



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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Placement Training - Java Full Stack project

Online food ordering and reservation system

STUDENT NAME

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JFS-(ST03)

AGENDA

1. Introduction
2. Problem statement
3. Feasibility analysis
4. requirement specifications
5. Purpose
6. Scope
7. Overview
8. System Architecture
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10. Ui/Ux planning
11. Features
12. Conclusion

INTRODUCTION

- The GreenLeaf Veg Restaurant Management System(online reservation and food delivery) is a full-stack web application developed to streamline restaurant operations such as menu browsing, order placement, and table reservations.
- It enables customers to interact with the restaurant digitally through an intuitive web interface without requiring any login.
- It leverages Spring Boot, JSP, and MySQL to ensure smooth data flow and reliable backend processing.

PROBLEM STATEMENT

Problems in Manual System

- No online ordering or reservation facility.
- Human errors in order handling and record maintenance.
- Difficulty managing large volume of orders manually.
- No centralized dashboard for admin to monitor operations.

Why Automation is Needed

- Fast and accurate order processing.
- Easy reservation scheduling.
- Better customer satisfaction.
- Streamlined admin operations.

FEASIBILITY ANALYSIS

Technical Feasibility

- The system is practical to develop because it uses widely supported technologies such as Java 17, Spring Boot 3.x, and MySQL, which are compatible with most modern systems.
- It can be deployed easily on any machine with a Java runtime and does not require specialized hardware or expensive software.

Requirement Specifications

Software Specifications

Operating System: Windows 10/11, macOS, or Linux

Backend Framework: Spring Boot (Java 17)

Frontend Technology: JSP (JavaServer Pages), HTML, CSS, JavaScript

Database: MySQL

Build Tool: Maven (for building and packaging backend)

IDE Tools: IntelliJ IDEA / Eclipse IDE (Backend), any code editor (Frontend)

Browser: Google Chrome / Microsoft Edge (for testing and running the app)

Server: Embedded Tomcat (default Spring Boot server)

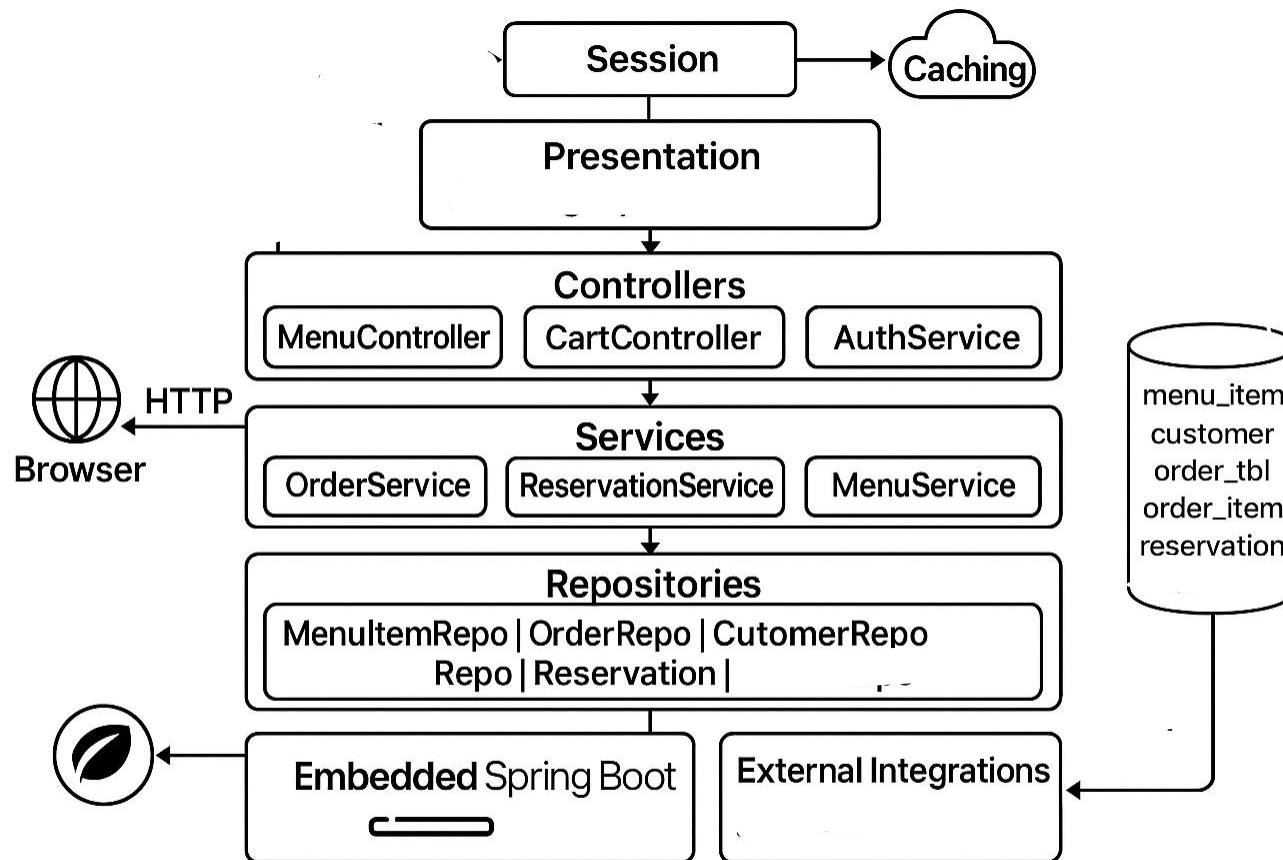
architecture

- The system is a full-stack web application built using Spring Boot for the backend and JSP for the user interface.
- It follows an MVC structure where controllers handle requests, services process logic, and repositories interact with the database.
- MySQL is used to store all restaurant data, including menu items, orders, order items, reservations, and admin details.
- The application runs in a web browser and allows customers to interact with the system easily.
- Session handling is used to maintain customer carts and admin login during their usage.

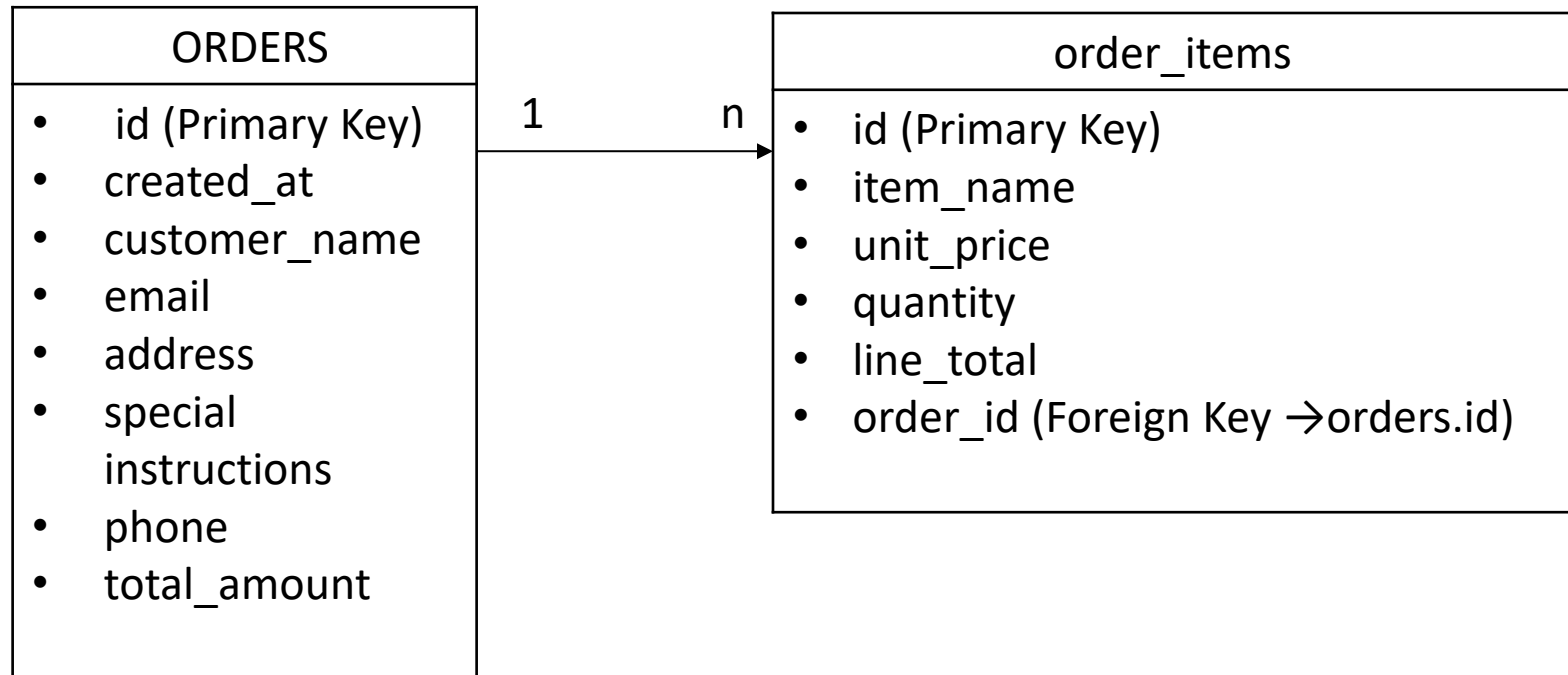
SYSTEM ARCHITECTURE

- the **presentation layer** is done with HTML,CSS and JS to handle all user interactions for customers and to perform essential operations .
- The **Controllers** receive user requests and connect them to the correct backend functions.
- The **Service layer** processes the main business logic such as placing orders and handling reservations.
- The **Repository layer** communicates with the MySQL database to store and retrieve all required data.
- Data flows smoothly from the user → controller → service → repository → database and back to the user interface.
- The system is built using a layered architecture to keep the application

ARCHITECTURE DIAGRAM



ENTITY RELATIONSHIP DIAGRAM

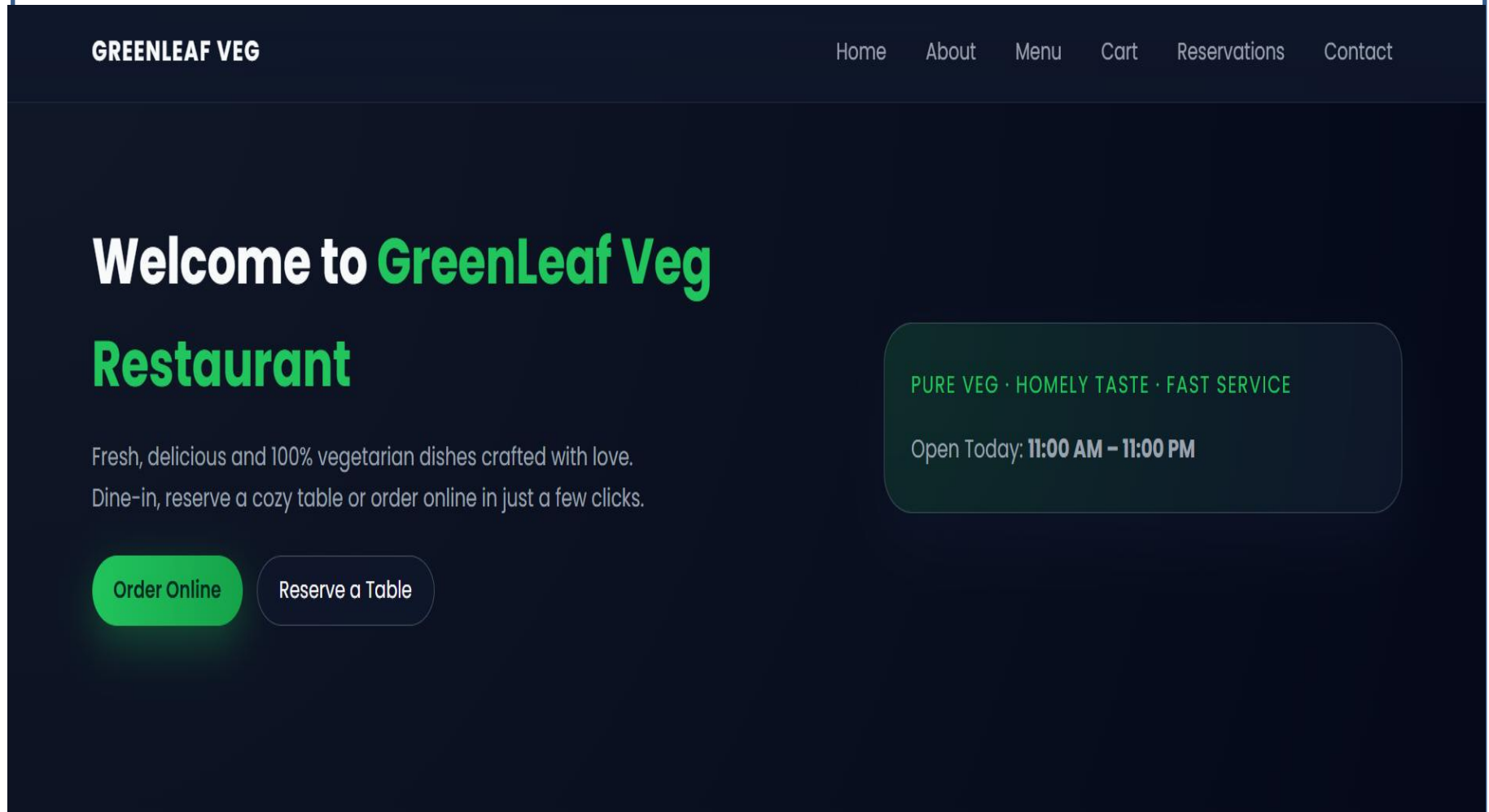


ENTITY RELATIONSHIP DIAGRAM

-

RESERVATIONS
<ul style="list-style-type: none">• id (Primary Key)• customer_name• email• phone• reservation_date• start_time• end_time• table_number• guests• notes• preferences• created_at

SCREENSHOTS



ABOUT

GREENLEAF VEG

[Home](#) [About](#) [Menu](#) [Cart](#) [Reservations](#) [Contact](#)

About Our Restaurant

GreenLeaf Veg Restaurant brings you a modern vegetarian dining experience with classic flavours, hygienic kitchen and friendly service.



100% Vegetarian

No egg, no meat – only fresh and flavourful vegetarian dishes.



Fresh Ingredients

Locally sourced vegetables and handpicked spices prepared daily.



Online Ordering

Order your favourites, add to cart and get an instant total in ₹.

MENU PAGE

The screenshot shows a web browser at localhost:8080 displaying the 'Online Menu' page for 'GREENLEAF VEG'. The page has a dark theme. The navigation bar includes links for Home, About, Menu, Cart, Reservations, and Contact. The main content area is titled 'Online Menu' and includes a prompt to 'Tap "Add to Cart" to start your order. Use the categories to filter.' Below this are category tabs: All (selected), Starters, North Indian, South Indian, Main Course, Beverages, Desserts, and Bestsellers. The menu items are displayed in a grid:

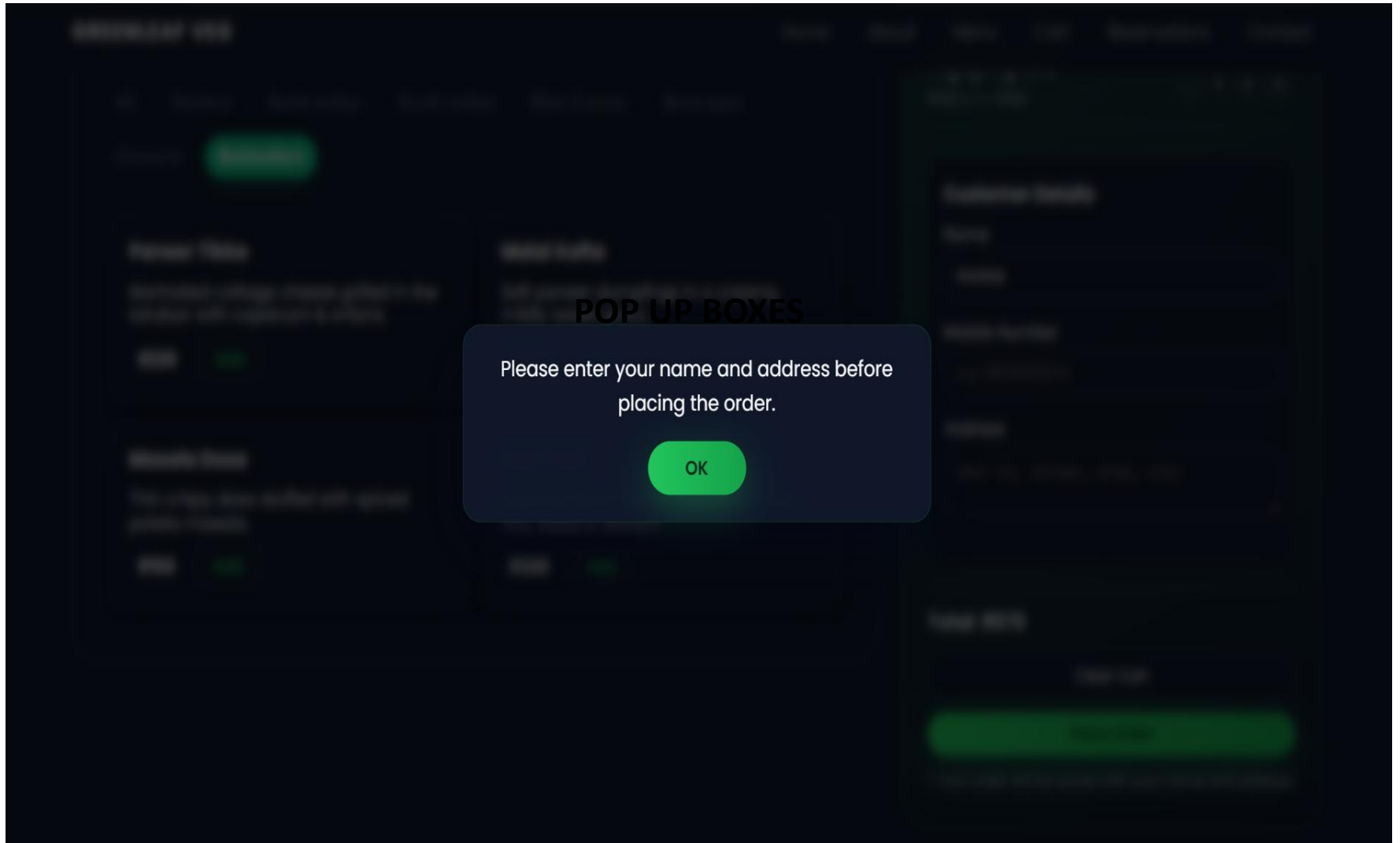
- Veg Spring Rolls**: Golden-fried rolls stuffed with sautéed veggies and light spices. Price: ₹150. Add button.
- Paneer Tikka**: Marinated cottage cheese grilled in the tandoor with capsicum & onions. Price: ₹220. Add button.
- Crispy Corn**: Crunchy fried corn kernels tossed with herbs, chilli and lemon. Price: ₹170. Add button.
- Chilli Paneer (Dry)**: Indo-Chinese style paneer tossed in spicy chilli-garlic sauce. Price: ₹210. Add button.

On the right side, there is a 'Your Cart' section showing two items:

- Paneer Butter Masala**: ₹260 x 2 = ₹520. Quantity: 2.
- Veg Spring Rolls**: ₹150 x 1 = ₹150. Quantity: 1.

Below the cart items is a 'Customer Details' section with input fields for Name (monica), Mobile Number (e.g. 9876543210), and Address (Door no, street, area, city). At the bottom of the cart section, the total is displayed as 'Total: ₹670'.

POP UP BOXES



ORDER CONFIRMED PAGE



Order Confirmed!

Your delicious meal is being prepared. Thank you for ordering from Greenleaf Veg.

Order Details

Customer :	monica
Phone :	6379054271
Address :	my address for order
Order ID :	84311
Total Amount :	670

Items Ordered

- Paneer Butter Masala x 2 — ₹520
- Veg Spring Rolls x 1 — ₹150

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RESERVATION PAGE

GREENLEAF VEG

HomeAboutMenuCartReservationsContact

Reserve a Table

Avoid waiting! Reserve your table in advance and enjoy a relaxed dining experience.

- Each reservation is for 1 hour 30 minutes.
- No reservations before 11:00 AM and after 11:00 PM.
- If a table is already booked for a time slot, the system will ask you to choose another table or time.

Full Name

Enter your name

Mobile Number

Email

Optional

Number of Guests

2

Guests: 2 — Small (1–2 guests) — tables 1 to 10

Table Number

Select a table

Allowed tables based on guests: Small (1–2 guests) — tables 1 to 10

Date

dd - mm - yyyy

Start Time

-- : --

Special Requests

RESERVATION CONFIRMATION PAGE



Reservation Confirmed!

Thank you, your table is booked. We look forward to serving you.

Reservation Details

Name :	monica
Phone :	9629573190
Date :	2025-12-29
Time :	11:00
Table :	11
Guests :	5
Special Requests :	please make arrangements for a birthday celebration

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FEATURES

- The system allows customers to browse the complete restaurant menu and add items to a session-based cart for quick and easy ordering.
- It provides a smooth checkout process where customers can place orders using only their name and phone number .
- A built-in reservation module lets customers book tables by selecting the date, time, and party size.
- The system ensures structured data storage using MySQL and delivers dynamic content through JSP pages and Spring Boot services.

CONCLUSION

The GreenLeaf Restaurant Management System (online reservation and food delivery) provides a simple and efficient way to handle menu browsing, order placement, and table reservations through a user-friendly web interface. Overall, the system improves customer convenience, reduces manual effort, and creates a smooth digital restaurant experience for users, that can be expanded with additional features in the future.