RESTAURANT MANAGEMENT SYSTEM

A MINI PROJECT REPORT

SUBMITTED BY

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BONAFIDE CERTIFICATE

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ABSTRACT

The restaurant sector is highly competitive nowadays, and effective management is necessary. Orders, inventory, and staff are still managed by many small cafés and restaurants using traditional techniques, which can be laborious and prone to mistakes. Our team has created an offline restaurant management program that simplifies daily tasks in order to overcome these difficulties. Restaurant operators will be able to better manage staff schedules, maintain order details, keep an eye on inventory levels, and handle table reservations with this system. This project's primary goal is to develop an database system that is easy to use and will assist restaurants in keeping accurate records and enhancing the quality of their services. Local eateries can use this tool to improve customer happiness, allocate resources as efficiently as possible, and maintain their competitiveness in the face of larger, technologically advanced enterprises.

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CHAPTER – 1

INTRODUCTION

1. INTRODUCTION

This project aims to simplify restaurant management by providing essential information on table availability, reservations, and current orders in an easy-to-access format. The system allows both staff and customers to view available tables and make reservations conveniently, ensuring a smooth dining experience. By organizing and displaying necessary information in a user-friendly way, this project enhances operational efficiency and improves customer satisfaction, making it a valuable tool for restaurants in any locality.

2. SCOPE OF THE WORK

This application provides a centralized platform to handle daily tasks of the restaurant, enabling efficient service and improving customer satisfaction. Ultimately, this system is a robust solution to meet the operational demands of restaurants in any locality, ensuring quick service and seamless management.

3. PROBLEM STATEMENT

Many small restaurants struggle to manage reservations, orders, and inventory efficiently due to a lack of affordable management tools, especially in areas dominated by large corporate establishments. Without access to advanced digital systems, these restaurants often face delays and operational challenges, impacting customer satisfaction. This project aims to provide a user-friendly, management system that helps local restaurants streamline operations and improve service quality

1.4 AIM AND OBJECTIVES OF THE PROJECT

The main objective of this project is to help restaurants efficiently manage table reservations, order tracking, and inventory to meet customer demands. This system keeps accurate, up-to-date information on table availability, order details, and stock levels, streamlining operations for restaurant staff. By enhancing service quality and operational efficiency, this tool enables local restaurants to compete effectively, providing a smooth and satisfying dining experience for customers.

CHAPTER – 2

SYSTEM SPECIFICATIONS

2.1 HARDWARE SPECIFICATIONS

Processor	:	Intel i5
Memory Size	:	8GB (Minimum)
HDD	:	1 TB (Minimum)

2.2 SOFTWARE SPECIFICATIONS

Operating System	:	WINDOWS 10
Front – End	:	React + Vite (Run in VSCode)
Back - End	:	PHP Server
Language	:	React + Vite

CHAPTER - 3

MODULE DESCRIPTION

This application consists of two modules. When the program runs, it will ask for a confirmation to the login window. The person who interacts can login as an Administrator or as a User. The description of the modules are as follows:

1. **Admin login:**

When the person who interacts tries to login as Admin then he needs to login with his username and password. The administrator only has the power to change and manipulate the data in the database. Different food products can be added and remove from the database according to the stock and availability of the products, this can be done only by the admin.

2. **User login:**

When the person tries to login as a user then he/she will be prompted to create an account or login from an existing account with their username and password. The user can place orders, reserve a table, add items to cart and make payments according to their needs. There are different modes of payment available.

CHAPTER - 4

SAMPLE CODING

FRONT- END CODE:

Routes Page:

```
import React, { useState } from 'react'
import './App.css';
import Navbar from './components/Navbar/Navbar'
import { Route, Routes } from 'react-router-dom'
import Home from './pages/Home/Home'
import Cart from './pages/Cart/Cart'
import PlaceOrder from './pages/PlaceOrder/PlaceOrder'
import LoginPopup from './components/LoginPopup/LoginPopup'
import MainPage from './pages/MainPage';
import Login from './pages/Login';
import SignUp from './pages/SignUp';
import Payment from './pages/payment';
import OrderPlaced from './pages/OrderPlaced';
import Last from './pages/last';
const App = () => {
  const[showLogin,setShowLogin]=useState(false)
  return (
    <>
    {showLogin?<LoginPopup setShowLogin={setShowLogin}/>:<></>}
    <div className='app'>
      <Navbar setShowLogin={setShowLogin}/>
      <Routes>
      <Route path='/' element={<MainPage/>}/>
      <Route path='/login' element={<Login/>}/>
      <Route path='/SignUp' element={<SignUp/>}/>
       < Route path='/display' element={<Home/>}/>
       <Route path='/cart' element={<Cart/>}/>
       <Route path="/last" element={<Last/>} />
       <Route path='/cart/order' element={<PlaceOrder/>}/>
       <Route path="/" element={<Home />} /> {/* Your Home component */}
       <Route path="/payment" element={<Payment />} />
       <Route path="/OrderPlaced" element={<OrderPlaced />} />
       </Routes>
    </div>
    </>
  )
}
export default App
```

Main Page:

```
import React from 'react';
import { useNavigate } from 'react-router-dom';
const MainPage =()=> {
    const navigate = useNavigate();
    const handleStartClick = ()=>{
        navigate('/login');
    }
    return (
            <section>
            <div className='wrapper'>
               <h1>BYTES AND EATS</h1>
               <button className='button' onClick={handleStartClick}>Start</button>
                </div>
            </section>
    );
};
export default MainPage
```

Place Order Page:

```
import React, { useState, useContext } from 'react';
import { StoreContext } from '../../context/StoreContext';
import './PlaceOrder.css';
import { useNavigate } from 'react-router-dom';
const PlaceOrder = () => {
```

```
const navigate = useNavigate();
const { cartItems, food_list } = useContext(StoreContext);
const [customerDetails, setCustomerDetails] = useState({
  name: '',
  address: '',
  paymentMethod: 'Credit Card'
});
const handleChange = (e) => {
  setCustomerDetails({ ...customerDetails, [e.target.name]: e.target.value });
};
//const handleCartClick = ()=>{
 // navigate('/payment');}
const handleSubmit = (e) => {
  e.preventDefault();
 //console.log('Order placed:', customerDetails);
  navigate('/payment');
};
const calculateTotalPrice = () => {
  return Object.keys(cartItems).reduce((total, itemId) => {
    const item = food_list.find(item => item._id === itemId);
    return total + (item.price * cartItems[itemId]);
  }, 0);
};
```

```
  return (
    <div className="place-order">
      <h2>Place Your Order</h2>
      <form onSubmit={handleSubmit}>
        <input type="text" name="name" placeholder="Your Name" onChange={handleChange} required />
        <input type="text" name="address" placeholder="Your Address" onChange={handleChange} required />
        <select name="paymentMethod" onChange={handleChange}>
          <option value="Credit Card">Credit Card</option>
          <option value="PayPal">PayPal</option>
          <option value="Cash on Delivery">Cash on Delivery</option>
        </select>
        <h3>Total Price: ${calculateTotalPrice().toFixed(2)}</h3>
        <button type="submit" >Submit Order</button>
      </form>
    </div>
  );
};
export default PlaceOrder;
```

Cart Page:

```
import React, { useContext } from 'react';
import './Cart.css';
import { StoreContext } from '../../context/StoreContext';
import { useNavigate } from 'react-router-dom';

const Cart = () => {
 const { cartItems, food_list, removeFromCart } = useContext(StoreContext);
 const totalPrice = Object.keys(cartItems).reduce((total, itemId) => {
  const item = food_list.find(food => food._id === itemId);
  if (item) {
   return total + item.price * cartItems[itemId];
  }
  return total;
 }, 0);
 const navigate=useNavigate();
 return (
  <div className='cart'>
   <div className="cart-items">
    <div className="cart-items-title">
     <p>Items</p>
     <p>Title</p>
     <p>Price</p>
     <p>Quantity</p>
     <p>Total</p>
     <p>Remove</p>
```

```
</div>
<br />
<hr />
{
  food_list.map((item) => {
    if (cartItems[item._id] > 0) {
      return (
        <div className='cart-items-item' key={item._id}>
          <img src={item.image} alt={item.name} />
          <p>{item.name}</p>
          <p>{item.price.toFixed(2)}$</p>
          <p>{cartItems[item._id]}</p>
          <p>{(item.price * cartItems[item._id]).toFixed(2)}$</p>
          <button onClick={() => removeFromCart(item._id)}>Remove</button>
        </div>
      )
    }
    return null;
  })
}
<hr />
<div className="cart-total">
  <p>Total Price: {totalPrice.toFixed(2)}$</p> {/* Display total price */}
```

```
        </div>
      </div>
      <button onClick={()=>navigate('./order')}>PROCEED TO CHECKOUT</button>
    </div>
  );
};
export default Cart;
```

BACKEND CODE:

```
import express from "express";
import cors from "cors";
import cookieParser from "cookie-parser";
import multer from "multer";
import path from "path";
import dotenv from "dotenv";
const result = dotenv.config();
const app = express();
app.use(express());
app.use(cookieParser());
app.use(express.json());
app.use((req, res, next) => {
  res.header("Access-Control-Allow-Credentials", true);
  next();
});
app.use(
  cors({
    origin: ['http://localhost:5173', 'http://localhost:5174']
  })
);

const port = result.parsed.PORT;

const storage = multer.diskStorage({
  destination: "./upload/images",
  filename: (req, file, cb) => {
    return cb(
      null,
      `${file.fieldname}_${Date.now()}${path.extname(file.originalname)}`
    );
  },
});

const upload = multer({
  storage: storage,
});
```

```
app.use("/images", express.static("upload/images"));

app.post("/upload", upload.single("product"), (req, res) => {
  res.json({
    success: 1,
    image_url: `http://localhost:${port}/images/${req.file.filename}`,
  });
});
import authRouter from "./routes/auth.js";
import userRouter from "./routes/user.js";
import productRouter from "./routes/products.js";
import orderRouter from "./routes/order.js";
import cartRouter from "./routes/cart.js";
app.use("/api/auth", authRouter);
app.use("/api/users", userRouter);
app.use("/api/products", productRouter);
app.use("/api/orders", orderRouter);
app.use("/api", cartRouter);

app.listen(port, () => {
  console.log(`Server listening on port ${port}`);
});
```

CHAPTER - 5

SCREEN SHOTS

Fig 5.1 Introduction page

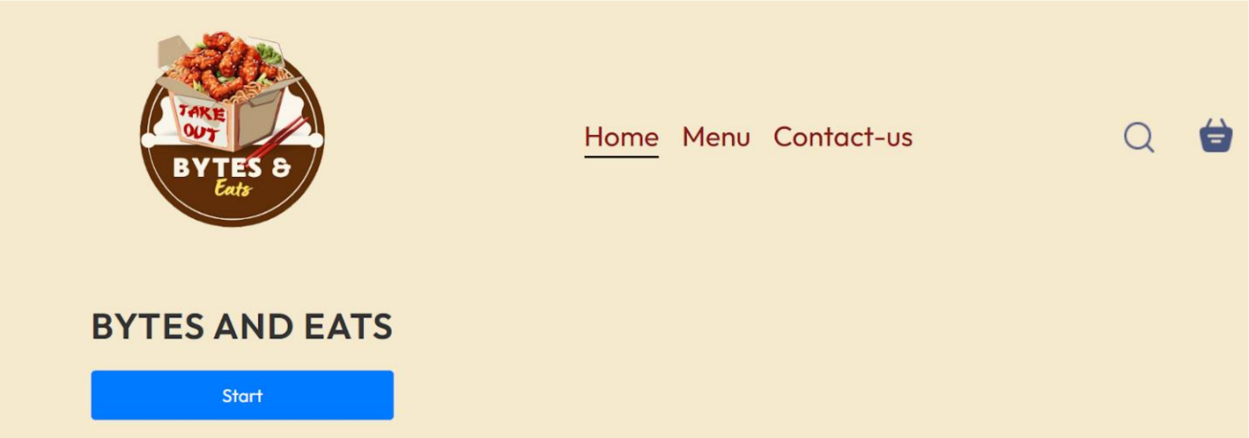
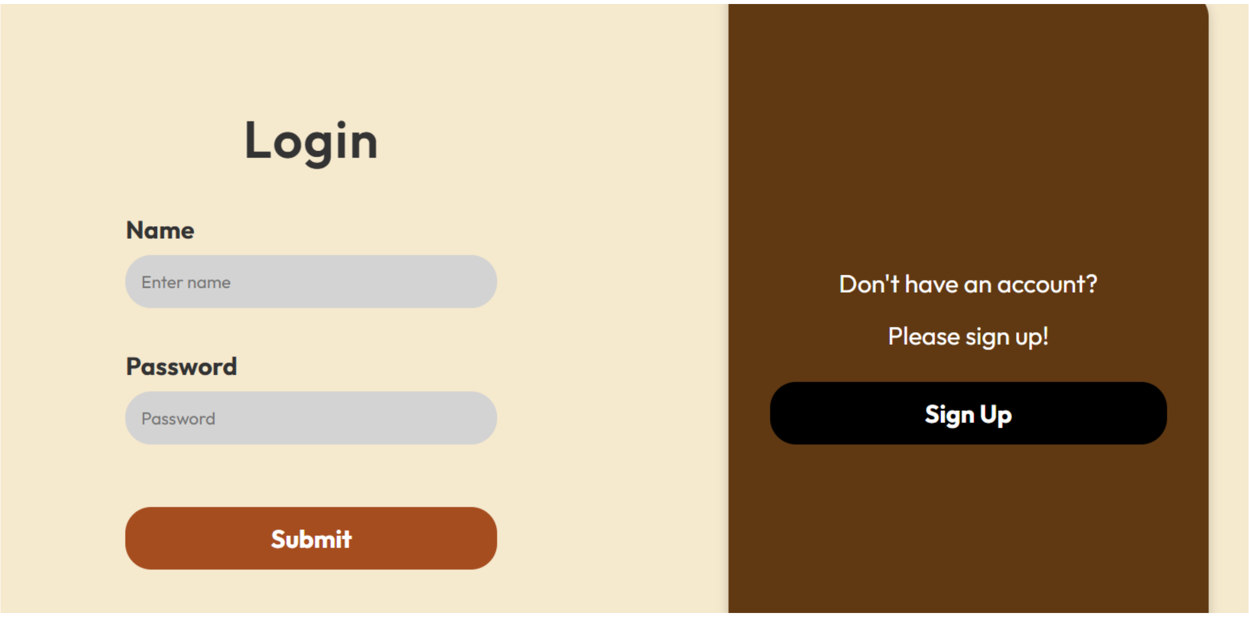


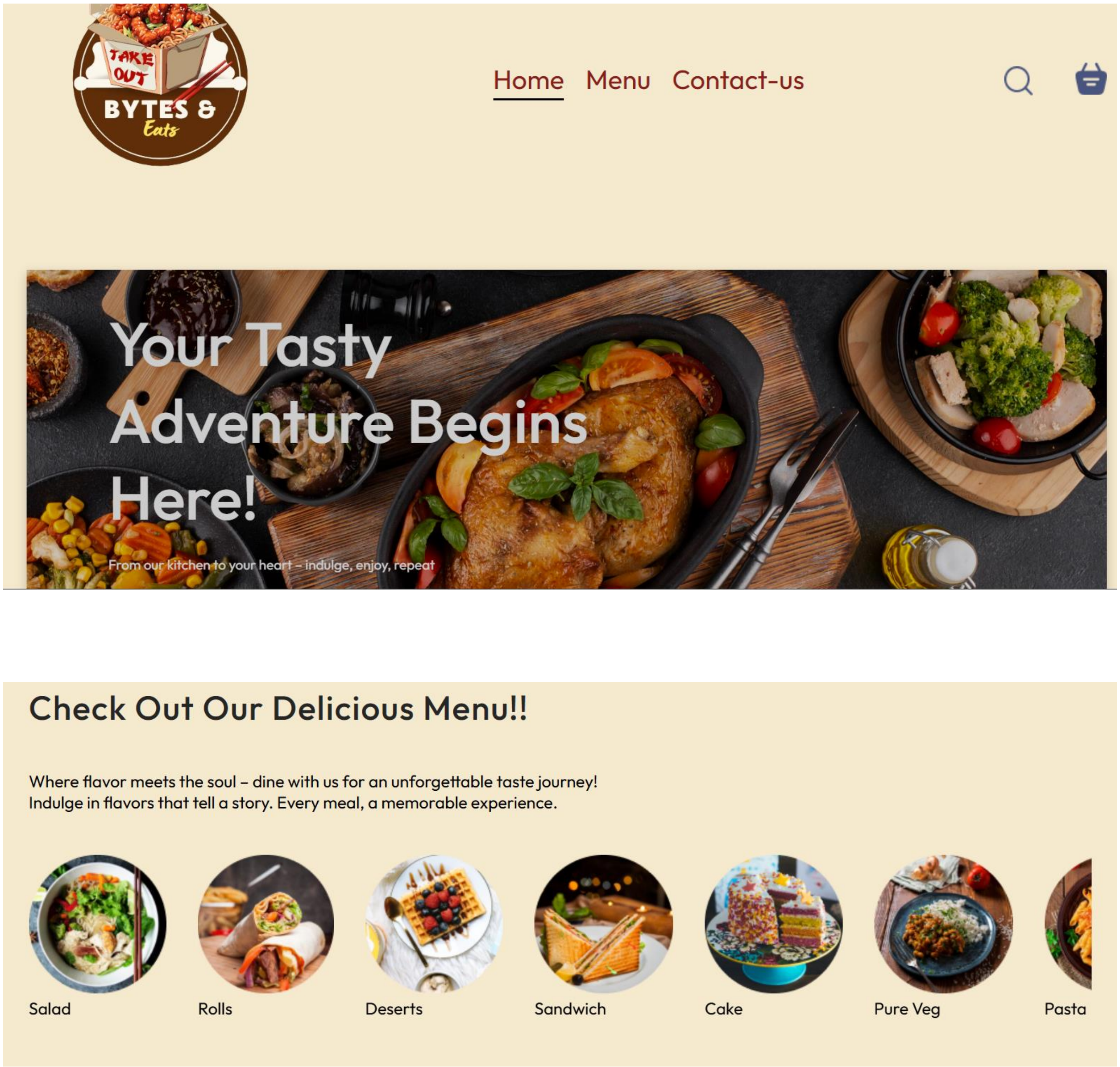
Fig 5.2 Login Signup Page



Don't have an account?

Please sign up!

Fig 5.3 Products Page



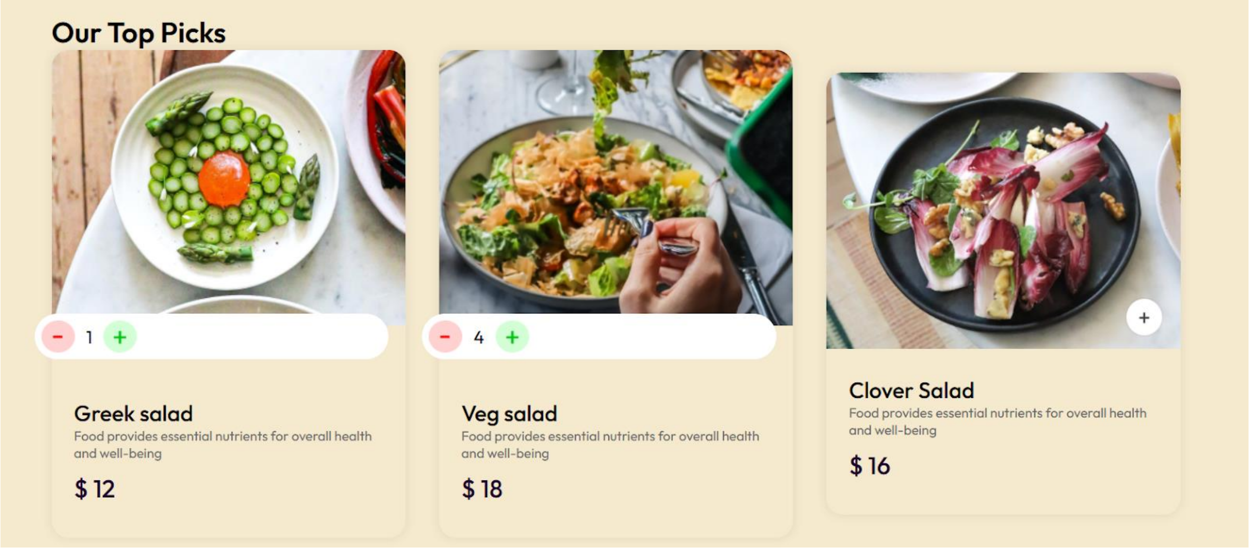
Your Tasty Adventure Begins Here!

From our kitchen to your heart – indulge, enjoy, repeat

Check Out Our Delicious Menu!!

Where flavor meets the soul – dine with us for an unforgettable taste journey!
Indulge in flavors that tell a story. Every meal, a memorable experience.

Fig 5.4 Adding products to cart



Our Top Picks

Greek salad

Food provides essential nutrients for overall health and well-being

$ 12

Veg salad

Food provides essential nutrients for overall health and well-being

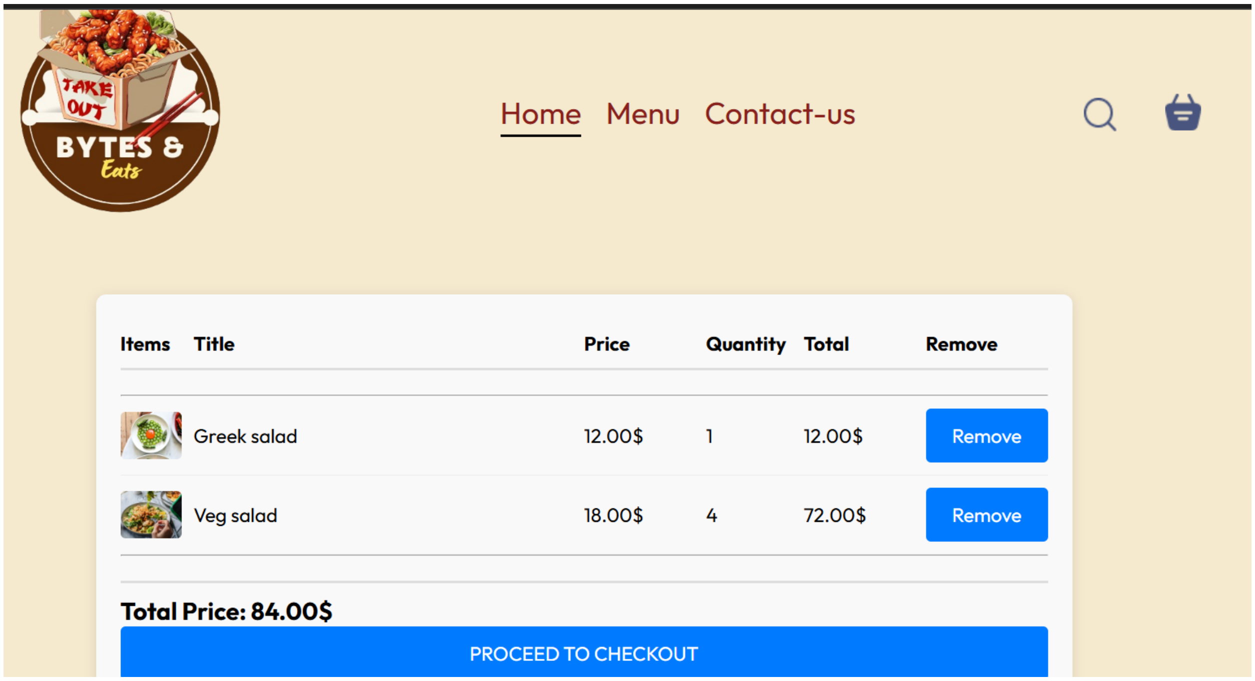
$ 18

Clover Salad

Food provides essential nutrients for overall health and well-being

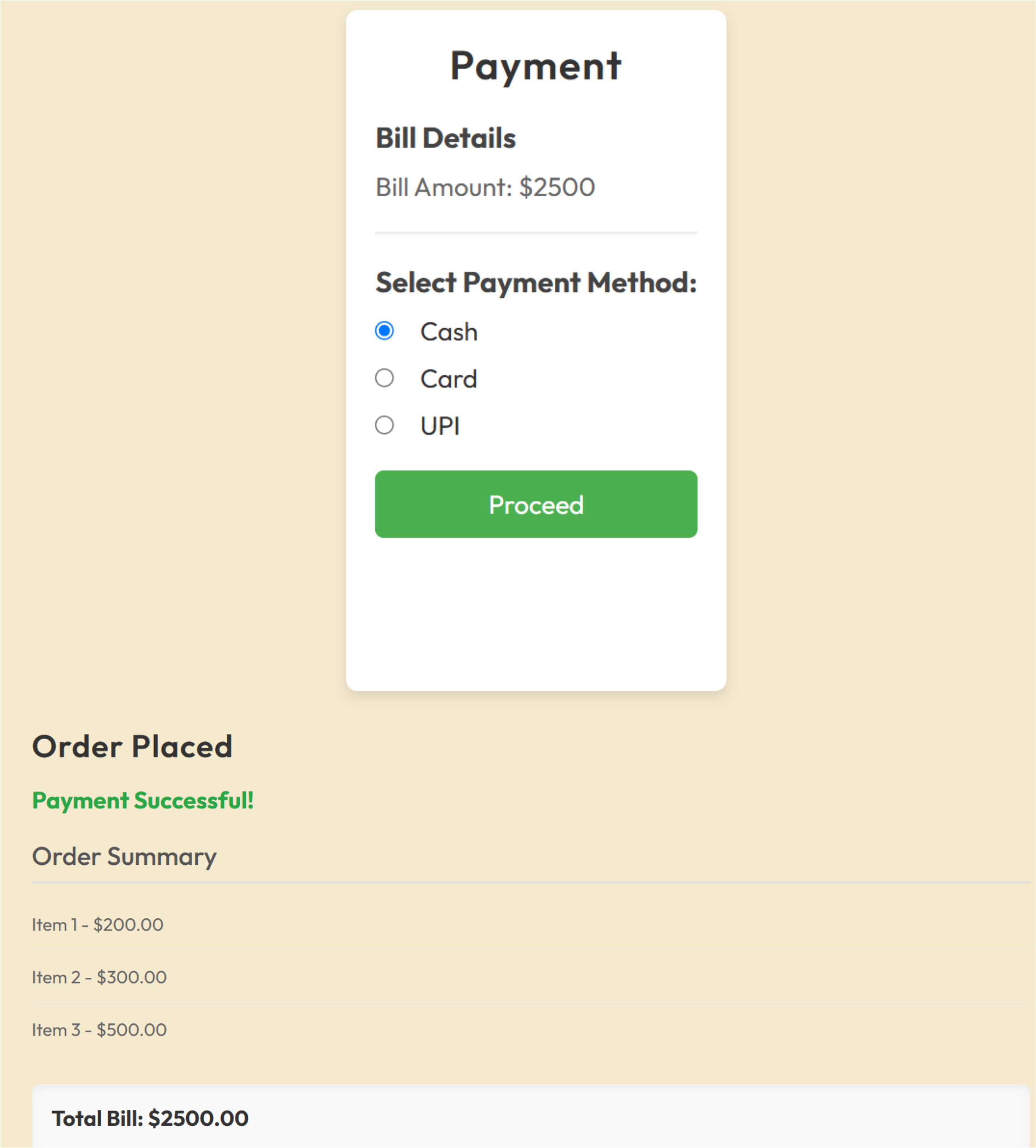
$ 16

Fig 5.5 Cart



Items	Title	Price	Quantity	Total	Remove
	Greek salad	12.00$	1	12.00$	Remove
	Veg salad	18.00$	4	72.00$	Remove

Total Price: 84.00$



Payment

Bill Details

Bill Amount: $2500

Select Payment Method:

● Cash

○ Card

○ UPI

Order Placed

Payment Successful!

Order Summary

Item 1 - $200.00

Item 2 - $300.00

Item 3 - $500.00

Total Bill: $2500.00

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

With the help of our restaurant management application, restaurant owners and staff can seamlessly manage table reservations, track orders, and maintain inventory records, all within a single platform. This system provides a clear overview of table availability and order status, allowing customers to make reservations efficiently and staff to monitor bookings in real-time. By simplifying daily operations, our system enhances service quality, reduces wait times, and improves customer satisfaction. In the future, this system could be expanded to include features like customer loyalty tracking and analytics to further optimize operations. Overall, this project is designed to benefit restaurant owners, employees, and customers, making restaurant management more efficient and enjoyable for everyone involved.

CHAPTER – 7

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