



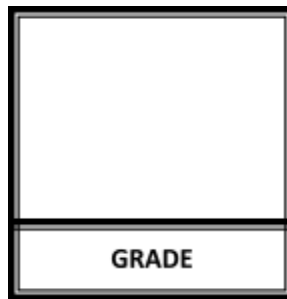
FEU Institute of Technology
COLLEGE OF ENGINEERING • COLLEGE OF COMPUTER STUDIES

SYSTEM INTEGRATION AND ARCHITECTURE II

T1-TECHNICAL

Introduction to Software Engineering and Software Design

TABLEDIN: SMART RESERVATIONS AND SEAT COORDINATION SYSTEM



Submitted by:



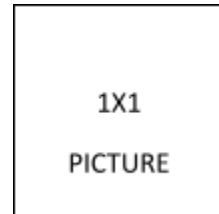
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Submitted to:
Ms. Geliza Alcober
Professor
September 17,
2025

PROJECT PLAN

PROJECT SUMMARY

Project title: TabledIn: Smart Reservations and Seat Coordination System
<p>Project description:</p> <p>TabledIn is a web-based system designed to help restaurants simplify the way they handle customer appointments. It enables users to reserve tables ahead of time, choose preferred seating, and avoid long queues. This system also helps restaurant staff organize bookings, manage peak hours, and ensure smooth seating operations. TabledIn aims to turn the hassle of walk-ins into a seamless dining experience through smart technology.</p>
<p>Project objectives:</p> <ul style="list-style-type: none">● To develop an online system for customers to schedule restaurant appointments.● To help restaurant staff manage seating and appointment flow more effectively● To provide a clear overview of daily bookings and available time slots.● To minimize waiting times and overcrowding during peak hours.● To send automated updates and reminders to customers.● To support flexible booking options, including cancellations and changes.● To enhance the overall dining experience through better organization and planning.
Project duration: 6 weeks
Proposed budget: 200,000 PHP - 300,000 PHP
<p>Group name / Proponents:</p> <p>WTG</p> <p>Jerry Reivrick Nares</p> <p>John Edwin Reyes (Project Manager)</p> <p>Zrone Jinrx Jbryl Verzosa</p>
Date of preparation: Sept 17, 2025

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PROJECT BACKGROUND

Provide factual information about the context of the problem or opportunity to be addressed. This section should present a logical analysis that justifies the conduct of the project.

The restaurant industry in the Philippines is undergoing a rapid digital transformation, driven by changing consumer behavior, technological innovation, and the need for operational efficiency. Traditional reservation methods, such as phone calls and physical manual logs, are a hassle and are nowadays being replaced by an online system for more convenience, speed, and real-time updates.

According to Grab Philippines, 9 out of 10 Filipino consumers now prefer food brands with an integrated online-to-offline (O2O) experience, and 89% use apps like Grabfood to discover new restaurants. This shift highlights the growing demand for digital reservation systems that allow customers to book tables, pre-order meals, and receive instant confirmations.

A study by the National University of Manila found that mobile booking apps like OpenTable in the Philippines suffer from performance gaps in service quality and user experience, suggesting a strong need for locally optimized solutions. Enhancing communication channels, live updates, and user-friendly interfaces were among the top recommendations.

The Peach Kitchen reports that the Philippine foodservice market is projected to grow from USD 18.41 billion in 2025 to USD 36.27 billion by 2030, with digital transformation playing a key role in this expansion. Cloud kitchens and smart reservation systems are becoming essential tools for restaurants to manage high volumes, reduce no-shows, and improve customer service.

Furthermore, Onigiri.ph emphasizes that Filipino diners, from Gen Z students to professionals, are increasingly booking everything online, including restaurant tables. Restaurants that fail to adopt digital reservation systems risk losing revenue due to missed bookings, double-bookings, and poor customer experiences.

Given these trends, the development of a restaurant appointment scheduling system like TabledIn is both timely and relevant. These systems aim to provide a seamless booking experience for customers while helping restaurants manage reservations, optimize seating, and improve service quality.

SIGNIFICANCE OF THE PROJECT

Who are likely to benefit from the output of the project? Find at least 10 related literatures and 10 related studies that will help you with your research. Please cite the sources and authors of the literatures and studies that you have found.

The development of a restaurant appointment scheduling system offers significant benefits to various stakeholders in the food service industry. Restaurant owners and managers are among the primary beneficiaries, as digital reservation systems help streamline operations, reduce manual errors, and improve table turnover. Lim et al. (2024) demonstrated that implementing a digital platform for appointment scheduling significantly enhances service quality and reduces customer wait times.

Restaurant staff also benefit from improved coordination and reduced stress during peak hours. Smith (2025) emphasized that online reservation systems allow restaurants to manage seating more efficiently and improve customer flow, especially in chain operations. Thompson and Kwornik (2008) further supported this by showing that pooling reservations rather than locking them to specific tables can reduce table turn times by up to 15%, increasing service efficiency.

Customers are also key beneficiaries. Latona (2016) found that perceived ease of use and usefulness of reservation systems positively influence customer attitudes and behavioral intentions to use such platforms. Hung et al. (2022) explored appointment-driven service systems and emphasized the importance of real-time scheduling in improving customer satisfaction and reducing congestion.

From a business strategy perspective, Feldman (2010) proposed a yield-management model that optimizes seat utilization by dynamically assigning reservations based on demand forecasts, resulting in a 25% increase in seat usage. This approach benefits both restaurant profitability and customer experience.

In the Philippine context, Morder Intelligence (2025) projected that the foodservice market will grow from USD 18.41 billion in 2025 to USD 36.27 billion by 2023, driven largely by digital transformation. This growth highlights the relevance of systems like TabledIn in support of operational scalability and customer engagement.

Botti et al. (2022) analyzed smart service systems in restaurant management and emphasized the role of technology in facilitating value co-creation between restaurateurs and customers. Their study showed how platforms like TabledIn enable restaurants to manage bookings while gathering customer feedback from continuous improvements.

Parneswaran (2025) examined the impact of reservation systems on restaurant operations and found that such systems reduce wait times by up to 30% and improve customer retention through personalized booking features. These findings align with the goal of the appointment scheduling system to enhance both service delivery and customer loyalty.

Finally, Ankor et al. (2024) studied the adoption of online reservation systems among hotels and found that technological, managerial, and environmental factors influence system uptake. Their findings suggest that similar dynamics apply to restaurants, especially in urban areas like Metro Manila.

(Feldman, n.d.) Introduced a model by shifting reservations to time slots as this maximizes seat usage. The study showed 25% improvement in maximizing seats.

(Yahya, n.d.) To enhance efficiency and improve customer service, a web based food reservation system was developed that allows customers to reserve in advance and reduce waiting time.

(Suginouchi et al., 2024) An Auction Based Reservation System with customers bid for time, and group size. Experimental results showed that Synthetic Scheduling Auction (SSA) achieves higher seat occupancy, reduced waiting time.

(Hishamudin & Abdullah, n.d.) Developed a Secured Restaurant Reservation System using the Prototype Model with two-factor authentication and role-based access. Tested with staff and students, it improved security, streamlined operations, and ensured role-specific access.

(Kale et al., n.d.) System developed to replace manual bookings that allows customers to reserve tables with a 50% advance payment and cancellation of reservation after 30 minutes. The solution saves time and cost that aligns with the modern approach.

(Bin Azizi, n.d.) A web-based reservations system to address long waiting times and lack of table availability. This gives the customers the ability to book tables by specifying group size, date, and time. Restaurant staff can update and monitor table status.

(Sutjiadi et al., n.d.) Developed a web-based reservation and food ordering system for Wisata Kampung Kemiri Jember to replace manual methods with digital solutions. Built using the requirement prototyping method, the system was tested through Black Box Testing for functionality and User Acceptance Testing (UAT) for usability.

(Sihombing, 2024) An integrated restaurant reservation system using the Agile methodology, covering requirements analysis, design, implementation, and testing. The system includes reservation management, notifications, payment integration, and performance reporting. Tested for functionality, performance, and user evaluation, it proved efficient, responsive under high loads, and improved customer satisfaction.

(Amran & Samsudin, n.d.) A restaurant reservation system for Restoran Dee Nasi Ayam Pandan Indah to replace manual bookings via phone or WhatsApp that often caused errors. The system enables staff to manage reservations efficiently, store records in a database, and generate reports for owners.

(Konkasem & Kularbphetong, 2025) A real-time restaurant queue management system using Flutter with Firebase as the backend, enabling seamless data synchronization and user-friendly interaction. User testing showed the system reduced waiting times by 85%, increased revenues by 20%, and improved customer convenience by 90%.

PROJECT OBJECTIVES

What are the objectives of the project? Be sure these objectives are stated in very specific and measurable terms. Ideally, the objectives should define a desired and realistic solution to the identified problem or opportunity. Also include the details of System Features and the Functional Decomposition Diagram.

General Objective:

To develop a web-based appointment scheduling and seating management system for restaurants that simplifies table reservations and improves customer experience.

Specific Objectives:

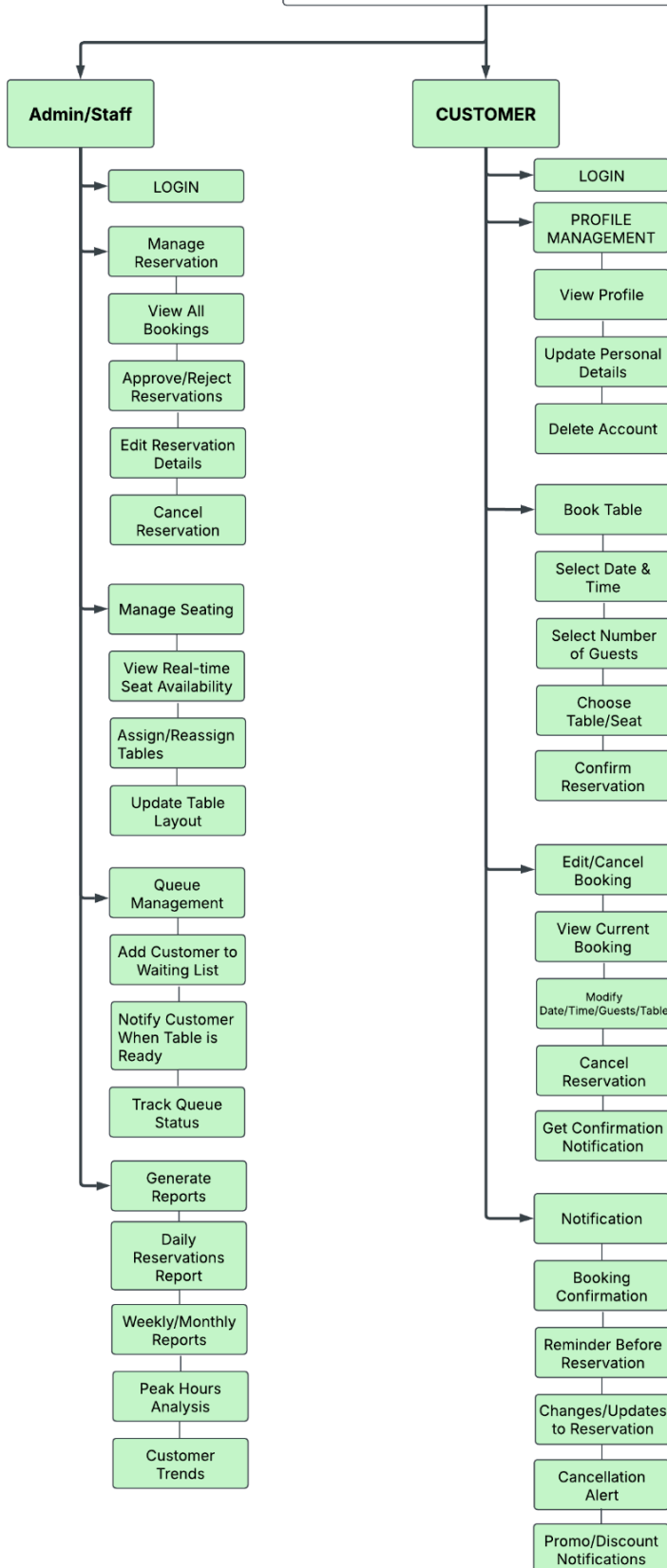
1. To allow customers to create accounts and manage their reservation details.
2. To enable customers to schedule appointments, choose seating preferences, and receive confirmation.
3. To allow staff to manage reservations, seating arrangements, and booking flow.
4. To integrate a real-time calendar that displays available time slots.
5. To provide automated notifications/reminders for upcoming reservations.
6. To include queue management for walk-in customers.
7. To generate reports on booking trends and peak dining hours.

System Feature includes:

- **Customer Side:**
 - Registration/Login
 - Profile management
 - Table booking with seat selection
 - View/edit/cancel bookings
 - Notification/reminder system
- **Admin/Staff Side:**

- Manage reservations
- View real-time seating map
- Queue management for walk-ins
- Daily/weekly booking reports

TabledIn: Smart Reservations and Seat Coordination System



WORK PLAN

The work plan should include the logical order and relationships among the project activities, as well as a

Gantt chart showing the detailed project activities/tasks, project milestones and activity durations. A summary should be provided below. For purposes of this summary, indicate only the major activities, milestone indicators, and target completion dates for these milestones.

Major activity	Milestone Indicator	Target completion date
Define System Requirements	Passed the SRS requirements	September 24, 2025
Making the database work	Database tables created	September 24, 2025
Module 1: Customer Profile Management	User registration and login	October 6, 2025
Module 2: Appointment Scheduling	Booking module complete	October 6, 2025
Module 3: Seating Management	Seat selection feature functional	October 13, 2025
Modules 4: Real-time Calendar Viewing	Calendar integrated	October 20, 2025
Module 5: Notification and Reminder	SMS/email notifications working	October 25, 2025
Module 6: Queue Management	Walk-in queue feature added	November 11, 2025

TABLEDIN: SMART RESERVATIONS AND SEAT COORDINATION SYSTEM

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