



**An Undergraduate Internship/Project on  
Food delivery website and Management System  
using MVC framework**

By

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**Summer, 2021**

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**September 6, 2021**

Dissertation submitted in partial fulfillment for the degree of Bachelor of  
Science in Computer Science

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# Attestation

This is to certify that the report titled “Food Delivery Website and Management System using MVC Framework” was completed by Marzan Binte Hassan (1810662) submitted in partial fulfillment of the requirement for the Degree of Computer Science from Independent University, Bangladesh (IUB). Mr. Sheikh Abujar (Internal Supervisor) and Mr. Touhid Alam (External Supervisor) guided the work. I further certify that none of the work that has been done in this report is plagiarized or copied from anywhere. Any resources used are mentioned in the reference section of the report.

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Signature

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Date

Marzan Binte Hassan

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Name

# Acknowledgement

I am grateful to the Almighty for blessing me with the opportunity and giving me the patience to work with my knowledge. I would like to express my gratitude to my honorable supervisor **Mr. Sheikh Abujar**, Internship Supervisor & Senior Lecturer, Independent University, Bangladesh, who has helped me go through the whole process of making this report. It has been a great experience to work as an intern at Devenport. I would like to express my gratitude to Devenport for giving me a chance to work with them and for helping me work from home as well as giving me an opportunity to work at office to understand the office culture better and making the transition from a student to a software developer much smoother all during this COVID-19 pandemic.

I would like to convey my gratitude to my external supervisor, **Mr. Touhid Alam** for his guidance and support that I needed for the fulfillment of my internship. I also want to offer my extraordinary thanks and gratitude to my colleagues at **Devenport** for giving me such consideration and time and directing me through the internship. I am indebted to my parents, for not only supporting me financially but for always motivating and appreciating me to accomplish the things that I achieved.

# **Letter of Transmittal**

Date:

Sheikh Abujar  
Lecturer  
School of Engineering, Technology & Sciences  
Independent University, Bangladesh.

Subject: Submission of Internship Report, Summer 2021.

Dear Sir,

With all due respect I would like to state that it is a great pleasure to submit my report on Internship at Devenport. I have tried my best to narrate my project works, achievements and experiences in this report. All the works presented in this report are completed with utmost sincerity and honesty.

During the internship period, I have served in Devenport for three months where I have not only gained real life work experience but learned the process of the department. I also got an insight on how the companies are dealing with the ongoing COVID-19 pandemic. This report includes a detailed review of the company as well as the functionalities of the department I worked in. As a document of my effort during the internship period, I have documented all the project works that I have done during my internship period.

I have tried my best to avoid my deficiencies and hope that my report will meet your expectation. I also would like to convey my gratitude for giving me the opportunity to submit this report.

Sincerely,  
Marzan Binte Hassan  
ID: 1810662

# Evaluation Committee

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# Abstract

Due to the pandemic, the restaurant sector has transformed from serving in-house clients to operating online through numerous platforms. As a result, the number of internet meal delivery companies has increased. “Devenport” chose to enter the food industry as a custom software development firm, producing a “Food Delivery Website and Management System leveraging MVC Framework.” Customers will be able to place orders for food straight through the website. Restaurants can utilize the website to make menu adjustments and publicize special offers. The management panel allows restaurant administrators to manage their establishments.

“Food Delivery Website and Management System utilizing MVC Framework” is an example of a Progressive Web App (PWA). For our project, we used server-side rendering (SSR). It’s a three-tiered design. In this report, we’ve also gone through a lot of the engineering problem analysis and concerns that arose during the development process. The creation and execution of a mobile app is one of our system’s important future ambitions. As a result, the public will have easier access to our system.

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# **Chapter 1**

## **Introduction**

### **1.1 Overview/Background of the Work**

The food industry in Bangladesh is flourishing and popularity of online platforms such as websites are increasing day by day. Different organizations are using online platforms to operate their business. With the ongoing pandemic, restaurant industry is struggling. Thus, more and more restaurants are shifting towards providing their services through online platforms. With the online delivery sites, customers can get the fast and quick order process as every option is available on the online website and restaurants can serve customers beyond their in-house capacity. So, the company “Devenport” decided to enter the food industry and develop “Food delivery website and management system using MVC framework”. In this website different restaurants will upload their menu and customers can order food from the website. Customers will see restaurants for their respective areas only. Restaurants can manage their menus and add special offers from the website. Website admins can see the customer list, restaurant list and all on going orders in the restaurants. This website provides all the necessary functionalities to provide wonderful user experience.

### **1.2 Objectives**

With the rise of automation every industry is moving towards automation and the food industry is no different. The main objective of this project is to provide nice experience to customers while ordering food and provide an easier way to maintain and process online orders for the restaurants. With the ongoing pandemic, customers can no longer go to the restaurants thus restaurants are losing their profit margin. An online food delivery website solves problems for both sides. Customers can order food sitting at their home and restaurants can receive orders and deliver food without any physical interactions. An online website is also a great way for marketing and promotion for the

restaurants. They can offer discounts and special offers to draw customers. They can manage orders from the website which makes it easier for them to review their sales and market position. Restaurants can send notifications to customers about their ongoing campaigns and generate various reports on order, user etc. to monitor their growth.

## 1.3 Scopes

- Order Food: Customers can view restaurants in their respective area only. To order food Customers need to sign up and login to their account on the website.
- Search Restaurants: Customers can search for restaurants in their area.
- Add Address: Customers can add multiple address in their profile
- Add Restaurants: Admin can add restaurants on the website.
- Upload Menu: Restaurants can upload and edit their menus.
- Add offer: Restaurants can add different offers.
- Send Notification: Restaurants can send notifications to a specific user or all the users at once.
- Show Featured Item: Restaurants can show their best-selling items.
- Determine Zonal Area: Setting different zones so that the restaurants will be visible for customers in that zone only
- Set Delivery Charge: Setting delivery charge for different zone.
- Generate Report: Generate “User acquisition Report”, “Rider Report”, “Order Report” (customer wise), “Order Report” (restaurant wise) etc.
- Manage User: Add user, edit user information, deactivate user.

# Chapter 2

## Literature Review

### 2.1 Relationship with Undergraduate Studies

CSE 203, Data Structures: In this course we were taught the basic concepts of many data structures and their applications, such as the Stack, Queue, Linked List, Array, and Pointers and so on.

CSE 213, Object-Oriented Programming: In this course we were taught about how to represent data and object and use modular programming to reduce repetition and long lines on codes.

CSE 303, Database Management: In this course we were taught, how to plan a project from scratch and complete the project. Six Element Analysis, Problem Analysis, System Development Life Cycle, Rich Picture, Requirement Analysis, Entity Relationship Diagram, Business Process Model, Normalization, and creating and maintaining database using, PHP, MySQL, Apache Server, Xampp were covered.

CSE 307, System Analysis and Design: In this course we were taught to analyze and design systems. This course provides an overview of the Used Case Diagram, Used Case Scenario, and SDLCs, as well as how to apply them to a project.

CSE 309, Web Application and Internet: In this course web application development is taught. HTML, CSS, JavaScript, jQuery, node JS, MongoDB, and other vital technologies that are in great demand in the market were covered.

CSE451, Software Engineering: In this course we learned about the different methodologies of development and the process of designing and producing an application.

### 2.2 Related works

Foodpanda is one of leading food delivery websites which is similar to this project that is operating in Bangladesh. There are many websites with similar functionalities operating in Bangladesh such as Ubereats, Hungrinaki etc.

# Chapter 3

## Project Management & Financing

### 3.1 Work Breakdown Structure

A work breakdown structure is an important project deliverable that divides the work into digestible chunks. It's also known as a hierarchical deconstruction of the whole scope of work that the project team must complete in order to meet the project's objectives and establish the project. A top-down approach was followed while creating the WBS for our project.

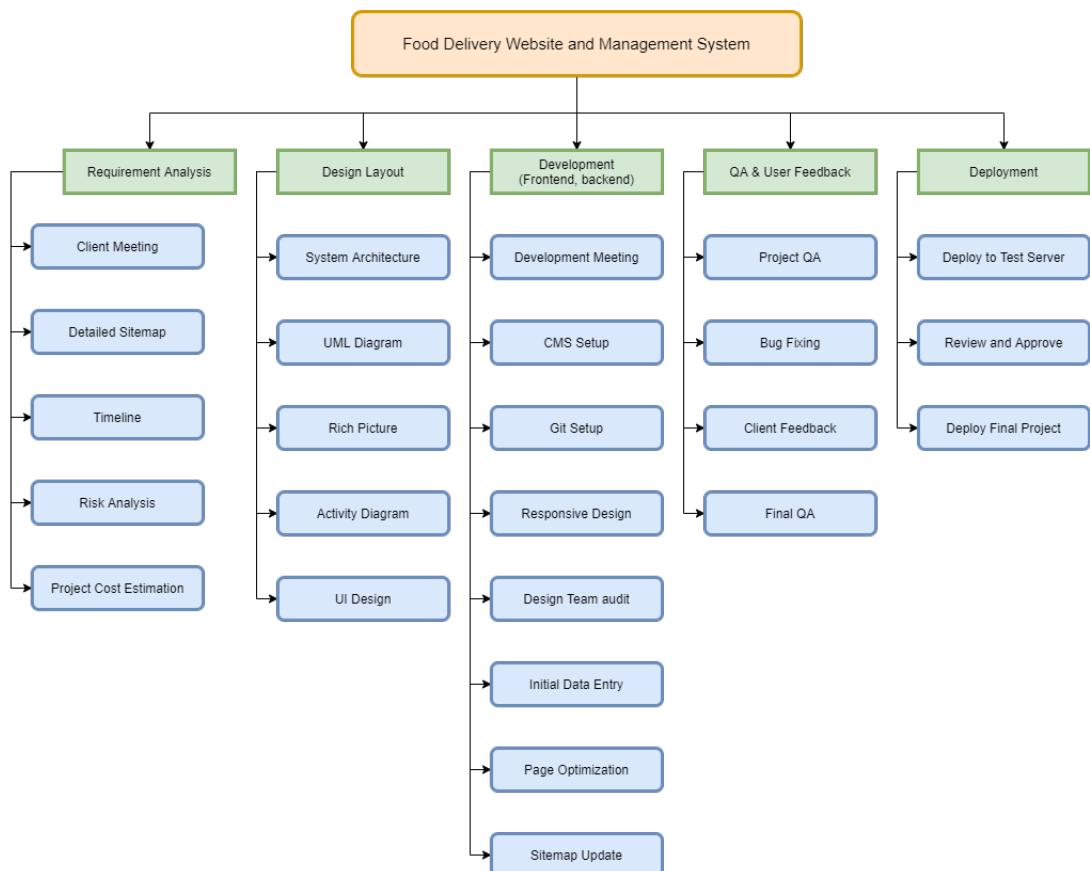


Figure 3.1: WBS of Food Delivery Website and Management System

## 3.2 Process/Activity wise Time Distribution

For Each Section described in the WBS Diagram for our project, we allocated the time required to complete the tasks . The Table below shows them in details.

Task	Days	Work Percentage(%)
Requirement Analysis	15	14%
Design Layout	10	9%
Development	45	41%
QA and User Feedback	30	27%
Deployment	10	9%
Total	110	100%

Table 3.1: Time Distribution

## 3.3 Gantt Chart

To complete the project successfully we planned and scheduled the activities using Gantt Chart.

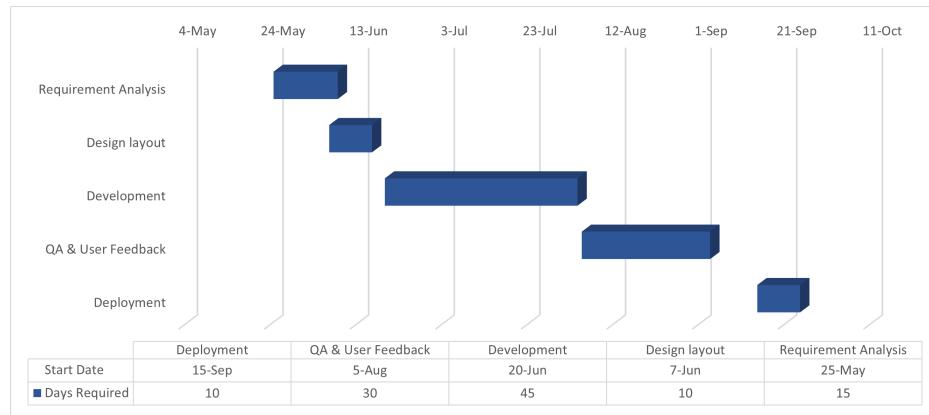


Figure 3.2: Gantt Chart for Food Delivery Website and Management System

## 3.4 Process/Activity wise Resource Allocation

The Food Delivery Website will be used by the general user for ordering and receiving food from the comfort of their homes. Thus for achieving this all the resources required was allocated for the development and implementation of the project. The primary resource of the project is the developers. Then comes the resources like laptop/computers, server and even the furniture are considered as resources.

**Requirement Analysis:** This is the initial step in the development of a project. The requirement analysis team set down with the clients for determining the requirements. For instance, the features the clients want in their website.

**Design Layout:** In this step, the UI/UX designers comes up with the mock designs of the website using Figma Software. This provided the front end developers the guideline in developing the website.

**Development:** In this step, the developers who will be working on the project are assigned. The senior developer are tasked with dividing the work among their subordinates. The developers has a weekly target to meet. It was also predicted that the development process might be slow as strict lockdown was imposed due to COVID-19 outbreak and this would hamper communication as the developers would be working from home. While in development the project was deployed in test server for testing purpose.

**QA and User Feedback:** After the development of the project, it is sent to the QA team for testing. The QA team checks for any bugs and reports back to the developers for correction. When the QA team is satisfied with the project it is sent to client for feedback. If the client has any feedback it is resolved.

**Deployment:** After the client is happy with the final outcome, the project is finally made live and deployed into the live server.

Though the development process ends here, the website might face bugs in the live server after deployment. These bugs and issues are fixed when they arrive.

## 3.5 Estimated Costing

The cost for the project was calculated according to the requirements provided by the client. The cost included all the discrete components such as Sample UI Design, Logo design etc.

Work Distribution	Costing(BDT)
Development	60000
Server Cost (Yearly)	40000
Maintenance (Monthly)	7000

Table 3.2: Estimated Cost

# Chapter 4

## Methodology

For developing any website, it is utmost important to follow the right steps. As there is risk of failure which can be very expensive. It is impossible to finish a large project at a time without the risk of failure. So, it is very convenient to break a large project's workflow into small units and simplify the design process. The "Iterative" methodology provides a similar way of developing a web application. [1]

Iterative methodology is based on a cyclic process of prototyping, designing, testing, analyzing, and refining a website. There are five stages of iterative methodology.

**Stage 1: Planning:** The project begins with a comprehensive plan according to established requirements. To identify requirements, user feedback needs to be collected and analyzed.

**Stage 2: Analysis and Design:** It is time to figure out the project's business logic when planning is finished. Business logic allows the database and end-users to communicate with each other. Job assignment and task listing are carried out during this step. Setting deadlines for each work is also critical.

**Stage 3: Implementation:** The development process is started based on the requirements and feedback from users. The development team and the client decide the priority and details of the tasks before starting each iteration. Normally, all code modifications are initially uploaded to a test server.

**Stage 4: Testing:** After the development team has completed the coding, testing is required to identify and correct any bugs or errors. Testing the product is not enough; quality assurance engineers provide input on the product and its documentation.

**Stage 5: Evaluation:** The last step of the iterative methodology is evaluation. Client along with the development team evaluates the prototype and verify if all the requirements are met.

This process is repeated according to necessity.

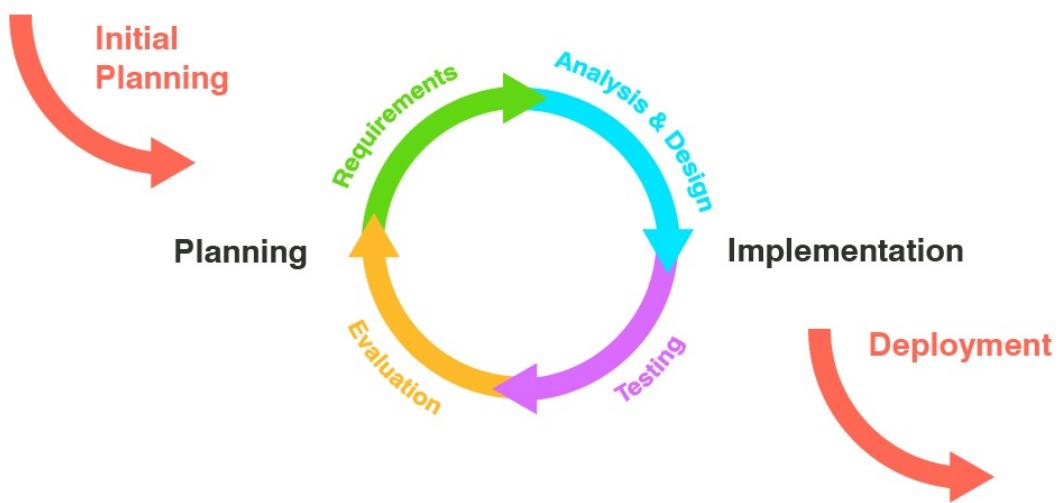


Figure 4.1: Iterative Methodology

# **Chapter 5**

## **Body of the Project**

### **5.1 Work Description**

Food Delivery Website and Management System is an Online Platform built by Devonport where users can search for restaurants in their area and order through the platform. Restaurants can register themselves to the platform and manage all the aspects of their restaurants starting from managing menu and orders to providing offers to the general users. The users can add multiple addresses to their profile so it is convenient for them to get the delivery. The website admins have the accessibility to manage and look into all the restaurants functions. The website operation team can also handle orders for restaurants if the restaurants themselves are not able to. Through the management platform the website admins can send out user centric notifications. There is also the feature of generating different types of reports that can be directly downloaded as excel file or PDF file straight from the website. They can also print the document if any printer is connected beforehand. In this project, I have worked in several features and bug fixing. I have developed features like manage rider, manage order and adding menu for specific restaurant. Apart from these, I have also worked in few minor features such as adding new columns to existing tables etc.

## 5.2 System Analysis

### 5.2.1 Six Element Analysis

Process Name	System Roles					
	Human	Non-Computing Hardware	Computing Hardware	Software	Database	Communication and Networking
Order Food	General User	N/A	Mobile/Computer	Browser	MySQL	Wifi/LAN
Manage User	Website Admin	N/A	Computer/Laptop	Browser	MySQL	Wifi/LAN
Manage Restaurant	Restaurant Admin	N/A	Computer/Laptop	Browser	MySQL	Wifi/LAN
Generate Report	Website Admin	Print out paper	Computer/Printer	Browser	MySQL	Wifi/LAN

Table 5.1: Six Element Analysis of Food Delivery Website and Management System

### 5.2.2 Feasibility Analysis

For determining the project's feasibility as quickly as possible, a feasibility study is necessary. It comprises doing preliminary project study and deciding whether the developed system will benefit the organization. The different types of feasibility are: Operational feasibility, Economical feasibility, Technical feasibility.

- **Operational Feasibility:** It provides excellent consumer pleasure and experience. The user interface is also simple to use. A mobile device or a PC with a reliable internet connection can be used to visit the website. Users can easily customize their profiles. Then they should look for a restaurant and place an order for the food they want. The proposed product achieves excellent results and has a high level of performance. The product is feasible in terms of functioning.
- **Economic Feasibility:** The financial impact on the company acquiring the goods is referred to as economic feasibility. We can determine if the product can be built in such a way that both parties profit financially by analyzing the needs. Because it benefits both parties, the product we're working on is financially viable.
- **Technical Feasibility:** Both the hardware and software requirements are referred to as "technical feasibility." To carry out this technical feasibility, we must first assess whether the required technology and suggested equipment are capable of storing the project's data. This technical feasibility analysis analyzes whether the necessary resources for project development are accessible.

### 5.2.3 Problem Solution Analysis

During this project, some problems were faced, and they were addressed accordingly. Some of the issues are stated below.

- **Git Integration Issue:** Git provides internet hosting for software development and version control. Even though it is popular in the industry, during this project git integration caused some unexpected issues in maintaining the branches, merging, push and pull etc.
- **Constant Change of Requirements:** On the biggest issues face during this project was the client was very indecisive and they kept changing the feature implementation.
- **API Issue:** In this project for most of the address features Google Map Api service was used. I faced some issued regarding the sequence of api calls.
- **Resource Problem:** For development purpose our company provided us laptops. The device specifications were not up to the mark so while working the software such as vs code, xampp, postman etc. kept crashing.
- **Communication Issue:** : Due to lockdown we were instructed to work from home which created a gap in communication between senior developers and project supervisor. For that the progress was really slow.

#### 5.2.4 Effect and Constraints Analysis

Constraint refers to the freedom that an organization preserves for producing solution. Any limitation that appears during the process of completing a project is considered as constraint. Any obstacle such as limited resource or management decision may limit the scope of developing a project smoothly. Some limitation and their impacts are stated below.

##### **Constraint 1:** Budget

Effect: One of an organization's most important constraints is its budget. Several high-paid personnel were laid off and replaced by fresh inexperienced developers throughout the development of our product due to financial constraints imposed by COVID-19. The development process was hampered as a result of this. Effect: As were we going through this pandemic, our company had to let go several experience and high paid developers because of the budget contain, which caused the development process to become slow.

##### **Constraint 2:** Time

Effect: For a development project to be delivered successfully time is very crucial. As there were already shortage of budget developers had to rush through the project to deliver to the client to get the payment.

## 5.3 System Design

### 5.3.1 Rich Picture

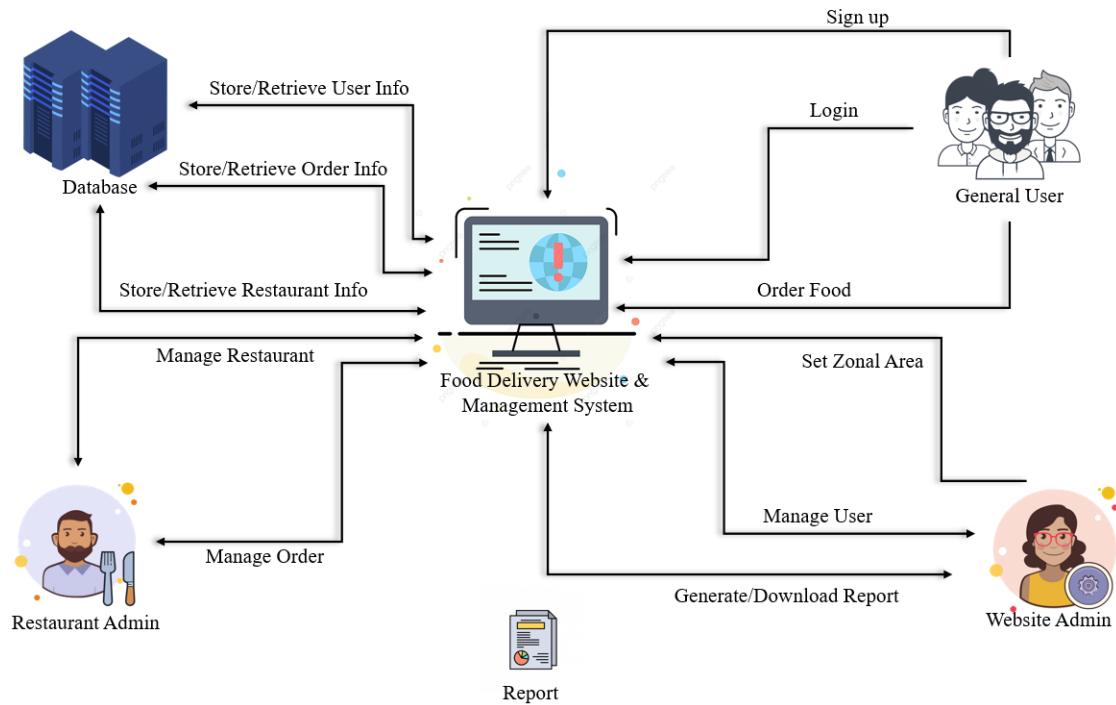


Figure 5.1: Rich picture of Food Delivery website and Management System

### 5.3.2 UML Diagrams

#### Activity Diagram:

An activity diagram is a flowchart that depicts the movement of information from one action to the next. The action can be described as a system operation. I've given two activity diagrams illustrating two primary activities that our system performs. The General User can order food, and the Restaurant Admin can add menus. [2]

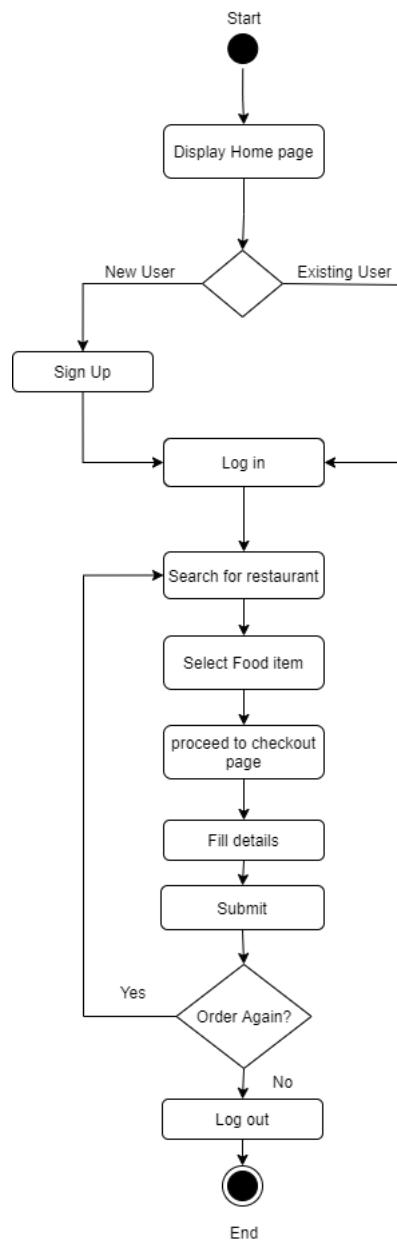


Figure 5.2: Activity Diagram (Order Food)

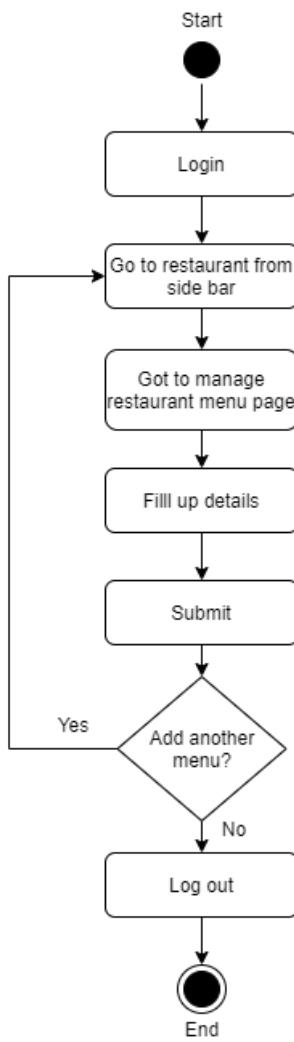


Figure 5.3: Activity Diagram (Add Menu)

### Use Case Diagram:

Use case diagrams are used to analyze a system's high-level requirements. The functionality of a system are captured in use cases when the requirements are examined. Use cases are nothing more than the system's functionality laid down in a logical order. I've attached a Use Case Diagram for our system below. It contains a few of our system's most important features. [3]

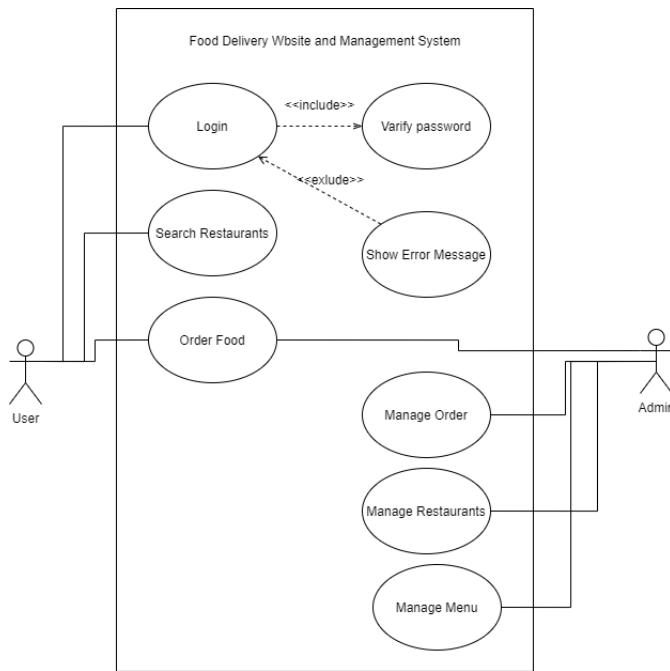


Figure 5.4: Use Case Diagram

### 5.3.3 Functional and Non-Functional Requirements

Some of the functional and non-function requirements of the projects are given below:

#### Functional Requirements:

1. The authentication system validates the mobile number entered by the users when they want to sign-up. Without verification the user cannot sign-up into the system.
2. The verification is done by sending OTP to the user mobile number. After verification the user can login.
3. Users can reset password using the forget password feature if they forgot their password during login.
4. Users can register several address to their account for receiving orders.
5. All available coupons of a restaurant will be present in the have a promo code feature.

6. Website admins can manage general users.
7. Website admins can activate or deactivate general users.
8. Website admins can see all the restaurants added to the website.
9. Website admins can activate and deactivate restaurants.
10. Website admins can manage trending items.
11. Website admins can set up Zonal Areas where they will set which restaurants will deliver to which zone.
12. Website admins can set delivery charge.
13. Restaurant admins can add their own coupons and offers from the management panel.

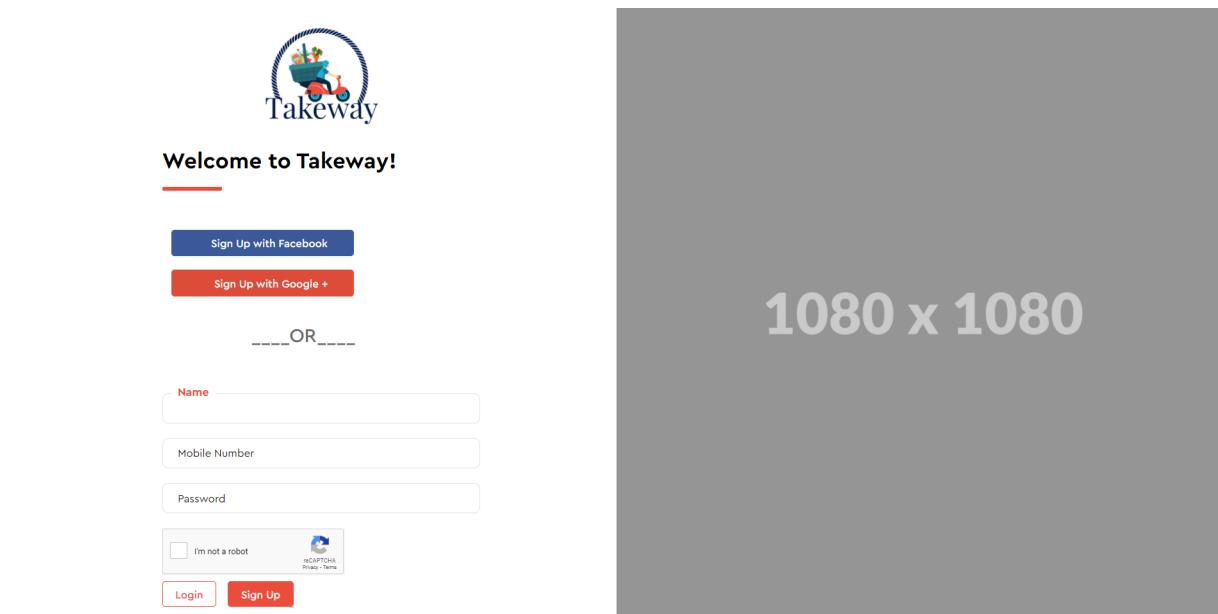
**Non-Functional Requirements:**

1. Usability: Users will find the system to be user-friendly and aesthetically beautiful.
2. Data security: Data security will be carefully enforced. It will be entirely safe, and the developers will monitor it for any irregularities from time to time.
3. Performance: For instance, when searching and browsing for restaurants, placing orders, managing orders, and so on, performance should always be smooth and simple to understand. Users should have a positive experience as a result of these.
4. Service: Because it is a browser-based solution, employees can access it from anywhere in the world.

## 5.4 Product Features

### 5.4.1 Input

General User Sign-up Page:



The image shows the Takeway user sign-up page. At the top is the Takeway logo, which features a blue scooter carrying a basket filled with various food items, all enclosed within a circular frame. Below the logo is the text "Welcome to Takeway!". Underneath this, there are two blue rectangular buttons: "Sign Up with Facebook" and "Sign Up with Google +". A horizontal line with the word "OR" in the center separates these from three input fields: "Name", "Mobile Number", and "Password". Below these fields is a reCAPTCHA interface consisting of a checkbox labeled "I'm not a robot", the reCAPTCHA logo, and links for "Privacy" and "Terms". At the bottom of the form are two red rectangular buttons: "Login" on the left and "Sign Up" on the right.

Figure 5.5: User Sign-up

General User Login Page:



The image shows the Takeway user login page. It features the same Takeway logo at the top. Below it is the text "Lets Get Started". Underneath this, there are two blue rectangular buttons: "Login with Facebook" and "Login with Google +". A horizontal line with the word "OR" in the center separates these from two input fields: "Mobile Number" and "Password". To the left of the "Mobile Number" field is a checkbox labeled "Remember Me". To the right of the "Password" field is a link "Forgot your password?". At the bottom of the form are two red rectangular buttons: "Login" on the left and "Sign Up" on the right.

Figure 5.6: User Login

### Management Panel (Login Page):

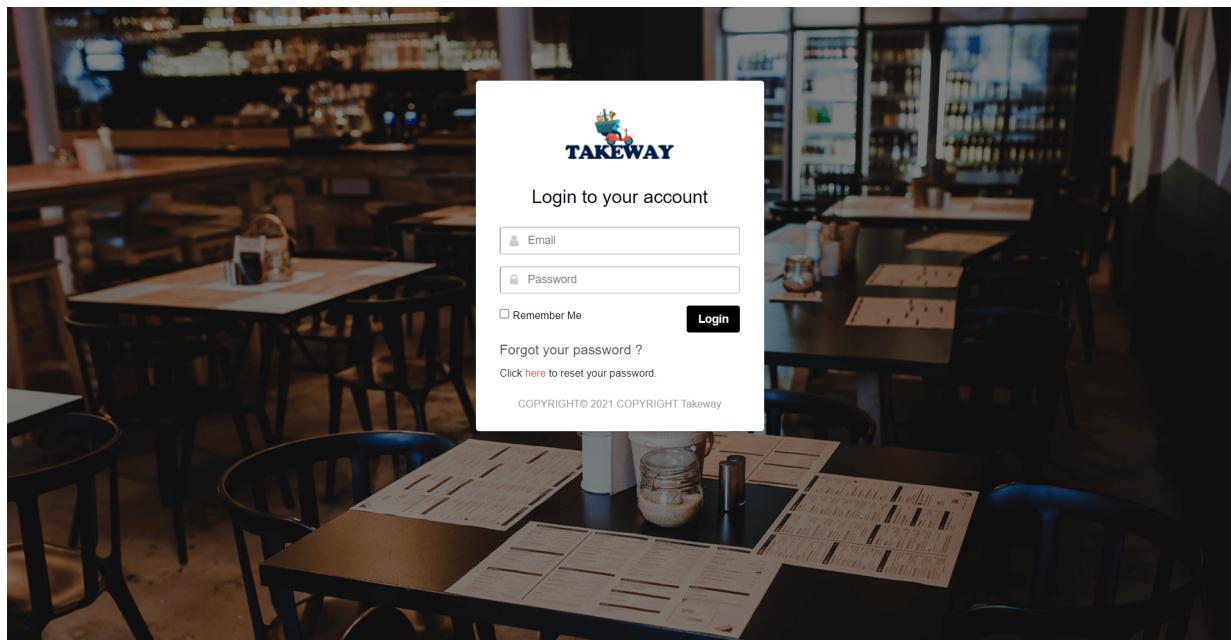


Figure 5.7: Management Panel (Login)

### Management Panel (Add Menu):

Figure 5.8: Management Panel (Add Menu 1)

The screenshot shows a management panel interface for adding a new item. The left sidebar lists various menu items like Grocery, Zones, Campaigns, etc. The main area is titled 'Add' and contains the following fields:

- SD(%): Input field
- Detail: Input field
- Image: File input field with placeholder 'No file chosen'. Notes: Only JPG, JPEG, PNG & GIF files are allowed. Maximum upload file size 5MB. Recommended size of image is 290 \* 210.
- Recipe Time\*: Input field
- Popular Item: Checkboxes (unchecked)
- Availability\*: Select dropdown with options: Select..., Morning, Lunch, Dinner
- End Date\*: Input field with a 'Reset' button

At the bottom are 'Submit' and 'Cancel' buttons, and a red 'Add' button on the right.

Figure 5.9: Management Panel Add Menu(2)

### Management Panel (Add Restaurant):

The screenshot shows a management panel interface for adding a new restaurant. The left sidebar lists various categories under 'Restaurant'. The main area is titled 'Add Restaurant' and contains the following fields:

- Restaurant Name\*: Input field
- Mobile Number\*: Input field
- Email\*: Input field
- Admin User: Select dropdown with placeholder 'Select...'
- Zone Area: Select dropdown with placeholder 'Select...'
- Image: File input field with placeholder 'No file chosen'. Notes: Only JPG, JPEG, PNG & GIF files are allowed. Maximum upload file size 5MB. Recommended size of image is 500 \* 450.
- Cover Image: File input field with placeholder 'No file chosen'. Notes: Only JPG, JPEG, PNG & GIF files are allowed. Maximum upload file size 5MB.
- Capacity(People)\*: Input field
- No Of Table\*: Input field
- No Of Hall: Input field
- Hall Capacity: Input field
- Address\*: Input field

Figure 5.10: Management Panel (Add Restaurant 1)

The screenshot shows a management panel for adding a new restaurant. The left side has a large red background area. The right side contains a form with the following fields:

- ZipCode\***: Input field
- Country\***: Input field
- State\***: Input field
- City\***: Input field
- Currency\***: Select dropdown with "Select..." option
- Commission(%)\***: Input field
- Food Type\***: Radio buttons for "Veg", "Non veg", and "Both"
- Price Range\***: Radio buttons for "\$", "\$\$", and "\$\$\$"
- Enable Restaurant Hours\***: Radio buttons for "Yes" and "No"
- Restaurant Timings**: A section with a checkbox "Assign Monday Timings for all days". Below it are two columns of input fields for opening and closing hours for each day of the week (Monday through Sunday).
- Close Times**: A section with checkboxes for marking close times for specific days of the week.

At the bottom are "Submit" and "Cancel" buttons.

Figure 5.11: Management Panel (Add Restaurant 2)

## 5.4.2 Output

**Home Page:**

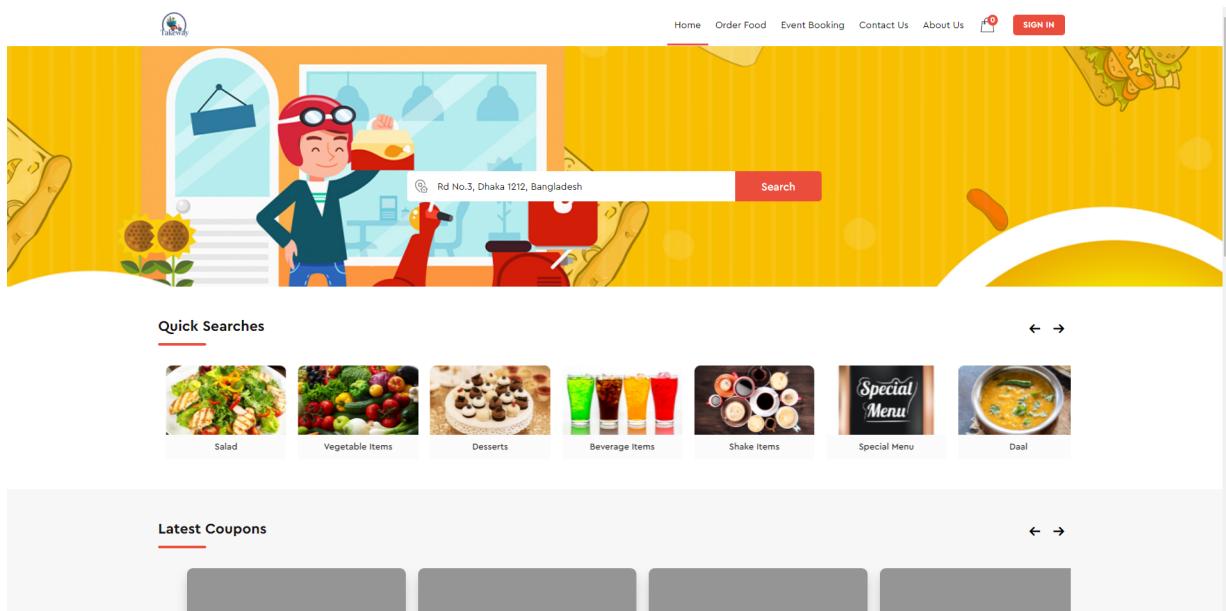


Figure 5.12: Home Page

### Restaurant View:

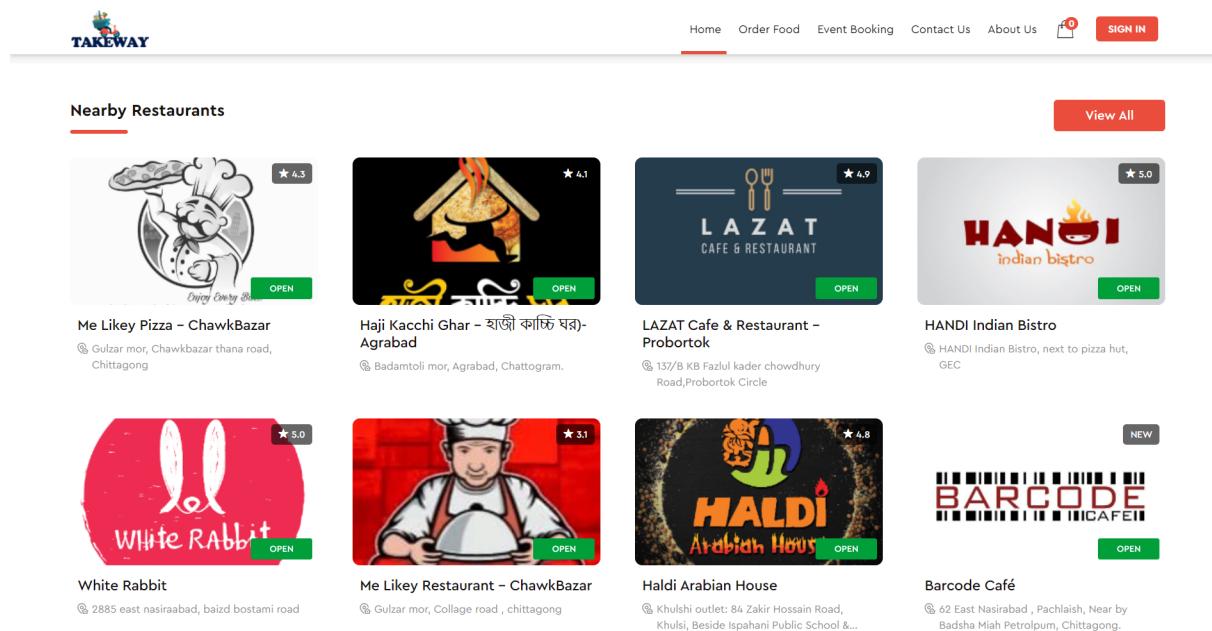


Figure 5.13: Restaurant View

### Single Restaurant View:

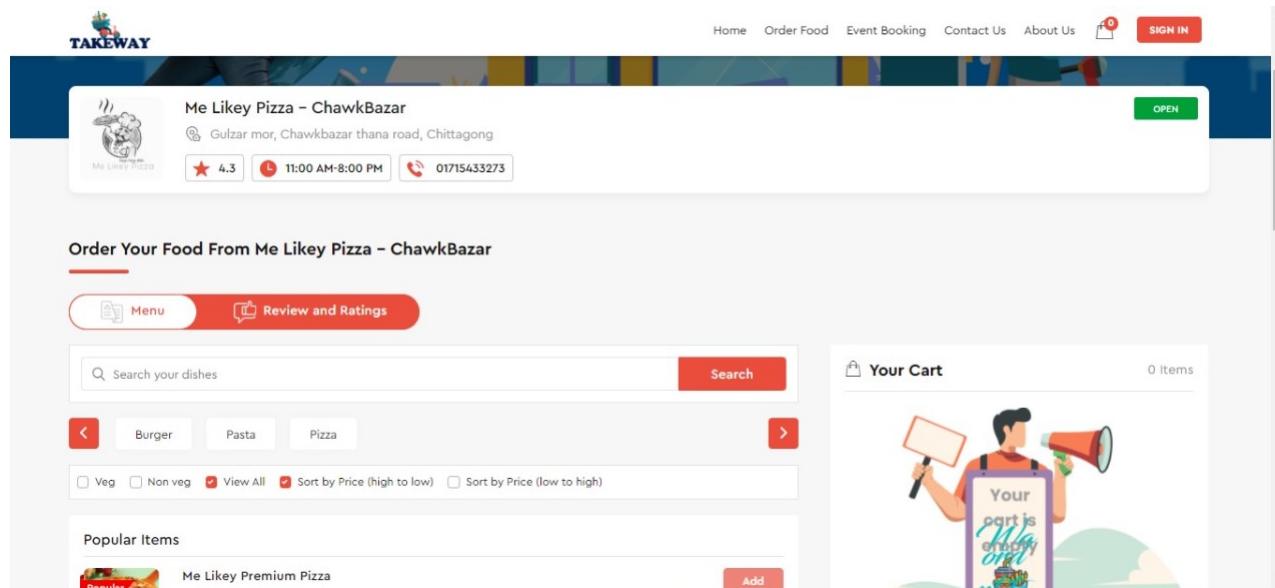


Figure 5.14: Single Restaurant View(1)

The screenshot shows a restaurant's product listing page. At the top, there are navigation links: Home, Order Food, Event Booking, Contact Us, About Us, and a sign-in button. Below the navigation is a search bar with filters: Burger, Pasta, Pizza, and checkboxes for Veg, Non veg, View All, Sort by Price (high to low), and Sort by Price (low to high). A 'Popular' item, 'Me Likey Premium Pizza', is highlighted with a red banner. The pizza is described as having Cheese, Chicken, Mushroom, Sausage, Black olive, Capsicum, Onion, Oregano, and Garlic. An 'Add' button is available. Other sections include 'Burger' (Chicken Burger, ₹ 200) and 'Pasta' (Europa Pasta, ₹ 170). To the right, a 'Your Cart' section shows a cartoon character holding a megaphone and a sign that says 'Your cart is empty'. The cart summary shows 0 items.

Figure 5.15: Single Restaurant View(2)

This screenshot shows the same restaurant page as Figure 5.15, but with a modal window open over the 'Me Likey Premium Pizza' item. The modal has a header 'Me Likey Premium Pizza' and a close button. It displays the item details: 'ITEM' (Variations: 6", 9", 12") and 'PRICE' (₹ 210, ₹ 300, ₹ 380). The '9"' variation is selected. Below the modal, the total price is shown as ₹ 300 with an 'Add' button. The background of the page remains the same, showing the burger and pasta sections and the empty cart summary.

Figure 5.16: Single Restaurant View(3)

### Management Panel (Manage Restaurant):

The screenshot shows the 'Restaurant' section of the management panel. The left sidebar has a 'Manage Restaurant' section under 'Restaurant'. The main area displays a table of 10 records with columns: #, Title, en, Status, and Action. The table lists various restaurants like 'The Sky Lounge & Restaurant', 'Barcode Café', etc. Each row has a 'Delete', 'Deactive', and 'Suspend' button in the Action column.

#	Title	en	Status	Action
1	The Sky Lounge & Restaurant	(The Sky Lounge & Restaurant)	Active	<span>Delete</span> <span>Deactive</span> <span>Suspend</span>
2	Barcode Café	(Barcode Café)	Active	<span>Delete</span> <span>Deactive</span> <span>Suspend</span>
3	Haldi Arabian House	( Haldi Arabian House )	Active	<span>Delete</span> <span>Deactive</span> <span>Suspend</span>
4	Me Likey Restaurant - ChawkBazar	( Me Likey Restaurant - ChawkBazar )	Active	<span>Delete</span> <span>Deactive</span> <span>Suspend</span>
5	White Rabbit	( White Rabbit )	Active	<span>Delete</span> <span>Deactive</span> <span>Suspend</span>
6	HANDI Indian Bistro	( HANDI Indian Bistro )	Active	<span>Delete</span> <span>Deactive</span> <span>Suspend</span>
7	Kutumbari Restora - কুটুম্বারি রেস্টোরা - Chawkbazar	( Kutumbari Restora - কুটুম্বারি রেস্টোরা - Chawkbazar )	Active	<span>Delete</span> <span>Deactive</span> <span>Suspend</span>

Figure 5.17: Management Panel (Manage Restaurant)

### Management Panel (Manage Order):

The screenshot shows the 'Order List' section of the management panel. The left sidebar has a 'Orders' section under 'Restaurant'. The main area displays a table of 50 records with columns: Order#, Business Type, User, Receiver's Details, Order Total, Order Assign To, Order Status, Order Date, Order Type, Status, and Action. The table lists two orders, each with detailed address and contact information. Each row has a set of buttons for managing the order: Accept, Reject, Delete, Invoice, Rider's Invoice, Status History, Assign Driver, Change Status, Rider's Invoice, Status History, Assign Driver, and Track Driver.

Order#	Business Type	User	Receiver's Details	Order Total	Order Assign To	Order Status	Order Date	Order Type	Status	Action
5852	Me Likey Pizza - ChawkBazar	Sarwar	Name Sarwar  Address Bag, 38 Chatteswari Road, Chittagong, Bangladesh, Chittagong Division,  Contact Number 0164610434	₹171.00	No response from riders	Placed	01-07-2021 10:09 PM	Delivery order	Deactive	<span>Accept</span> <span>Reject</span> <span>Delete</span> <span>Invoice</span> <span>Rider's Invoice</span> <span>Status History</span> <span>Assign Driver</span>
5851	Sadia's Kitchen-Chawkbazar	Md Saiful Kabir	Name Md Saiful Kabir  Address 01864812194, মুজিব সর্পিলপুর চকবাজার, Omar Ali Mataabbar Rd, Chittagong, Bangladesh, Chittagong Division,  Contact Number	₹274.00	Abdur Rahman 01314303413	Delivered	01-07-2021 7:50 PM	Delivery order	Active	<span>Delete</span> <span>Invoice</span> <span>Change Status</span> <span>Rider's Invoice</span> <span>Status History</span> <span>Assign Driver</span> <span>Track Driver</span>

Figure 5.18: Management Panel (Manage Order)

### Management Panel (Generate Report):

The screenshot shows the Takeaway management panel interface. On the left is a sidebar with various menu items. The main area is titled 'REPORT' and displays an 'All Order Report'. The report table has the following data:

SL	Date & Time	Rider Name	Order ID	Restaurant	Food Amount	VAT Amount	Amount of SD	Food Bill(incl. VAT,SD,SC)	Company Percentage	Commission Amount	Restaurant Paid	% of Discount	Discount Amount	Delivery Charge	Customer Paid	Rider Hand
1	07-01-2021 19:48:00	Joy Paul-IN	5850	ME LIKEY PIZZA - Hallshahar	310.00	0	0	310	15%	47	263	20.00%	62.00	25.00	273	10
2	07-01-2021 19:50:00	Abdur Rahman	5851	Sadia's Kitchen-Chawkbazar	287.00	0	0	287	10%	29	258	15.00%	43.05	30.00	274	16
3	07-01-2021 19:41:00	Saiful Islam -42	5849	Me Likey Pizza - Chawkbazar	310.00	0	0	310	15%	47	263	50.00%	100.00	25.00	235	-28
4	07-01-2021 19:41:00	Md. Jahir Uddin Baber-IN	5848	Haji Kachhi Ghor - হাজি কচ্ছি খোরা - Agrabad	390.00	0	0	390	10%	39	351	0.00%	0.00	25.00	415	64
5	07-01-2021 19:36:00	Joy Paul-IN	5847	ME LIKEY PIZZA - Hallshahar	130.00	0	0	130	15%	20	110	20.00%	26.00	35.00	139	29
6	07-01-2021 19:41:00	Sultan	5845	Sadia's	218.00	0	0	218	10%	22	196	50.00%	100.00	30.00	148	-48

Figure 5.19: Management Panel (Generate Report)

### 5.4.3 Architecture

We have used server-side-rendering (SSR) architecture for this project. It is a three-tier architecture. As we are developing a Progressive Web App (PWA), we used SSR to define the way the pages would load, and the amount of communication need between client and server. The three tiers are: presentation tier, application tier, data tier. The three tiers could be upgraded or replaced individually without associating with the other tiers. The user interface can be implemented on any platform, such as a desktop PC, smart phone or tablet, as a native application, web application, mobile application, voice interface, etc. It uses a standard graphical user interface, which contains different modules running on the application server. [4] The database server contains the computer data storage logic. The database server is on the relational database management system. The tier in between are multilayered. These three tiers are logical in nature so, they might run in different servers. [5]

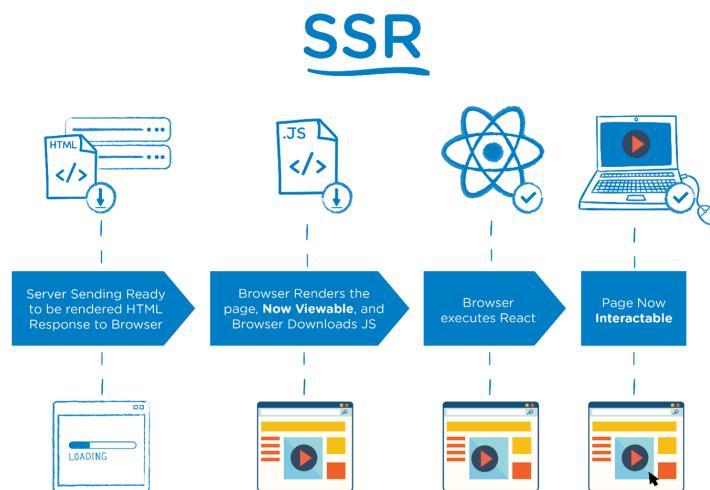


Figure 5.20: Server Side Rendering

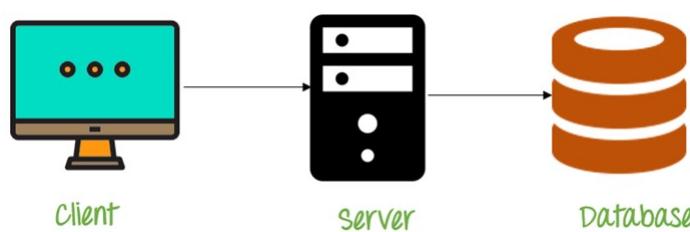


Figure 5.21: Three tier architecture

# Chapter 6

## Results & Analysis

The project I was working is a food delivery website. It is an online solution for the users so that they can enjoy their favorite food right from the comfort of their homes. The Food Delivery Website and Management System, provides the general users and the restaurants with an user-friendly, easy and reliable platform for executing their business. Here I will illustrate with UI pictures the process the General User will follow for placing an order through our system.

### Step 1:

When the user first visits our website they will see the home page where they can enter their location for showing the restaurants near their area. They will also see the different category of food items under the quick search tab. They will also see the available coupons from different restaurants and the all restaurant view.

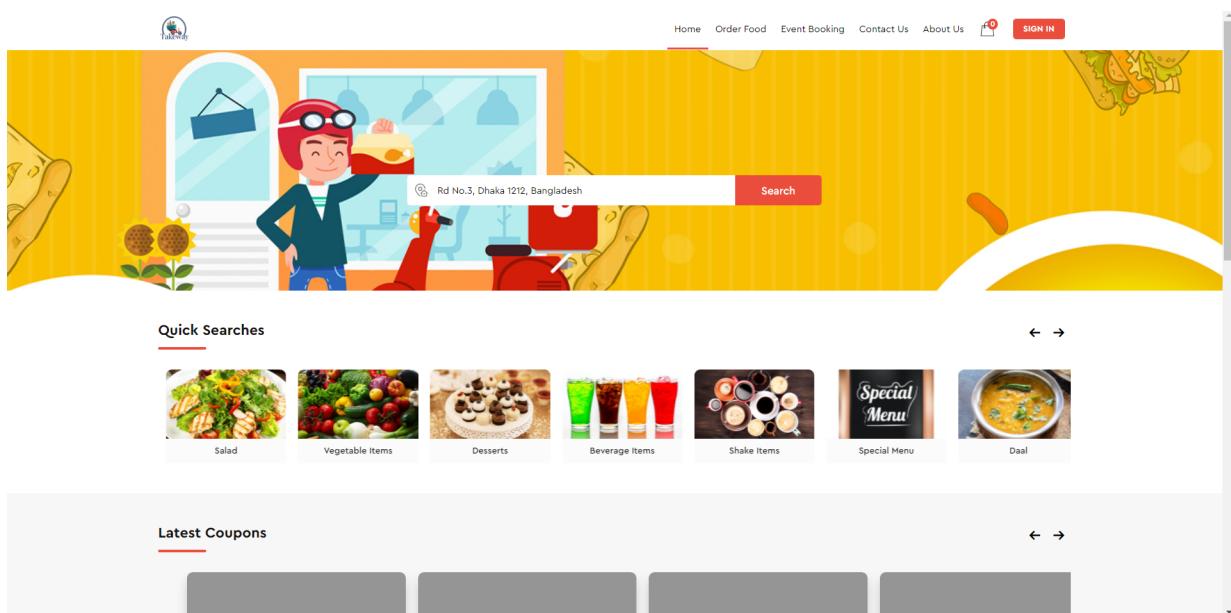


Figure 6.1: Home Page

**Step 2:**

They will login to their account using the sign in button on the top right of the home page. It will take them to the login page. If they do not have an account, they can also sign up from the page. The user can browse our website without log in but for placing an order they need to be logged in.

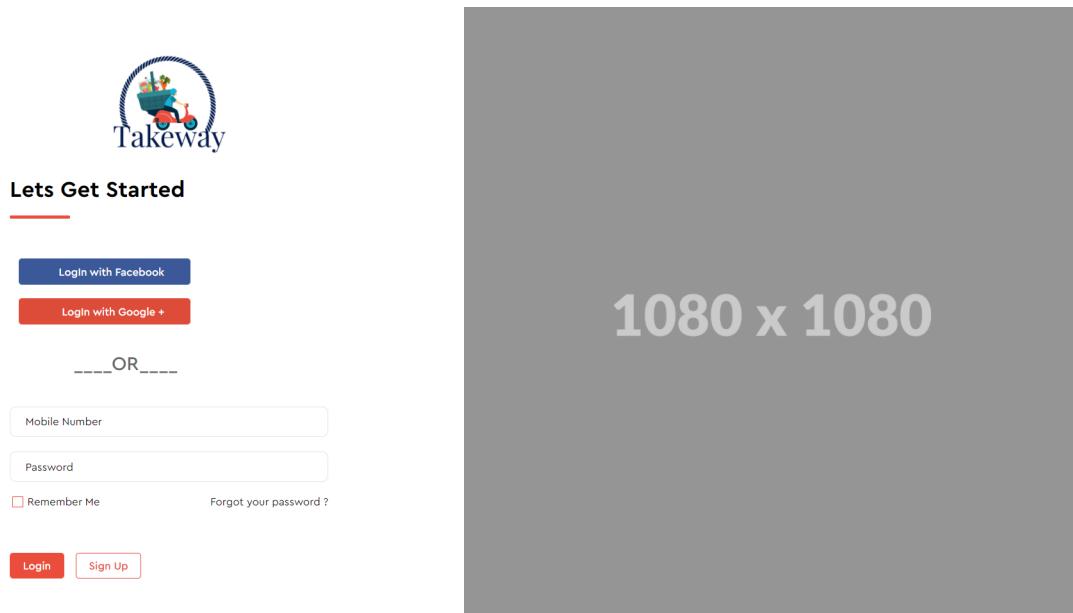


Figure 6.2: User Login

**Step 3:**

Then they will go to the all restaurant segment and look for the restaurant they want to order from. They will then click on the restaurant and see the detailed information of the restaurant along with the menu of the restaurant.

## CHAPTER 6. RESULTS & ANALYSIS

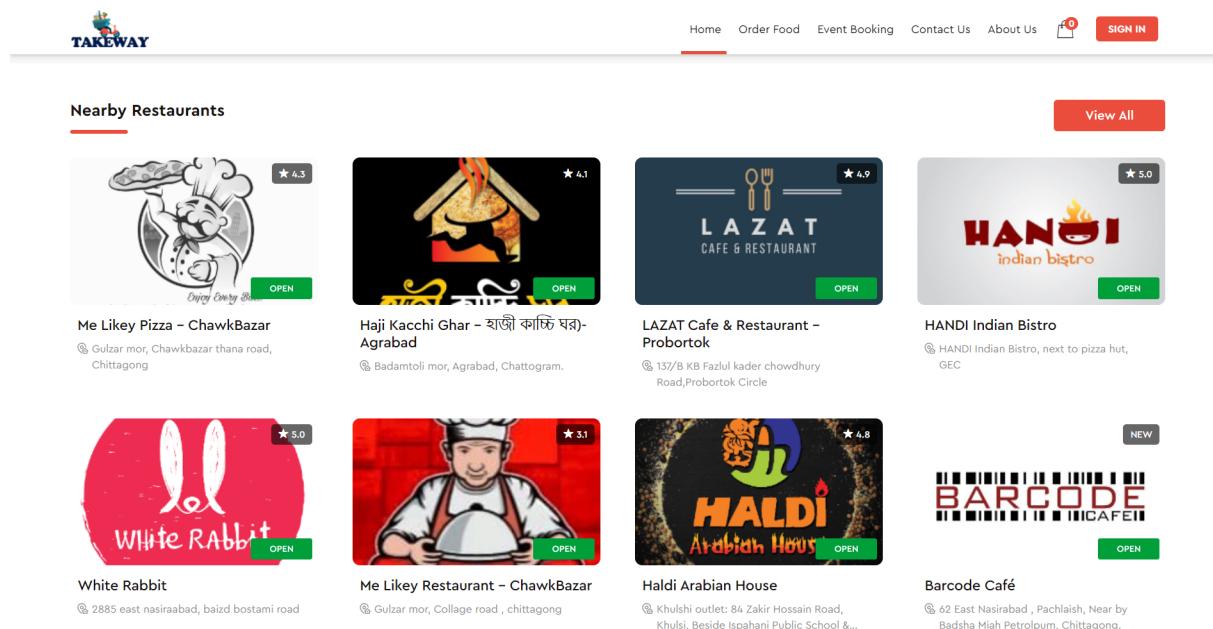


Figure 6.3: Restaurant View

This screenshot shows the detailed view for 'Me Likey Pizza - ChawkBazar'. At the top, it has the restaurant's name, address (Gulzar mor, Chawkbazar thana road, Chittagong), rating (4.3), operating hours (11:00 AM-8:00 PM), and phone number (01715433273). Below this, there's a section titled 'Order Your Food From Me Likey Pizza - ChawkBazar' with 'Menu' and 'Review and Ratings' buttons. A search bar allows users to 'Search your dishes'. Underneath, there are filters for 'Burger', 'Pasta', 'Pizza', and checkboxes for 'Veg', 'Non veg', 'View All', 'Sort by Price (high to low)', and 'Sort by Price (low to high)'. A 'Popular Items' section shows a thumbnail for 'Me Likey Premium Pizza' with an 'Add' button. To the right, there's a 'Your Cart' section with an illustration of a person holding a megaphone and a sign that says 'Your cart is empty'.

Figure 6.4: Single Restaurant View(1)

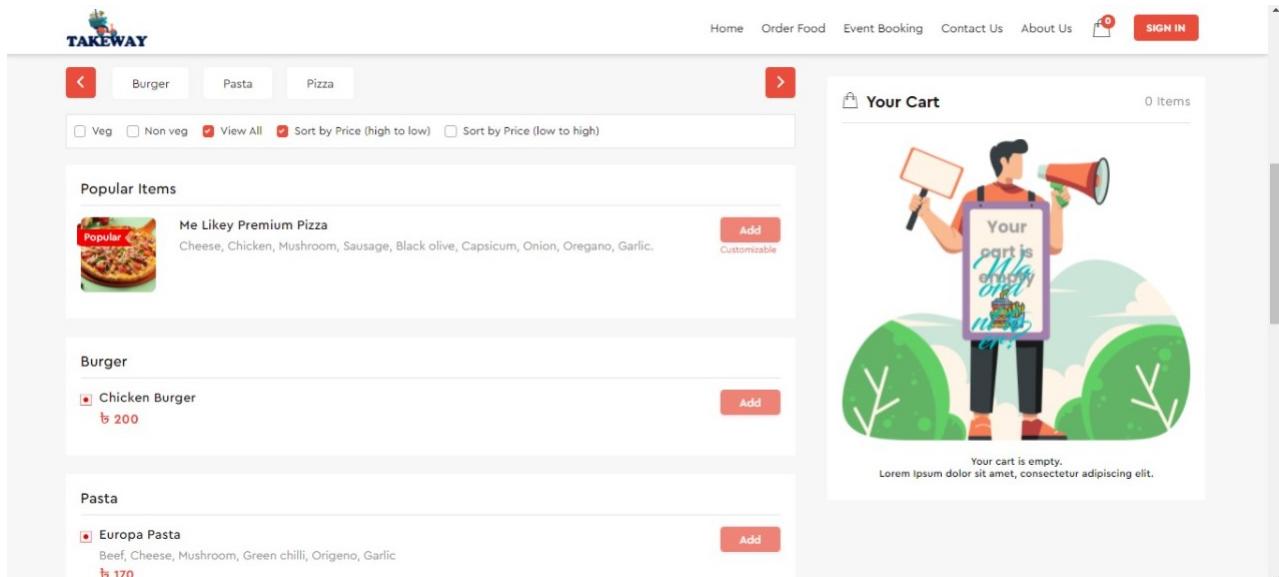


Figure 6.5: Single Restaurant View(2)

#### Step 4:

They will click add button to add all the items they want to order and the items will be added to their cart. They can change how many of the same item they want from their cart. Finally they can click the continue button when they are ready to place their order.

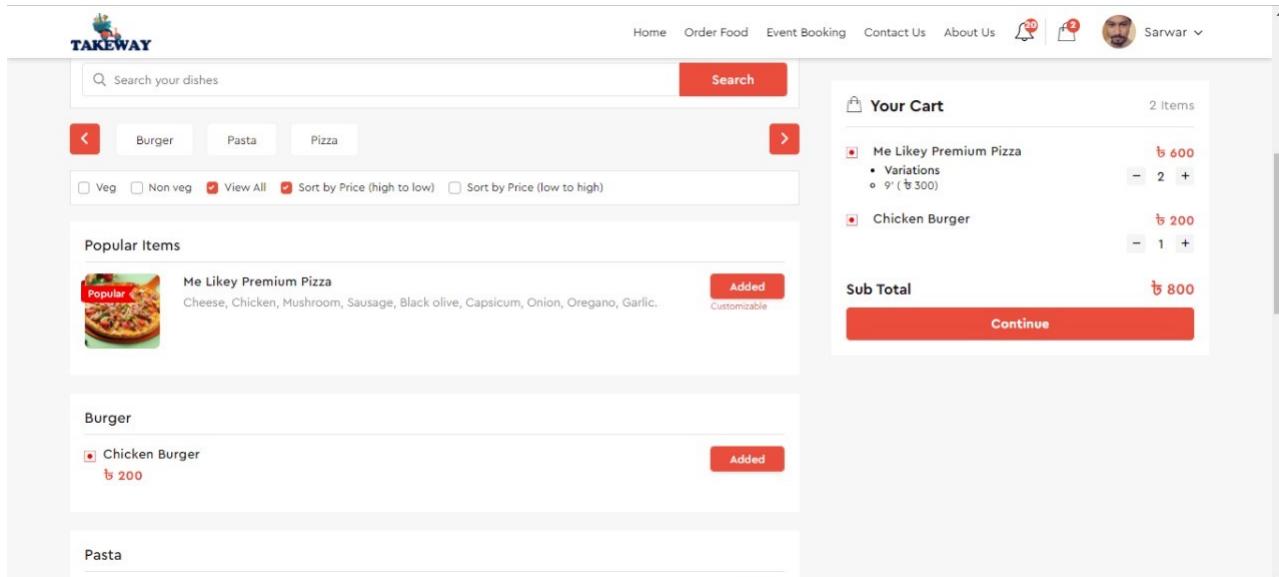


Figure 6.6: Cart View(2)

**Step 5:**

Then they will be taken to the check out page. From the check out page they can double check the items that they have ordered. Then they will determine the delivery address and proceed to checking out. Through this their order will be placed.

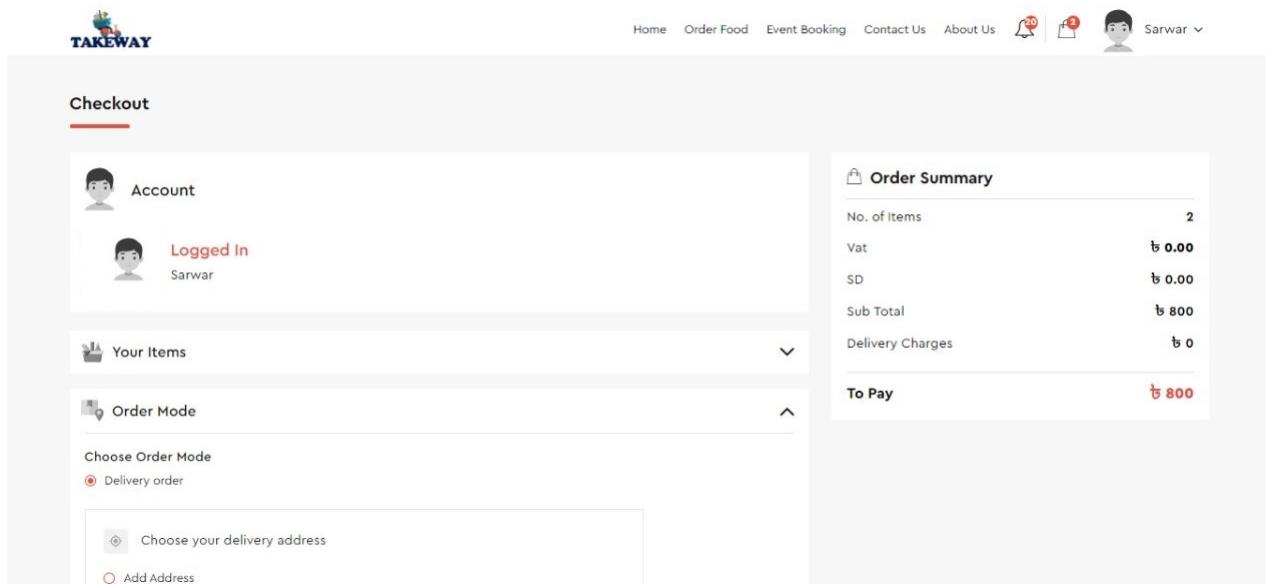


Figure 6.7: Checkout Page View

**Step 6:**

After logging into the restaurant admin panel, the admin will go to the order section of the restaurant admin panel. There they will see all the orders and their detailed information. They admin can accept, reject, delete, see the invoice of the order, assign rider for delivering the order, the rider invoice and also see the time when status of the order was changed. Thus the whole ordering process and the managing order process is completed.

The screenshot shows a management interface for a food delivery service. On the left is a sidebar with various menu items like Restaurant, Zones, Menu Category, Campaigns, Parcel Types, Orders, Event Booking, Coupons, Rating & Review, Notifications, Slider, and CMS. The Orders section is expanded, showing sub-options: All Orders, Pre Order, Placed, Delivered, On Going, Cancel, and Deleted Orders. A notification bell icon shows 0 notifications.

The main area is titled "Order List" and displays two orders:

Order#	Business Type	User	Receiver's Details	Order Total	Order Assign To	Order Status	Order Date	Order Type	Status	Action
5852	Me Likey Pizza - ChawkBazar	Sarwar	Name: Sarwar Address: Bag. 38 Chatteswari Road, Chittagong, Bangladesh, Chittagong Division, Contact Number: 01644610434	৳171.00	No response from riders	Placed	01-07-2021 10:09 PM	Delivery order	Deactive	<input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject <input checked="" type="checkbox"/> Delete <input type="checkbox"/> Invoice <input type="checkbox"/> Rider's Invoice <input type="checkbox"/> Status History <input type="checkbox"/> Assign Driver
5851	Sadia's Kitchen-Chawkbazar	Md Saiful Kabir	Name: Md Saiful Kabir Address: 01864812194, মিলিজ সর্বাধিকার হাসপাতাল, Omar Ali Matabbar Rd, Chittagong, Bangladesh, Chittagong Division, Contact Number:	৳274.00	Abdur Rahman	Delivered	01-07-2021 7:50 PM	Delivery order	Active	<input type="checkbox"/> Delete <input type="checkbox"/> Invoice <input type="checkbox"/> Change Status <input checked="" type="checkbox"/> Rider's Invoice <input type="checkbox"/> Status History <input type="checkbox"/> Assign Driver <input type="checkbox"/> Track Driver

Figure 6.8: Management Panel (Manage Order)

# Chapter 7

## Project as Engineering Problem Analysis

### 7.1 Sustainability of the Project/Work

One of the most pressing issues of our day is sustainability. How can we achieve riches without jeopardizing future generations' lives? Sustainability is being incorporated into marketing, business communication, yearly reports, and company operations. Project management has recently been related to the concept of sustainability, which plays an important role in the realization of more sustainable corporate practices. [6]

Our staff will monitor the "Food Delivery Website and Management System" for the specified time period, as agreed with the client. Our team will repair any bugs or difficulties that arise during this time. Our team will ensure that the system runs smoothly. If the client requests it, our staff will assist in training and forming an IT maintenance team for them. In addition, the database will be monitored.

### 7.2 Social and Environmental Effects and Analysis

**Social Effects:** The common user can order from the comfort of their own home using our system. Users may see which restaurants are in their immediate vicinity. They can order their favorite food from the restaurant of their choice with only a few mouse clicks. Restaurant administrators can use their control panel to effortlessly manage their establishment. The management panel also allows website administrators to oversee the entire system.

**Environmental Effect:** The system's major purpose is to make it easier for the average person to enjoy their favorite foods from the comfort of their own home. Going outside in this pandemic situation is really dangerous. To halt the spread of the virus, governments all around the world have instituted stringent lockdowns. The gen-

eral public does not have to leave their houses to use the system, which reduces the number of individuals roaming the streets. As a result, there will be a good impact on the environment.

### **7.3 Addressing Ethics and Ethical Issues**

Data is the most vital ingredient for any firm in today's world. Everyone has access to data if they have it. As a result, the most critical consideration is data security. There are several tacit standards and ethical guidelines that must be followed when designing software. During the creation of the product, our development team verified sure there were no contract violations.

All of the data in our system is kept off-site because it has been proven that data kept on-site can be hacked. Data loss, hacking, and corruption are all reduced with this kind of storing. The backend server and database are only accessible to the lead developers. As a result, they can only be accessed using the credentials of the main developer. As a result, the information kept can be considered safe and secure.

# **Chapter 8**

## **Lesson Learned**

### **8.1 Problems Faced During this Period**

Having to work six days a week from 10 a.m. to 8 p.m. while also taking two additional university classes was rather difficult. I've always attempted to give everything I do my all, and my internship was no exception. The communication gap with my coworker was one of the major challenges I had during the internship. It was often difficult to contact senior developers when stuck with a problem due to lockdown and everyone working from home. When a client requested a tweak to a feature, it may be a major headache.

### **8.2 Solution of those Problems**

Throughout my internship, I learnt a lot of useful information and got excellent experience. I've been fortunate to work with such a supportive and cooperative group of people. This internship has also assisted me in identifying my personal strengths and shortcomings. During this internship, I learnt Codeigniter, a new PHP framework, I expanded my knowledge of Git and code debugging, and I learned how to communicate with a group of individuals. I've honed my ability to communicate my thoughts on a given subject. My bosses provided me more time to tackle problems and come up with solutions on my own in order to bridge the communication gap.

# **Chapter 9**

## **Future Work & Conclusion**

### **9.1 Future Works**

Our company strives to give the greatest possible user experience while using our system. For this reason, our systems are constantly monitored so that we can determine what adjustments are required to improve and optimize the system. Clients can request additional features to be added to the “Food Delivery Website and Management System” because it is a live project. The development of a mobile app is one of the project’s primary future tasks. This will make accessing the system and receiving service considerably easier for the average user.

### **9.2 Conclusion**

During my internship at Devenport, I had a fantastic time. Throughout my internship, I learned and implemented a tremendous quantity of new information. I learned about new technologies and approaches that are employed when building a production-ready website. My colleagues at Davenport have pushed me to quickly adjust to changes and come up with reasonable solutions. Throughout my internship, I worked with my seniors and supervisor to resolve any concerns that arose. Despite their busy schedules, they have always been there to support and guide me. I would like to express my gratitude to everyone who has contributed to making my time as an intern so enjoyable and unforgettable.

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