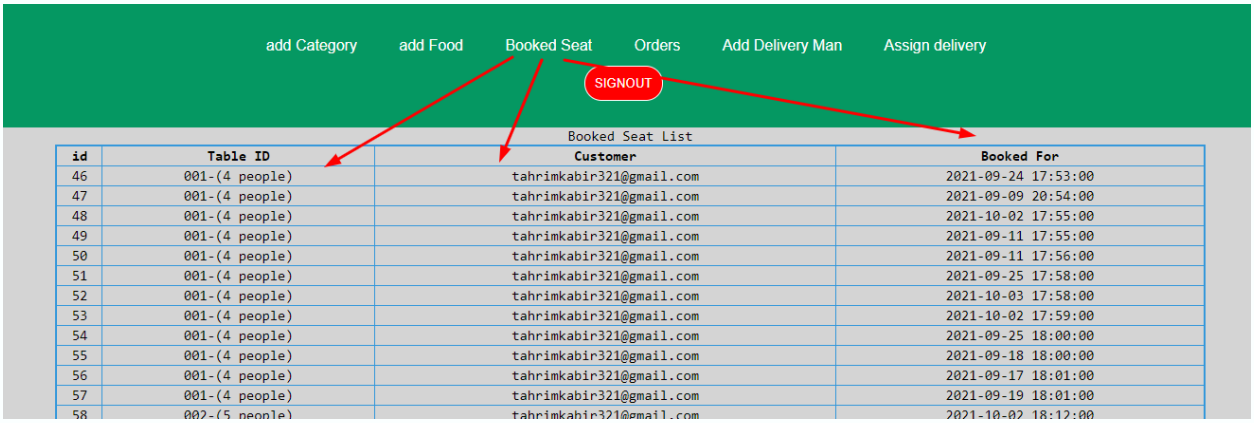



add Category
add Food
Booked Seat
Orders
Add Delivery Man
Assign delivery
SIGNOUT
Breakfast
Add Food Name
Enter Food Price
Choose File
No file chosen
Add Food


All Food


add Category
add Food
Booked Seat
Orders
Add Delivery Man
Assign delivery
SIGNOUT
Assign Delivery Hero
Enter Your User Name
Enter Your Email Adress
Enter Your Password
Re Enter Your Password
***By signing up, you are agree
to abide the terms and conditions.
SIGNUP

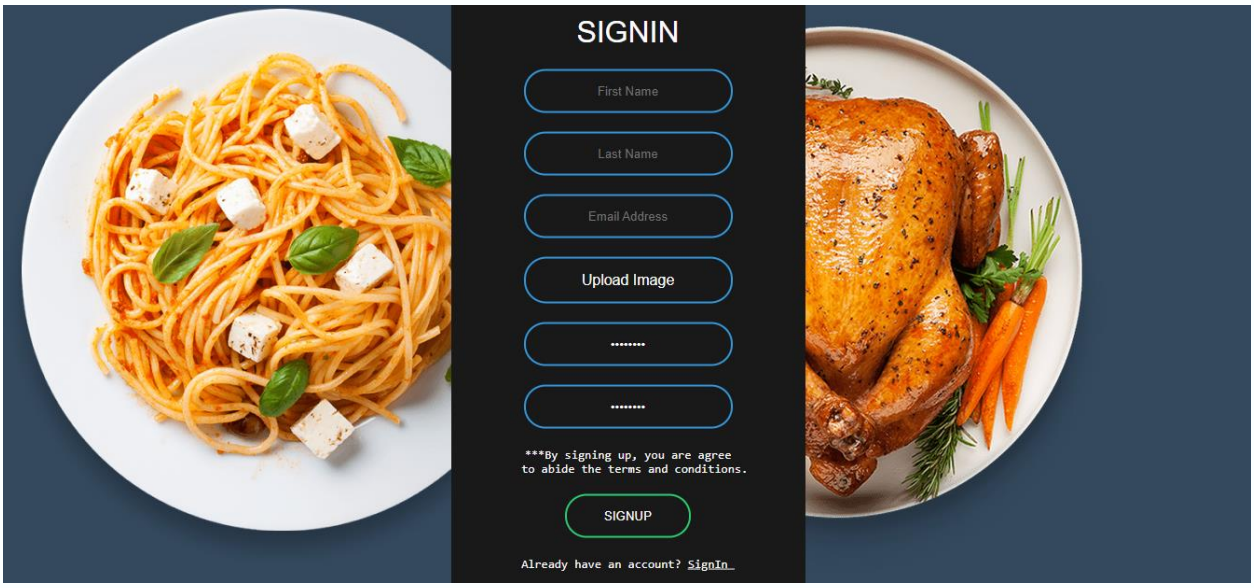


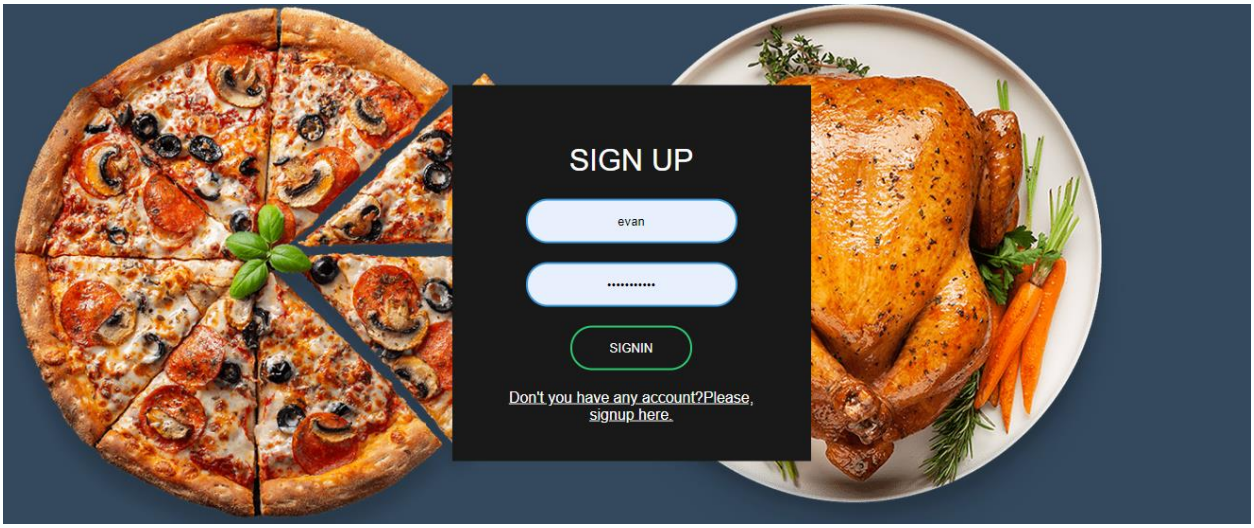


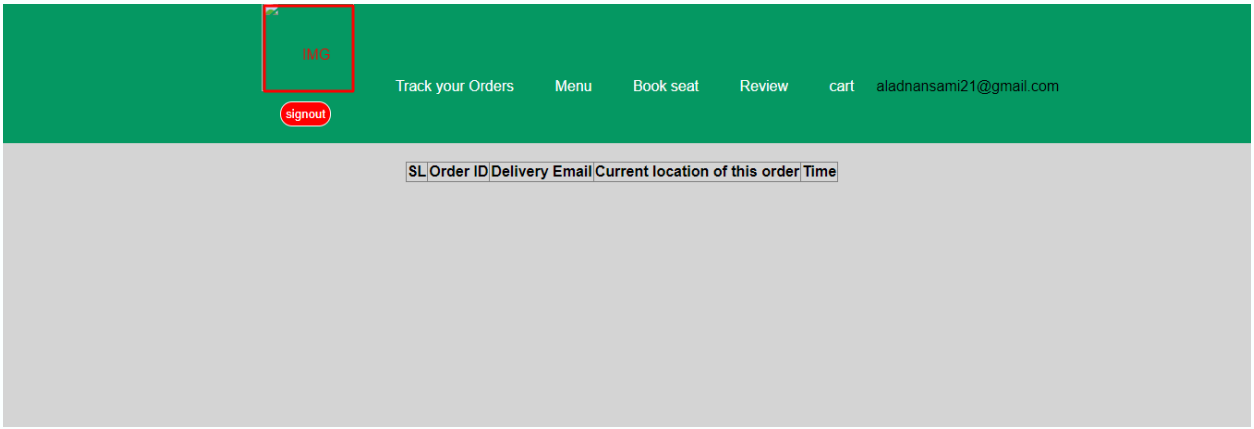
id	Table ID	Customer	Booked For
46	001-(4 people)	tahrimkabir321@gmail.com	2021-09-24 17:53:00
47	001-(4 people)	tahrimkabir321@gmail.com	2021-09-09 20:54:00
48	001-(4 people)	tahrimkabir321@gmail.com	2021-10-02 17:55:00
49	001-(4 people)	tahrimkabir321@gmail.com	2021-09-11 17:55:00
50	001-(4 people)	tahrimkabir321@gmail.com	2021-09-11 17:56:00
51	001-(4 people)	tahrimkabir321@gmail.com	2021-09-25 17:58:00
52	001-(4 people)	tahrimkabir321@gmail.com	2021-10-03 17:58:00
53	001-(4 people)	tahrimkabir321@gmail.com	2021-10-02 17:59:00
54	001-(4 people)	tahrimkabir321@gmail.com	2021-09-25 18:00:00
55	001-(4 people)	tahrimkabir321@gmail.com	2021-09-18 18:00:00
56	001-(4 people)	tahrimkabir321@gmail.com	2021-09-17 18:01:00
57	001-(4 people)	tahrimkabir321@gmail.com	2021-09-19 18:01:00
58	002-(5 people)	tahrimkabir321@gmail.com	2021-10-02 18:12:00

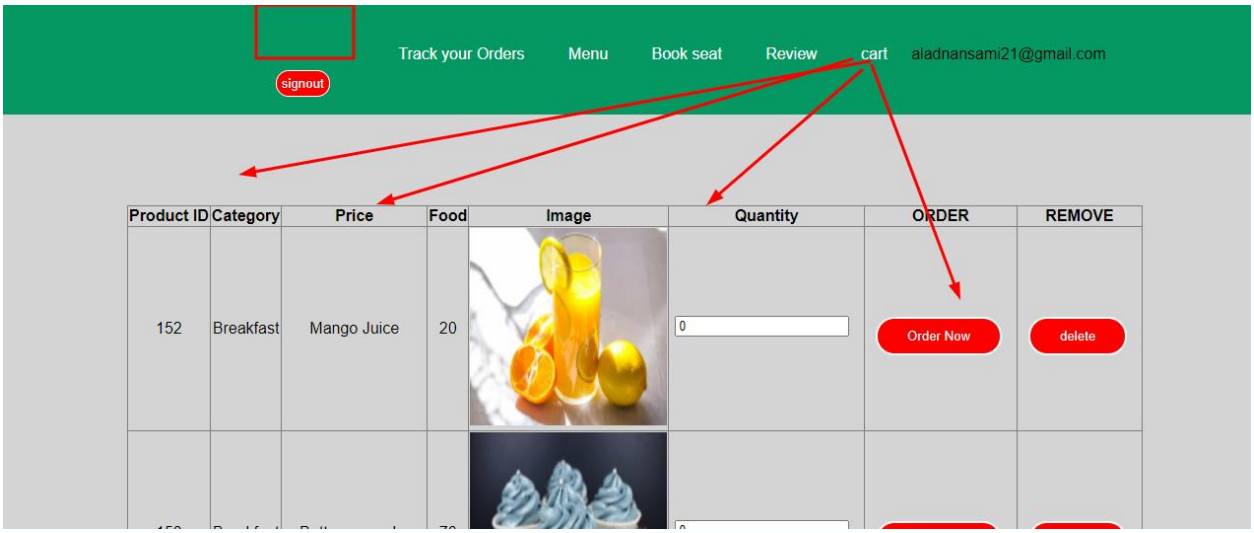
9. Customer Login and Signup

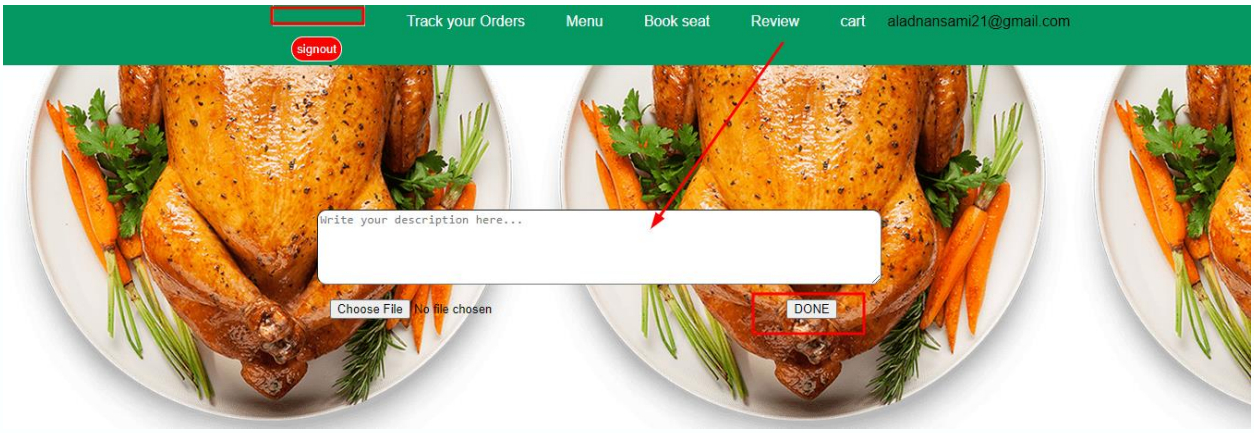
When Customer Want to order something than they must be sign in, when he was not our previous client or he don't have any account than he needs to sign up our system. When he sign in our system they can order food, see full menu, add to cart and also they give us feedback and booked his table for live restaurants food enjoy.

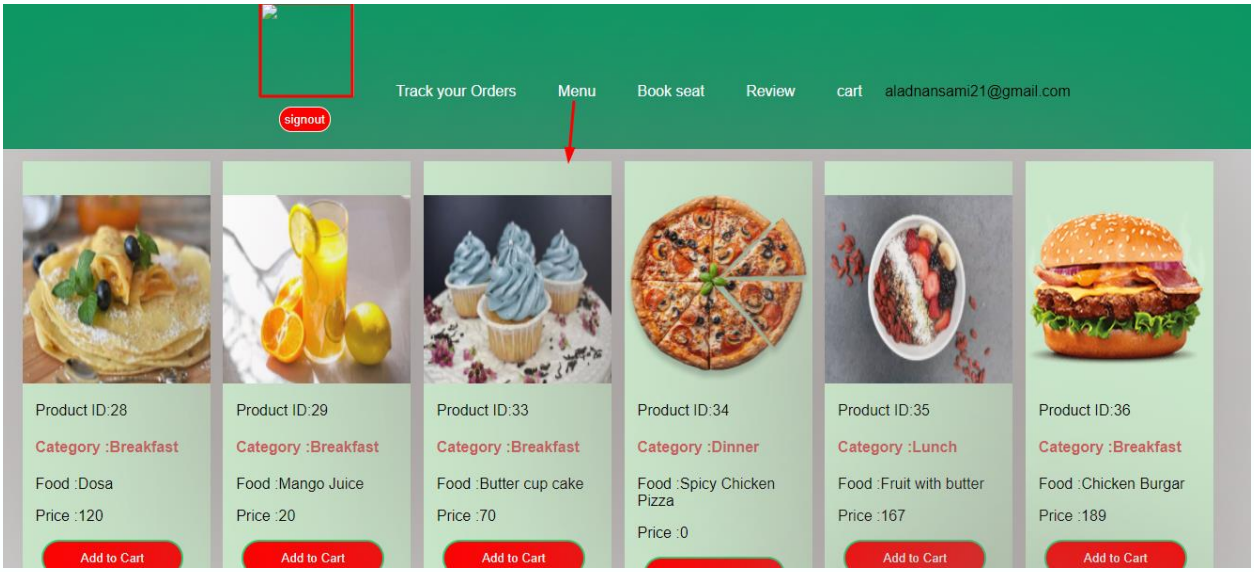


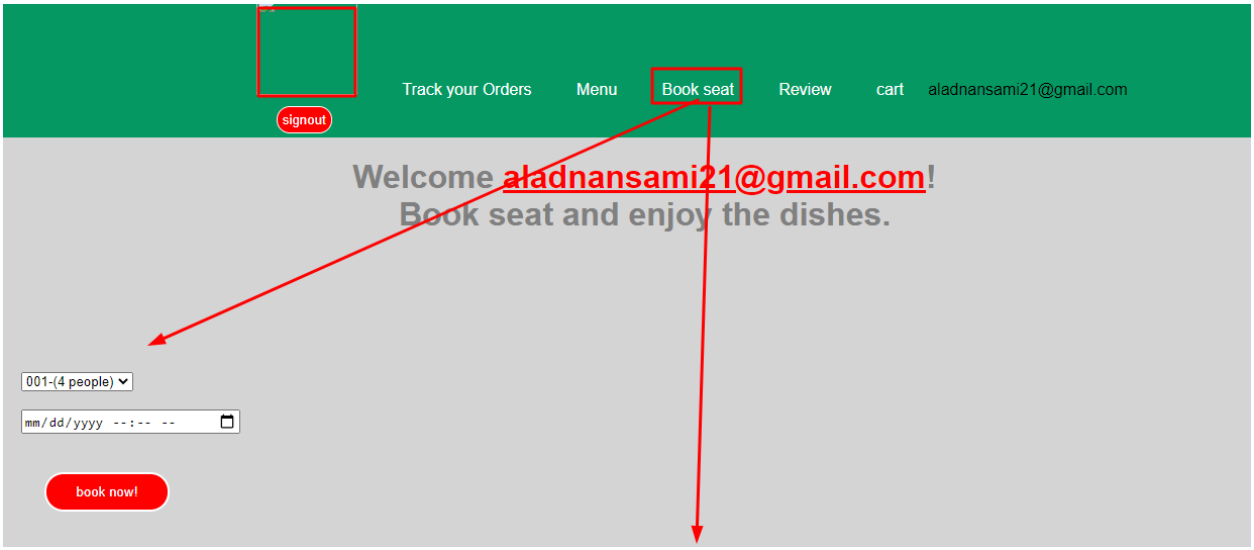

SIGN UP
evan
SIGNIN
Don't you have any account?Please, signup here.


signout
Track your Orders
Menu
Book seat
Review
cart
aladnansami21@gmail.com
SL
Order ID
Delivery Email
Current location of this order
Time


signout
Track your Orders
Menu
Book seat
Review
cart
aladnansami21@gmail.com
Product ID
Category
Price
Food
Image
Quantity
ORDER
REMOVE
152
Breakfast
Mango Juice
20
0
Order Now
delete

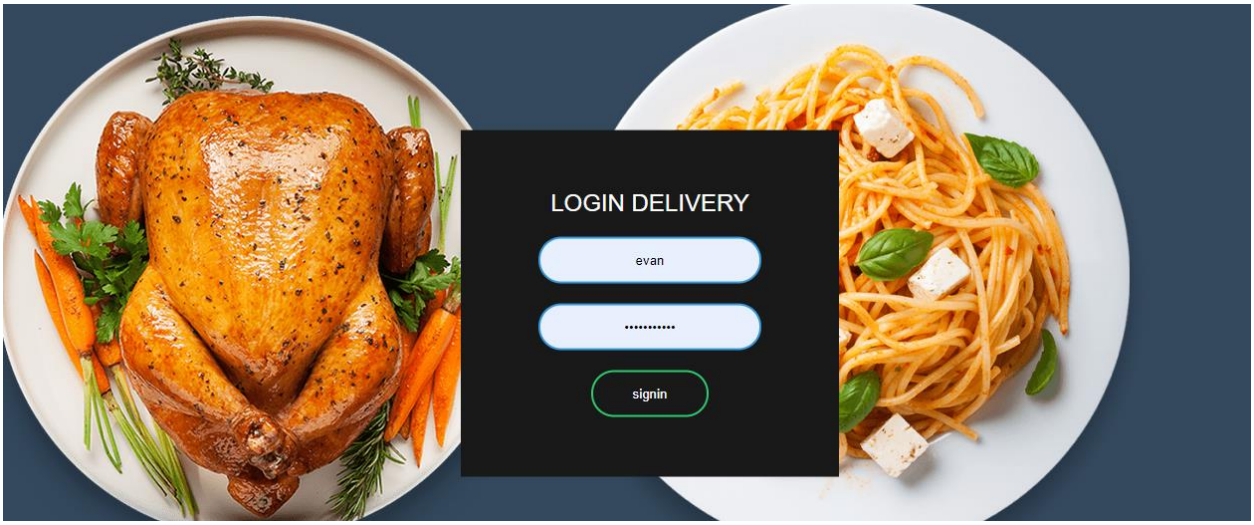

signout
Track your Orders
Menu
Book seat
Review
cart
aladnansami21@gmail.com
write your description here...
Choose File
No file chosen
DONE

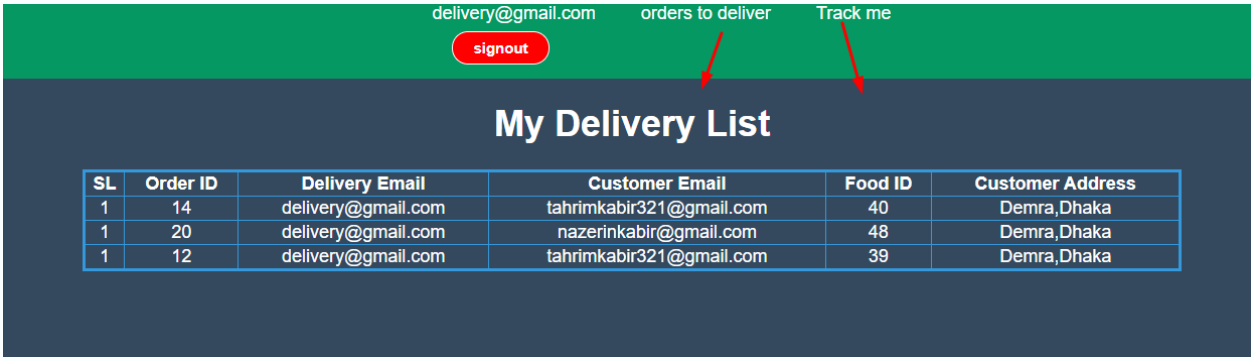

signout
Track your Orders
Menu
Book seat
Review
cart
aladnansami21@gmail.com
Product ID:28
Category :Breakfast
Food :Dosa
Price :120
Add to Cart
Product ID:29
Category :Breakfast
Food :Mango Juice
Price :20
Add to Cart
Product ID:33
Category :Breakfast
Food :Butter cup cake
Price :70
Add to Cart
Product ID:34
Category :Dinner
Food :Spicy Chicken Pizza
Price :0
Product ID:35
Category :Lunch
Food :Fruit with butter
Price :167
Add to Cart
Product ID:36
Category :Breakfast
Food :Chicken Burgar
Price :189
Add to Cart


signout
Track your Orders
Menu
Book seat
Review
cart
aladnansami21@gmail.com
Welcome aladnansami21@gmail.com!
Book seat and enjoy the dishes.
001-(4 people)
mm/dd/yyyy --:-- --
book now!

10. Delivery Man Login

When Delivery hero sign in our system ,then can see their own task, they can share his location to customer, also they can track Customer locations.





SL	Order ID	Delivery Email	Customer Email	Food ID	Customer Address
1	14	delivery@gmail.com	tahrimkabir321@gmail.com	40	Demra,Dhaka
1	20	delivery@gmail.com	nazerinkabir@gmail.com	48	Demra,Dhaka
1	12	delivery@gmail.com	tahrimkabir321@gmail.com	39	Demra,Dhaka

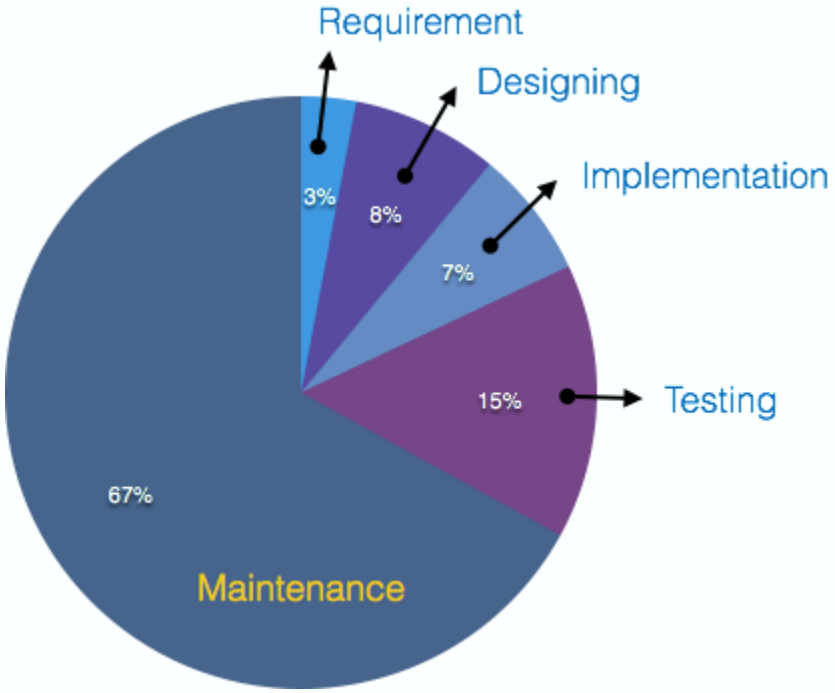
7.Maintenance

1. Software Maintenance

Software maintenance in software engineering is the modification of a software product after delivery to correct faults, to improve performance or other attributes

A common perception of maintenance is that it merely involves fixing defects. However, one study indicated that over 80% of maintenance effort is used for non-corrective actions.[2] This perception is perpetuated by users submitting problem reports that in reality are functionality

enhancements to the system. More recent studies put the bug-fixing proportion closer to 21%. The six software maintenance processes as



2. Current status of development

Initialization, Planning and Designing has been completed and only Implementations is under process.

8. Conclusion

1. Conclusion

The Online Restaurant Management System (Khandani Foodie's) is for computerizing the working in a restaurant. It is a smart restaurants system. It is a great improvement over the manual system. The computerization of the system has speed up the process. The restaurant managing system was thoroughly checked and tested with dummy data and thus is found to be very reliable. The software takes care of all the requirements of an average restaurant and is capable to provide easy and effective storage of information related to customers that come up to the restaurant. It provides the home delivery facilities to the customer. It also billing facility such as cash on or pay with bkash/Bank. The system is also provides location flexibilities in Dhaka city.

9. Limitations

For upcoming improvement, there are some proposals to advance our project abilities.

- ✓ There is no email verification system.
- ✓ There is no online bill payment system.
- ✓ There is no security protection such as SSL.
- ✓ SMS alert system is not available right now.
- ✓ There is no online secured payment getting system.
- ✓ There is no multiples order facilities right now.

10. Future Plans

- ✓ Enhanced and Rich UI will be Designed.
- ✓ We will add more features to improve our project.
- ✓ There will be email verification system.
- ✓ We will add SSL security system.
- ✓ SMS alert system is easier for the customer.
- ✓ We also work on online payment gateway integration.
- ✓ Additionally, it is just a **beginning**. Supplementary the system may be used in various other types of reviewing process.

11. Reference

During the development of our system, we have taken the reference from Online. Most of the time we use google.com

- ✓ https://en.wikipedia.org/wiki/Entity%E2%80%93relationship_model
- ✓ https://en.wikipedia.org/wiki/Software_requirements_specification
- ✓ https://www.tutorialspoint.com/uml/uml_class_diagram.htm