

Restaurant Management System

Project Proposal

Prepared By

Group Assignment: Group BI

Module Code: CS107.3

Module Name: Object Oriented Programming with C#

Module Lecturer: Mr. Anton Jayakody

Project Proposal

Restaurant Management System

Delivery Date: First Week of June 2025

Project Overview

This project aims to develop a comprehensive Restaurant Management System (RMS) tailored for fine-dining restaurants. It automates and enhances customer service, employee management, table operations, billing, payment handling, kitchen coordination, digital feedback, and promotional outreach.

Objectives

- Streamline restaurant workflow from table reservation to post-meal feedback
- Implement role-based access for system security and clarity
- Facilitate seamless communication between staff (waiters, receptionists, chefs, cashiers)
- Support digital payments, tip management, and automated salary calculations
- Gather customer feedback for quality assurance
- Provide newsletter functionality for customer engagement and marketing

Key Features

1. Table Management

- UI-based table visualization for receptionist
- Reservation marking and assignment
- Real-time updates on table status (available, occupied, needs cleaning)

2. Order & Notification System

- Waiter notified upon table assignment
- Chef receives digital orders with status updates
- Waiters notified when orders are prepared

3. Payment & Feedback

- Tablet-based billing presentation
- Tip selection (5%, 10%, 15%, custom)
- Payment via card or cash
- An automatic bill summary is sent via email
- Post-payment digital rating panel for customer feedback

4. Customer Data Management

- Optional customer email input
- Consent checkbox to receive newsletters/promotions

5. Newsletter System

- Manager upload interface for promotions
- System sends promotional emails to opted-in customers

6. Employee Role Management

- Role-based access (Waiter, Chef, Receptionist, Cashier, Manager, Finance Manager)
- Only authorized personnel can perform sensitive tasks (e.g., correcting bills, managing salary)

7. Salary Management

- Base salary per role
- Tip tracking (tips assigned directly to waiters)
- Overtime logging and approval
- Automated salary summaries
- Finance Manager role to handle salary edits, bonus deductions, and final verification

8. Analytics system for monthly reports

- Tracks waiter performance
- sCalculates revenue
- Shows top/least sold items
- Visual charts and graphs
- Export as PDF/Excel
- Custom time range

9. Menu recommendation system based on customer inputs like age, diet type (vegetarian/vegan/etc)

- Collects basic customer data (age, gender, diet type, allergies)
- Highlights chef specials and healthy choices
- Offers seasonal or promotional item suggestions

Timeframe & Milestones

Phase	Timeline
System Design (UI & DB)	April 1 – April 15, 2025
Backend Development	April 16 – May 10, 2025
Frontend Integration	May 5 – May 15, 2025
Testing & QA	May 16 – May 25, 2025
Documentation & Deployment	May 26 – May 31, 2025
Final Delivery	First Week of June 2025

Team Structure & Responsibilities

Name	Responsibility
Member 1	Database Developer - Version Control & General Management
Member 2	Backend Developer - Billing & Payment System
Member 3	Backend Developer - Order Management
Member 4	Backend Developer - Reservation System
Member 5	Backend Developer - Salary & Employee Payroll
Member 6	Backend Developer - Newsletter System
Member 7	Backend Developer - Employee Role Management
Member 8	Backend Developer - authentication, payment processing
Member 9	Frontend Developer - Staff Dashboard
Member 10	Frontend Developer - Customer Payment & Rating UI

Group Members

1. 34000 - WDTU Anuda
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