MINI PROJECT REPORT ON

ARROWGRUB

(Based on Online Table Reservation)

MINI PROJECT- CSS300

Submitted in partial fulfilment the requirements for the award of the degree of

BACHELOR OF COMPUTER SCIENCE

Submitted by

ABISHEK T A	**224171003**
BHADRINATH N	**224171015**
SAJAN KUMAR S S	**224171074**

Under the Guidance and Supervision of

Mr. R. VENKATESAN, Assistant Professor-I/CSE/SRC

Mr. M. JEYAPANDIAN, Assistant Professor-II/CSE/SRC

SASTRA

ENGINEERING · MANAGEMENT · LAW · SCIENCES · HUMANITIES · EDUCATION

DEEMED TO BE UNIVERSITY

(U/S 3 of the UGC Act,1956)

THINK MERIT | THINK TRANSPARENCY | THINK SASTRA

THANJAVUR | KUMBAKONAM | CHENNAI

SRINIVASA RAMANUJAN CENTRE

KUMBAKONAM-612 001

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BONAFIDE CERTIFICATE

Certified that this project work titled **"ARROWGRUB"** submitted to Srinivasa Ramanujan Centre, Shanmugha Arts, Science, Technology & Research Academy, SASTRA Deemed to be University, by **ABISHEK T A(224171003)** Bachelor of Computer Science, **N.BHADRINATH(224171015)** Bachelor of Computer Science, and **S.S.SAJAN KUMAR(224171074)** Bachelor of Computer Science, program in partial fulfilment of the requirement for the award of the degree of **BACHELOR OF COMPUTER SCIENCE**. This work is an original and independent work carried out under supervision, during the period **December 2023 – April 2024**

COORDINATORS:

Mr. Venkatesan R, Assistant Professor-I/CSE/SRC

Mr. Jeyapandian M, Assistant Professor-II/CSE/SRC Submitted for University Examination held on

EXAMINER I **EXAMINER II**

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DECLARATION

We submit this project work titled **"ARROWGRUB"** was submitted to Srinivasa Ramanujan Centre, Shanmugha Arts, Science, Technology & Research Academy, SASTRA Deemed to be University, in partial fulfilment of the requirement for the award of the degree of BACHELOR OF COMPUTER SCIENCE. We declare that this work is carried out under the supervision and guidance of Mr. R. Venkatesan and Mr. M. Jeya Pandian, Department of Computer Science, Srinivasa Ramanujan Centre, Kumbakonam.

Place: Kumbakonam

Date:

Name: Abishek T A **Signature:**

Reg No: 224171003

Name: N. Bhadrinath **Signature:**

Reg No: 224171015

Name: S.S. Sajan Kumar **Signature:**

Reg No: 224171074

ACKNOWLEDGEMENT

We pay our sincere obedience to **GOD ALMIGHTY** for their grace and infinite mercy and for showering on us their blessings.

We would like to express our sincere thanks to our **Chancellor Prof. R. Sethuraman, Vice-Chancellor Dr. S. Vaidhyasubramaniam** and **Register Dr. R. Chandramouli** for allowing us to be a student of this esteemed institution.

We express our deepest thanks to our revered Dean **Dr. V. Ramaswamy**, **Dean** and **Dr. A. Allirani, Associate Dean,** Srinivasa Ramanujan Centre, SASTRA Deemed to be University for all their moral support and suggestions when required without any reservations.

We would like to express our deep sense of gratitude to the project coordinators **Mr. R. Venkatesan Assistant Professor I** and **Mr. M. Jeyapandian Assistant Professor II**, Department of Computer Science, for their cordial support and meticulous guidance which enabled us to complete this project successfully.

We would like to express our sincere thanks to our Dr.Kalaichelvi **Associate PROFESSOR,** Department of Computer Science, for their cordial support and meticulous guidance which enabled us to complete this project successfully.

Without the support of our parents and friends, this project would never have become a reality. We owe our sincere thanks to them.

We dedicate this work to all our well-wishers, with love and affections. Our sincere thanks to all faculty in the department who have directly or indirectly helped us in completing this project.

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ABSTRACT

In modern days, most people find it difficult to bear to wait for a table and to order food in a restaurant. Almost all the restaurants have difficulties in taking and processing orders, which triggers inconvenience to the customers. To reserve a table to dine at a desirable time the customer needs to communicate with the restaurant to reserve the table. When multiple staff members handle reservations without a centralized system, there is a lack of a comprehensive overview of the existing bookings. In such a hectic and noisy environment, mistakes are bound to occur from noting down the wrong menu and date or hour to missing reservations entirely. This system will overcome these problems. The restaurant table reservation system is robust, and the menu-based options will be easier to operate. This system manages two main services, the first one would be available for general customers to view and book tables and to order their desired dishes from the available menu of the restaurant. Secondly, the admin manages the services within the restaurants listed in the locality. The proposed system will benefit restaurants by increasing their customer satisfaction, the number of food orders, and their revenue by reducing the customer's waiting time.

Keywords: surge price framing model, Ubiquitous web interface, Human computer interaction enabled system.

ABBREVIATION

HTML – Hypertext Markup Language

CSS – Cascading Style Sheet

JS - Javascipt

LIST OF FIGURES

SYSTEM REQUIREMENTS

Name of the Component	Specification
Development Framework	HTML, CSS
Language	Java
Database	PHP, MySQL
Operating System	Windows 10

TABLE OF CONTENTS

1. INTRODUCTION

The Online Table Reservation system is a training system that is a convenient self-service table and menu booking system. The booking process could be adjusted, managed restaurant reservations. The services provided are table and menu booking. The main objective is to provide seat reservation and ordering services to the customer. The major intent of the task is for the owner of the restaurant to directly deal with the clients. The idea is caught by keeping in mind the reality that the clients think it is difficult to go to the restaurant, because of the delicate amount of time required to book the table and menu. In a restaurant, the manager needs to analyze many paper receipts to check the customer-ordered menu, so the proposed system may help to reduce these kinds of problems. The customer needs to signup/login then only he can access the booking process. The customer can see the availability of seats at a desired time and book their seats without making a phone call to the restaurant.

2. WEBSITE DEVELOPMENT PROCESS

2.1 Various steps consider developing a website

Analysis: Firstly, better understand the website requirement creation, including website Design and Website looks and feels, the Web pages uses, website content and for suggestion and discussions, a proper space available on a web site for easily approachable.

Design & Development: Invention and Development is a significant role plays in Web Development. The Interface looks and feel according to most impressive and efficient way, Graphical elements required for design are appearing more impressive, for this use colour and image.

Content Writing: Writing of contents isa significant part of development of web pages and plays an important and necessary step in optimization Engine, a well-defined or easy content is utterly necessary to fall in internet site users. Content written by a more professional requires more pure, easy and accurate content.

Testing & Security: Testing as well play an important role in website development, testing is done for browser compatibility, broken links and can check the speed of loading pages and loading speed of images. We can also check validation of HTML code, validation of CSS, checking of spelling and build alterations to rectification of mistakes and can perform test of functional on processes of websites like Booking, Order menu, Signup, Login, Admin side, etc., these checks as per requirement.

2.2 Actual Implementation:

In our project we created an Online Restaurant management System website which having the complete information of items and the restaurant table. This Website shows the exact interior table view of the restaurant and which is develop with some ideas and portability purpose that may help some fresher to look around it and may show some interest against the restaurant management by doing some enquiry through these websites. Here the data is arranged properly by which its updating will be easier in future as the requirement or demand increase towards the website. It contains updated and useful for data for the online restaurant management. We have used platform HTML, CSS, JS for frontend and PHP, MYSQL for backend in our restaurant management.

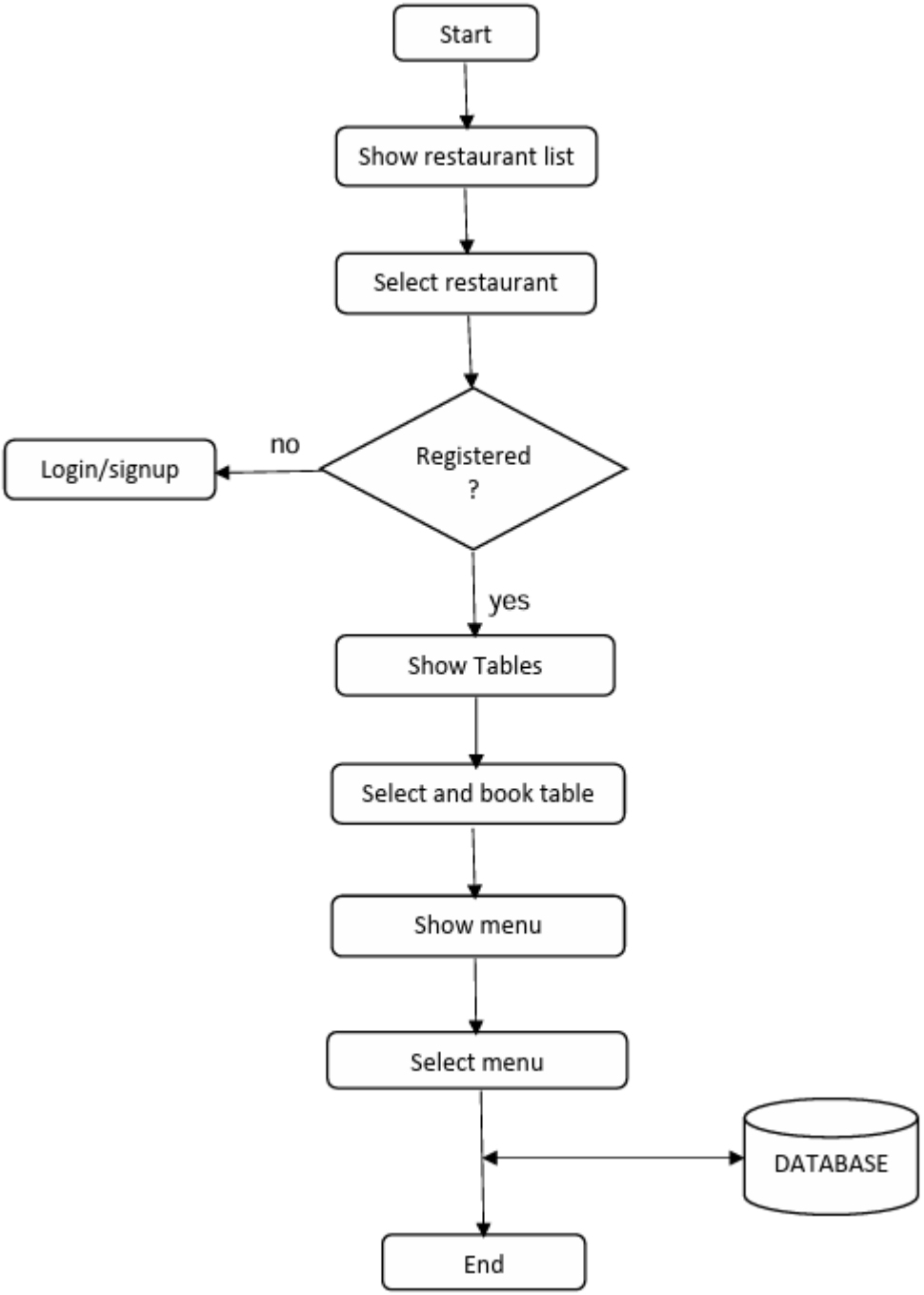
There are 5 modules in our project:

- First module is home module. In that home module we have given the Photos of restaurant and a search bar. When the customer opens website, it will open the home page.
- Second module is Restaurant overview. In this module we give the details of restaurant and owner words.
- Third module is Table view. In this module we show the exact table position and they can select and book the tables.
- Fourth module is Menu. In this module we insert the items which is available at restaurant like chicken burger, pizza, crab lollipop, etc.,
- Fifth module is Feedback, In this module customer can write and give rating from 1 to 10 of the given question.

3.WORK-FLOW DIAGRAM

The architecture diagram shows how the website works using MySQL, Java and HTML. Following below are the flow diagram to describe working.

Fig.3.1



4. SNAPSHOTS:

Home Page:

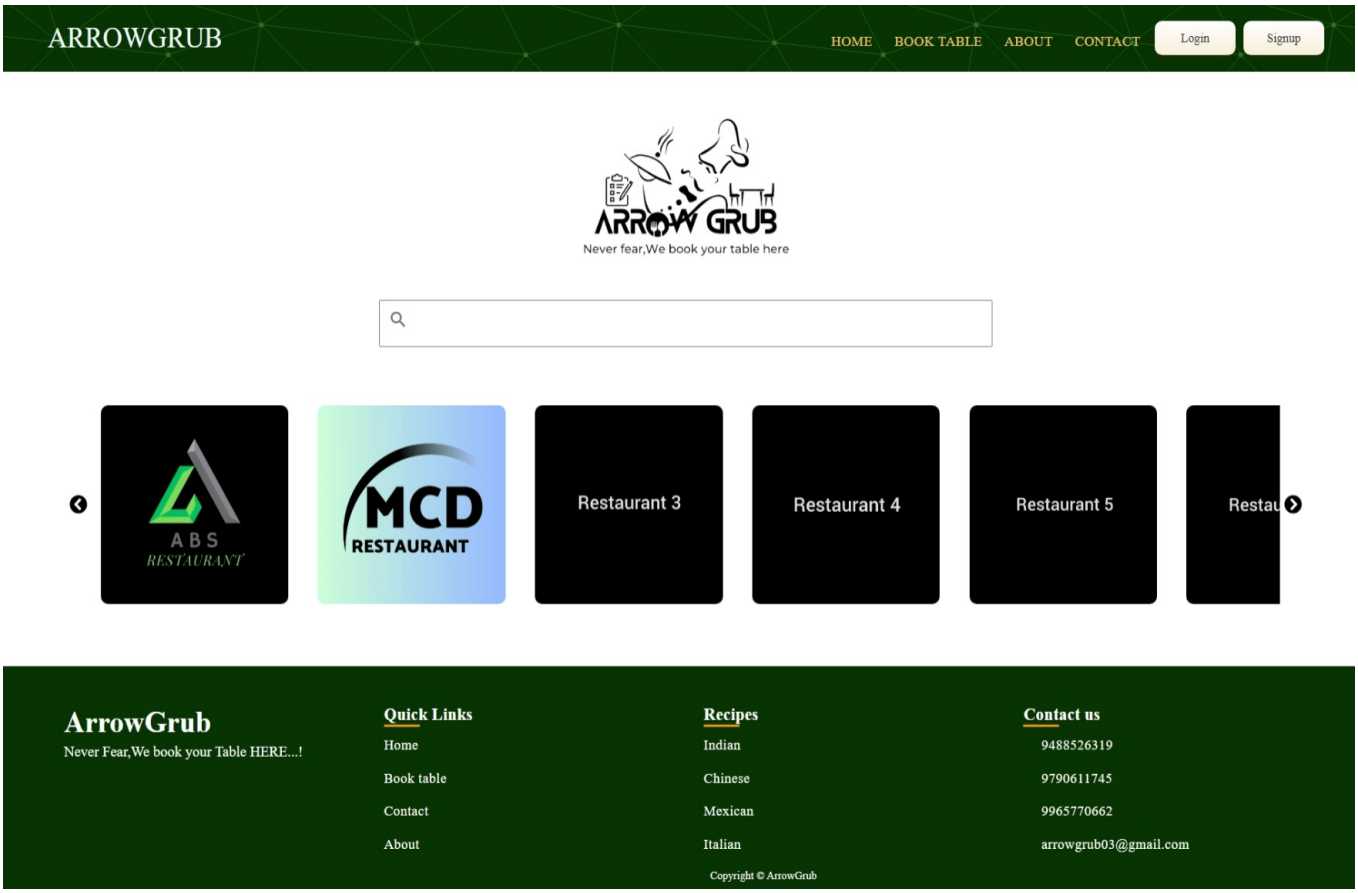


Fig 4.1: In this module, the customer can the list of restaurants given in the image carousal and they can also search their favourite restaurant in the given search bar.

Restaurant Overview:

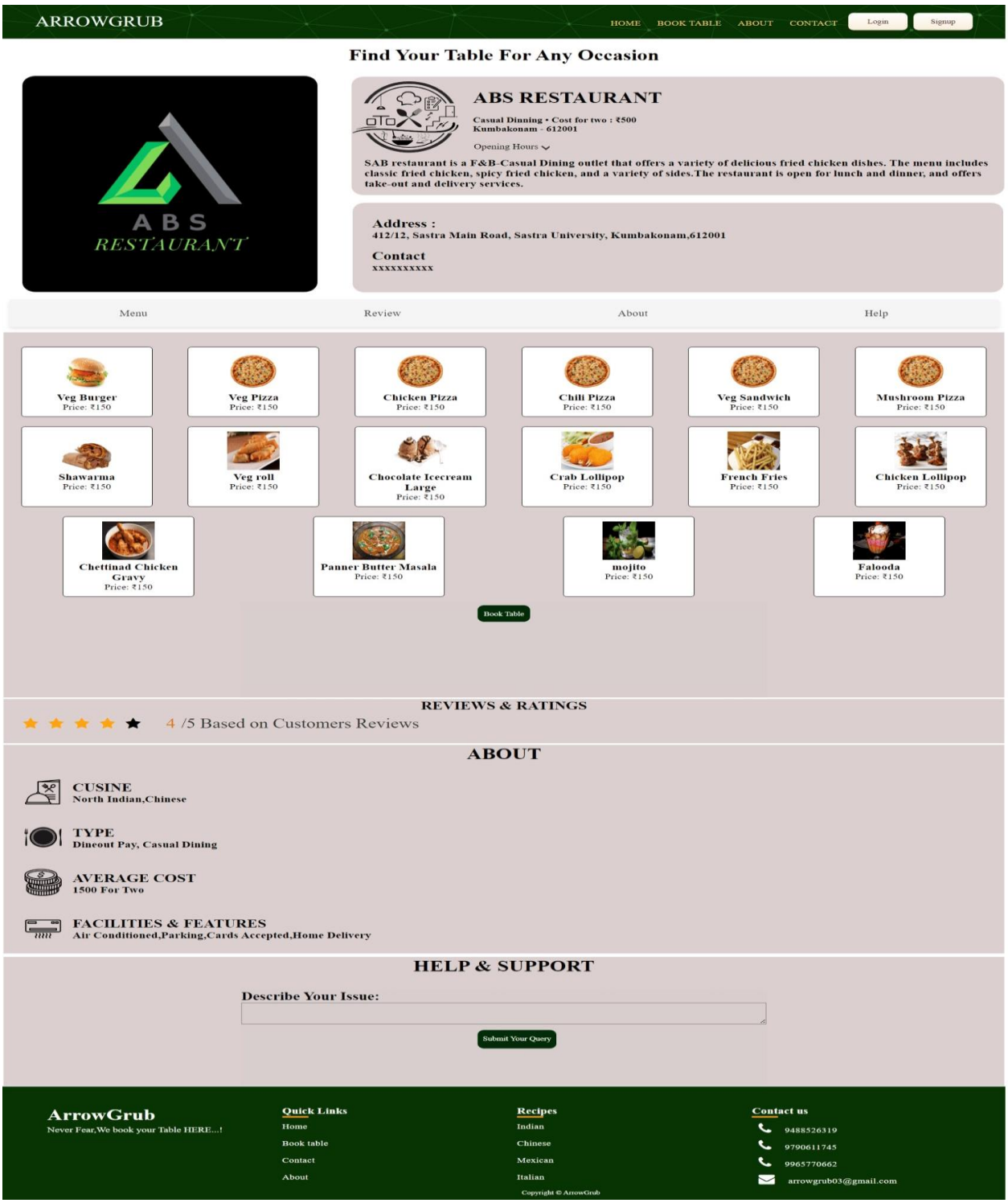


Fig.4.2: In this module, it contains the overall view of the selected restaurant (ABS restaurant).

Table Overview:

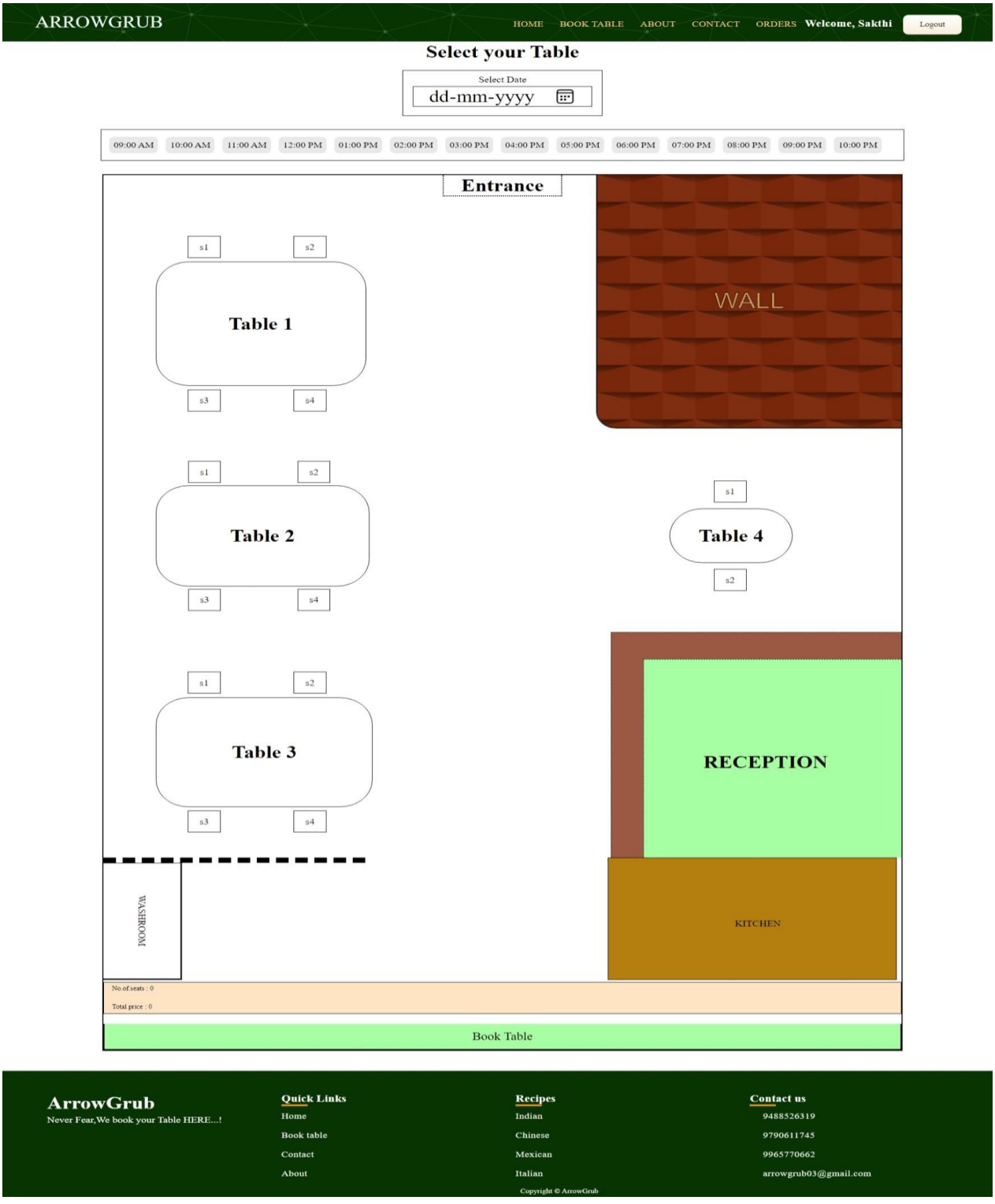


Fig.4.3: In this module, the customer can view, select and book their tables

Menu List:

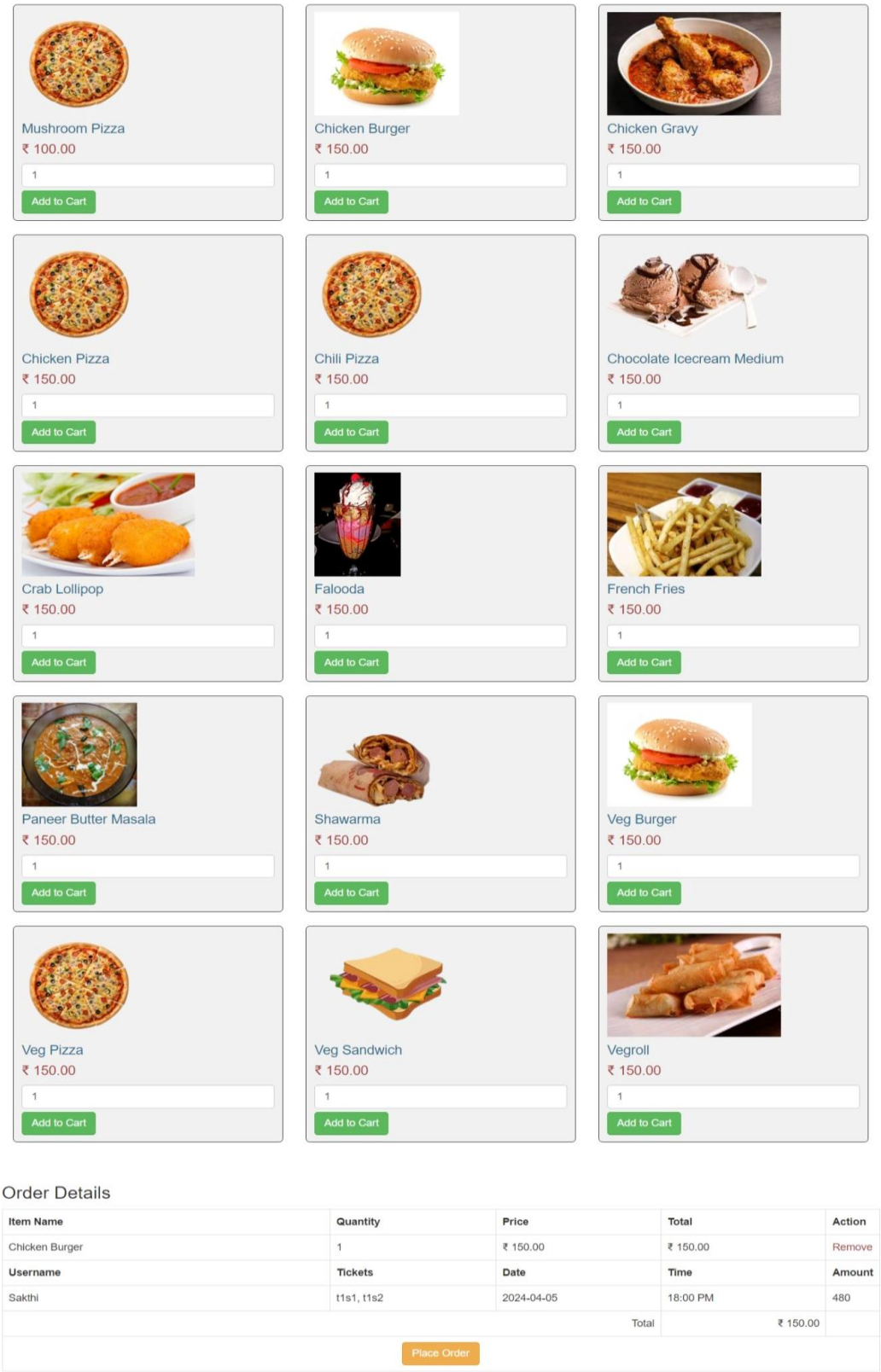


Fig 4.4: In this module, the customer can order their favourite menu dish in the given list.

Feedback Page:

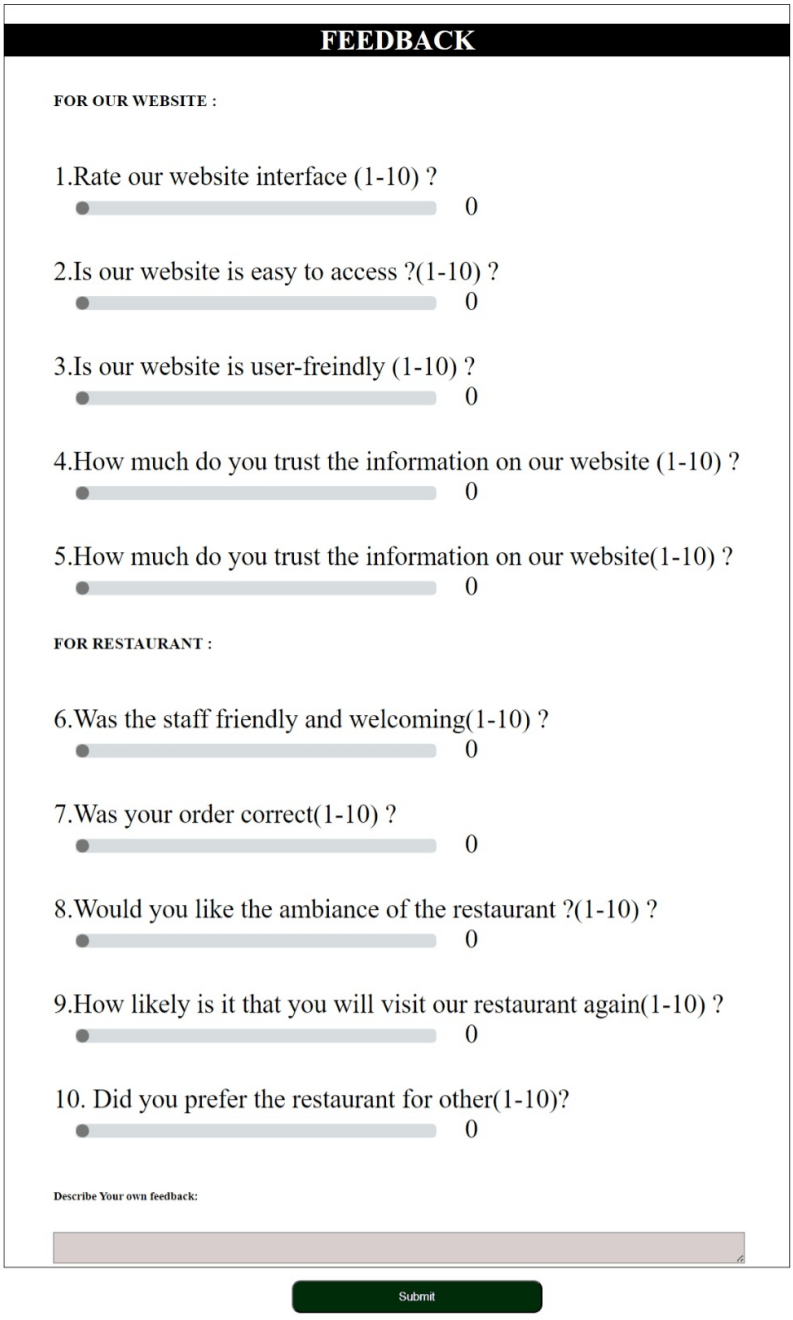


Fig 4.5: In this module, the customer can give the feedback about the website and about the restaurant.

About Page:

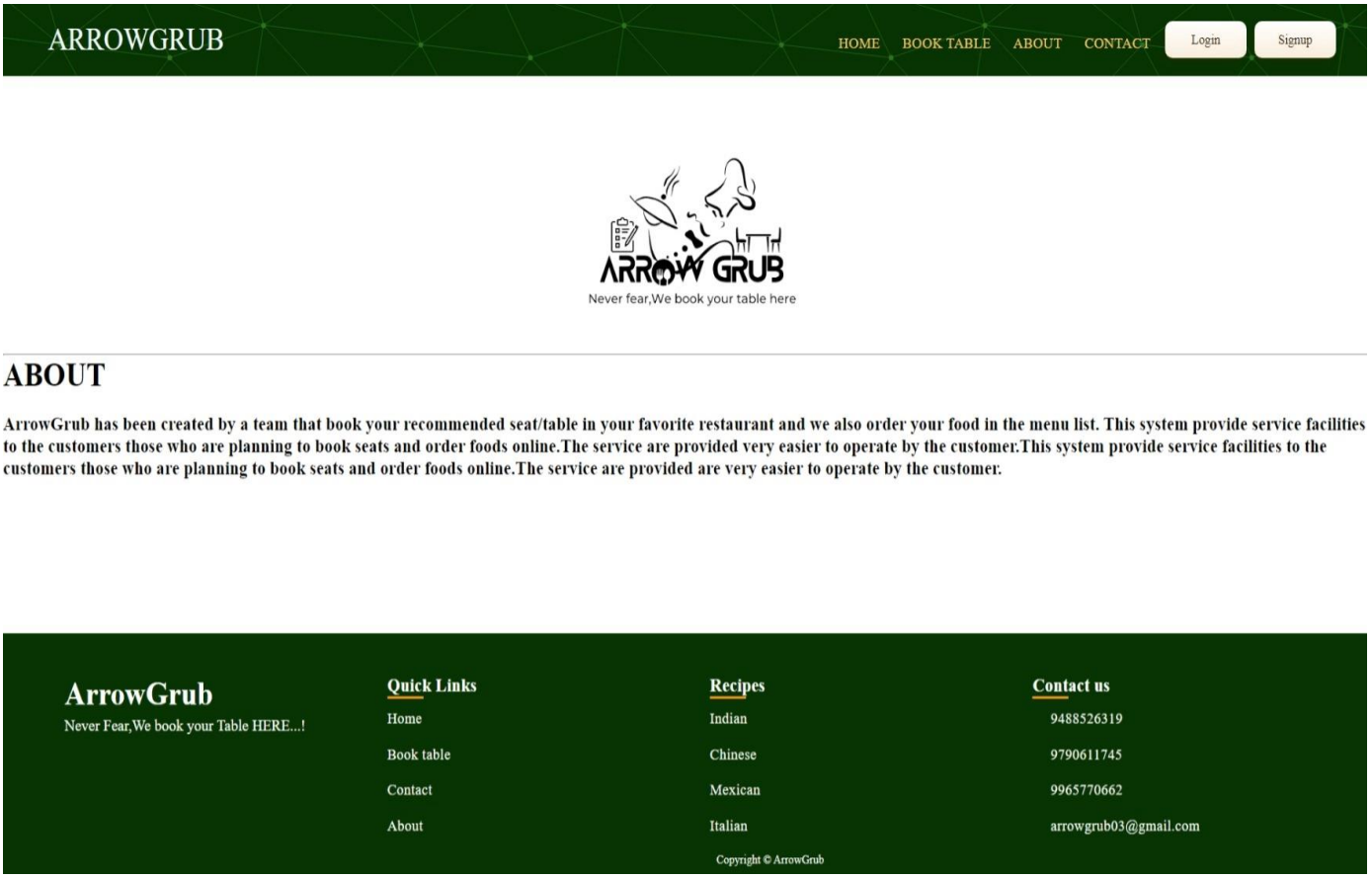
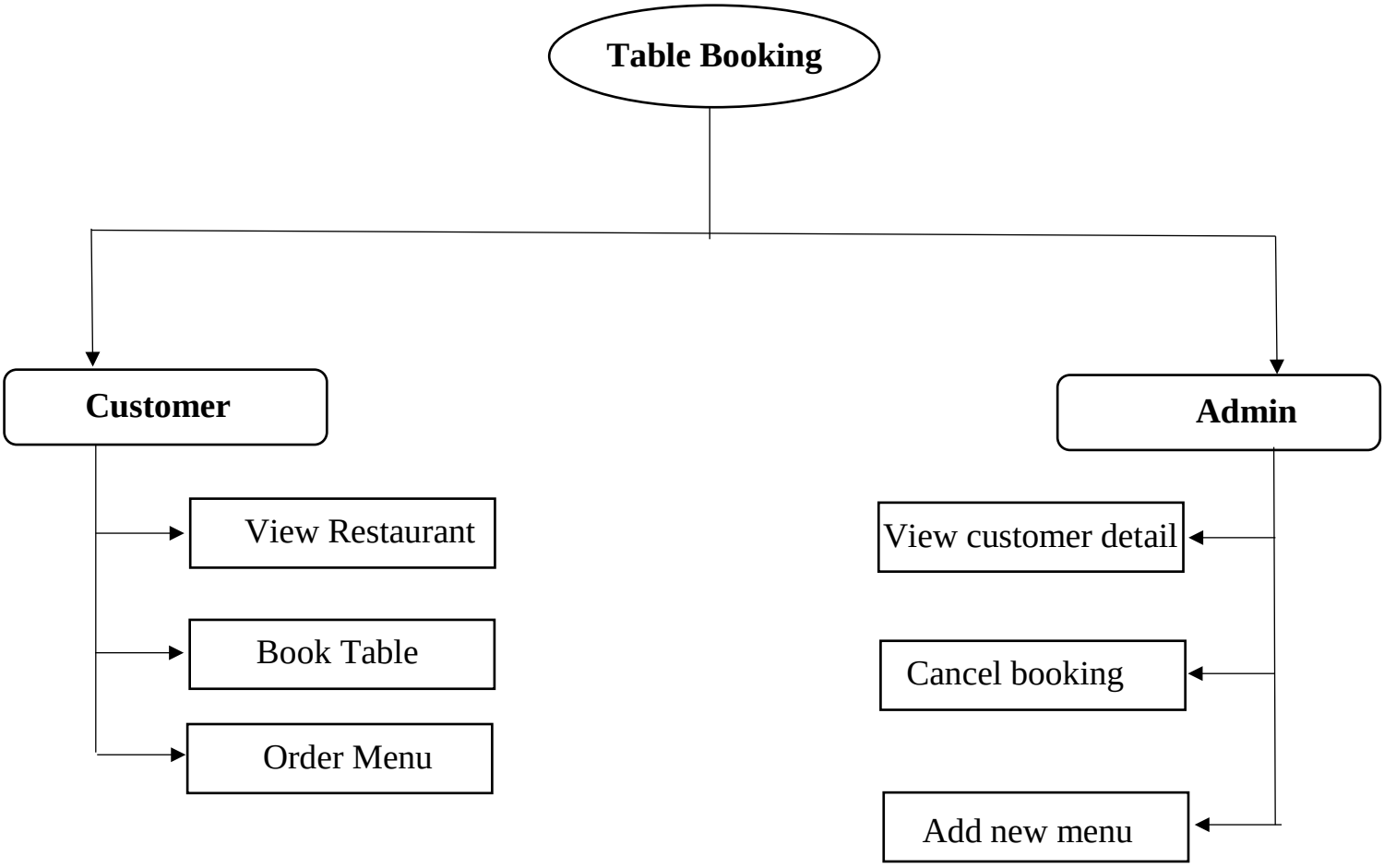


Fig 4.6: In this module, it shows the detail of the website.

5. ARCHITECTURE DIAGRAM



6. SOURCE CODE:

6.1 HTML CODES

Home Page (HTML code)

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">

   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>ArrowGrub</title>
   <link rel="icon" href="./Asset/Images/ArrowGrub.png" type="Image/x-icon">
   <link rel="stylesheet" href="./Asset/css/styles.css">
   <script src="https://code.jquery.com/jquery-3.7.1.min.js" integrity="sha256-
/JqT3SQfawRcv/BIHPThkBvs0OEvtFFmqPF/lYI/Cxo="
crossorigin="anonymous"></script>
   <script src="./Asset/js/index.js" async></script>
</head>
<body>
<!--Header-->
  <div id="head1"></div>
<!--Logo  (Page-1,step-2)-->
       <img class="arrowimg" src="./Asset/Images/ArrowGrub_bgremoved.png"
alt="Image not found" width="320">
<!--Code for search bar(pg-1,step-3)-->
  <div class="sbar"></div>
<!--Code for Slider (Page-1,step-4)-->
<div class="container">
   <div class="carousel-view">
     <button id="prev-btn" class="prev-btn">
      <svg viewBox="0 0 512 512" width="20" title="chevron-circle-left">
   <path d="M256 504C119 504 8 393 8 256S119 8 256 8s248 111 248 248-111 248-
248 248zM142.1 273l135.5 135.5c9.4 9.4 24.6 9.4 33.9 0l17-17c9.4-9.4 9.4-24.6 0-
33.9L226.9 256l101.6-101.6c9.4-9.4 9.4-24.6 0-33.9l-17-17c-9.4-9.4-24.6-9.4-33.9
0L142.1 239c-9.4 9.4-9.4 24.6 0 34z" />
```

```
</svg>
      </button>
      <div id="item-list" class="item-list">
         <a href="./ABS_home.html"><img id="item" class="item"
src="./Asset/Images/ABS.png"></a>
         <a href="./re2.html"><img id="item" class="item"
src="./Asset/Images/MCD.png"></a>
         <a href="#"><img id="item" class="item" src="./Asset/Images/R3.jpg"></a>
         <a href="#"><img id="item" class="item" src="./Asset/Images/R4.jpg"></a>
         <a href="#"><img id="item" class="item" src="./Asset/Images/R5.jpg"></a>
         <a href="#"><img id="item" class="item" src="./Asset/Images/R6.jpg"></a>
         <a href="#"><img id="item" class="item" src="./Asset/Images/R7.jpg"></a>
      </div>
      <button id="next-btn" class="next-btn">
          <svg viewBox="0 0 512 512" width="20" title="chevron-circle-right">
    <path d="M256 8c137 0 248 111 248 248S393 504 256 504 8 393 8 256 119 8 256
8zm113.9 231L234.4 103.5c-9.4-9.4-24.6-9.4-33.9 0l-17 17c-9.4 9.4-9.4 24.6 0
33.9L285.1 256 183.5 357.6c-9.4 9.4-9.4 24.6 0 33.9l17 17c9.4 9.4 24.6 9.4 33.9
0L369.9 273c9.4-9.4 9.4-24.6 0-34z" />
  </svg>
         </button>
      </div>
  </div>
  <!--footer-->
    <div class="footer"></div>
</body>
</html>
```

6.2 CSS CODES

Home Page (CSS code)

```
/*Navbar (pg-1,step-1)*/
*{
    margin: 0;
    padding: 0;
    font-family: "futura md bt";
    text-decoration: none;
    list-style: none;
```

```
    box-sizing: border-box;

}
body {
    background: #fff;
}
/*Code for Image(pg-1,step-2*/
.arrowimg{
  display: block;
  margin: 3% auto;
}
@media screen and (max-width: 660px){
  .arrowimg{
    margin-top: 3%;
    margin-bottom: 3%;
  }
}
/*Code for search bar(pg-1,step-3)*/
.input-box {
  position: relative;
  height: 76px;
  max-width: 67%;
  width: 100%;
  background: none;
  margin-top: 1%;
  margin-left: auto;
  margin-right: auto;
  border-radius: 8px;
  border: solid #1f1818;
  box-shadow: 0 5px 10px rgba(0, 0, 0, 0.1);
}
.input-box i,
.input-box .button {
  position: absolute;
  top: 50%;
  transform: translateY(-50%);
}
.input-box i {
  left: 20%;
```

```
  font-size: 40%;
  color: #000;
}
.input-box input {
  height: 100%;
  width: 100%;
  outline: none;
  font-size: 110%;
  font-weight: 400;
  border: none;
  padding: 0 30% 0 3%;
  background-color: transparent;
}
.input-box .button {
  right: 2%;
  font-size: 100%;
  font-weight: 400;
  color: #fff;
  border: none;
  padding: 1.2% 3%;
  border-radius: 6px;
  background-color: #083302;
  cursor: pointer;
}
.input-box .button:active {
  transform: translateY(-50%) scale(0.98);
}
@media screen and (max-width: 1280px){
  .input-box{
    position: relative;
  height: 76px;
  max-width: auto;
  width: 100%;
  background: none;
  margin: 5% 0%;
  margin-left: auto;
  margin-right: auto;
  border-radius: 8px;
  border: solid #1f1818;
```

```
  box-shadow: 0 5px 10px rgba(0, 0, 0, 0.1);
  }
  .carousel-view .item-list {
  max-width: auto;
  width: 75vw;
  padding: 50px 10px;
  display: flex;
  gap: 33px;
  scroll-behavior: smooth;
  transition: all 0.25s ease-in;
  -ms-overflow-style: none;
  scrollbar-width: none;
  overflow: auto;
  scroll-snap-type: x mandatory;
}
}
@media screen and (max-width: 950px){
    .container{
        width:auto;
        height: auto;
    }
    .item{
        min-width: 100px;
        height: 100px;
    }
}
```

7. ALGORITHM:

7.1 Dynamic Price Algorithm

```
<script>
      document.addEventListener("DOMContentLoaded", function () {
        const seats = document.querySelectorAll('input[type="checkbox"]');
        const amountDisplay = document.querySelector(".amount");
        const countDisplay = document.querySelector(".count");
        let totalAmount = 0;
        let selectedSeats = 0;
        seats.forEach((seat) => {
          seat.addEventListener("change", () => {
            const basePrice = 20;
            const dynamicPrice = calculateDynamicPrice(basePrice);
            if (seat.checked) {
              totalAmount += dynamicPrice;
              selectedSeats++;
            } else {
              totalAmount -= dynamicPrice;
              selectedSeats--;
            }
            amountDisplay.textContent = totalAmount.toFixed(2);
            countDisplay.textContent = selectedSeats;
            const finalAmount = calculateFinalAmount(totalAmount);
            console.log("Final Amount:", finalAmount);
          });
        });
        function calculateDynamicPrice(basePrice) {
          const selectedTimeInput = document.querySelector(
            'input[name="time"]:checked'
          );
          if (!selectedTimeInput) {
            return basePrice;
          }
          const selectedTime = selectedTimeInput.value;
          const selectedHours = parseInt(selectedTime.split(":")[0]);
          let extra_charge = 20;
          if (selectedHours >= 18 && selectedHours <= 23) {
```

```
          return basePrice + extra_charge;
        } else {
          return basePrice;
        }
      }

      function calculateFinalAmount(totalAmount) {
        return totalAmount;
      }
    });
</script>
```

7.2 Dynamic Time Restriction Algorithm

```
<script>
    document.addEventListener("DOMContentLoaded", function () {
      const timeContainer = document.querySelector('.times');
      const dateInput = document.getElementById('restrict1')
      function updateTimeSlots() {
        const currentTime = new Date().getHours();
        const selectedDate = new Date(dateInput.value);
        const currentDate = new Date();
        currentDate.setHours(0, 0, 0, 0);
        selectedDate.setHours(0, 0, 0, 0);
        if (selectedDate > currentDate) {
timeContainer.querySelectorAll('input[type="radio"]').forEach(option => {
            option.disabled = false; // Enable all time slots });
        } else if (selectedDate.getTime() === currentDate.getTime()) {
timeContainer.querySelectorAll('input[type="radio"]').forEach(option => {
            const hour = parseInt(option.value.split(":")[0]);
            if (hour < currentTime) {
              option.disabled = true;} else {
              option.disabled = false
}});} else {
          timeContainer.querySelectorAll('input[type="radio"]').forEach(option => {
            option.disabled = true;});}updateTimeSlots();
      dateInput.addEventListener('change', updateTimeSlots);
);
    </script>
```

11. CONCLUSIONS AND FUTURE ENHANCEMENTS

The project describes that if the customer visits the restaurant perhaps there is no table available the customer needs to wait so long. With the help of this system, the customer can select their desired table according to their wish. The customer can see the restaurant view exactly and select their seat and menu. It allows the client to book their table and menu without waiting for a long time. This system will get its important day by day.

The future enhancement of this project is to implement:

- **Send Notification:** The customer wants to book a table. but, it already reserved. Whether the reserved table is free, the customer got a notification “table is free”.

- **Admin can change price:** The Admin can change the price of the table at peak hours and price of the menu.

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