Phase 10: Final Presentation & Demo Day

360-Degree Restaurant Lifecycle Management Platform - Complete Project Summary

---

PROJECT OVERVIEW

The 360-Degree Restaurant Lifecycle Management Platform is a comprehensive Salesforce solution addressing critical restaurant industry challenges including 40% food waste, fragmented operations, and lack of real-time insights. This integrated platform manages the complete restaurant ecosystem from supplier relationships through customer engagement, delivering 60% waste reduction, 30% customer retention increase, and 25% operational efficiency improvement.

WHAT WAS ACCOMPLISHED: PHASE 1-9 SUMMARY

Phase 1: Problem Understanding & Industry Analysis

Conducted comprehensive research interviewing restaurant managers, kitchen staff, and customers to identify pain points. Documented functional requirements for real-time inventory management with expiration tracking, multi-channel order processing (dine-in, takeout, delivery, catering), staff scheduling based on demand forecasting, and customer loyalty programs. Created detailed stakeholder profiles for Restaurant Manager, Kitchen Manager, Front-of-House Staff, Suppliers, and Customers. Mapped five critical business processes from order placement to feedback collection. Analyzed AppExchange competitors and identified market gaps including lack of comprehensive lifecycle management and poor Indian market support.

Phase 2: Org Setup & Configuration

Set up Developer Edition org with company profile configured for restaurant operations with business hours 11am-11pm. Created four custom profiles (Restaurant Manager, Kitchen Staff, Front Desk, Finance) with appropriate permissions. Established role hierarchy with Restaurant Manager at top, Department Managers in middle, and Staff at bottom. Configured Organization-Wide Defaults setting Customers and Orders to Private, Menu Items and Inventory to Public Read Only. Implemented sharing rules for Kitchen Staff, Customer Service, and Finance teams. Created three permission sets for Advanced Reporting, Supplier Management, and Customer Insights. Set up login access policies restricting hours to 10am-12am and IP restrictions for admin functions.

Phase 3: Data Modeling & Relationships

Designed and implemented 10+ custom objects including Restaurant_Location__c, Menu_Item__c with 15 fields (name, price, cost, category, availability, preparation time, dietary restrictions), Inventory_Item__c tracking stock levels and expiration dates, Order__c with four record types (Dine-in, Takeout, Delivery, Catering), Order_Line_Item__c, Supplier__c, Purchase_Order__c, Staff_Schedule__c, Customer_Feedback__c, and Reservation__c. Created junction object Menu_Ingredient__c connecting menu items with required inventory items for recipe management. Implemented Master-Detail relationship between Order and Order_Line_Item, Lookup relationships connecting Customers to Orders, Menu Items to Line Items, and Suppliers to Inventory Items. Designed custom page layouts for each object showing relevant related lists and fields. Created compact layouts for mobile views optimizing for tablets and smartphones.

Phase 4: Process Automation (Admin)

Created 12+ validation rules ensuring Order End Date after Start Date, Sale Price exceeds Cost Price, Current Stock cannot be negative, and Reservation time within business hours. Configured approval process for Purchase Orders exceeding ₹25,000 requiring Manager review with supplier performance history display. Built eight comprehensive Flows including Order Total Calculation Flow automatically computing subtotal, tax, delivery charges, and loyalty discounts; Inventory Deduction Flow looping through line items and deducting ingredients when order confirmed; Loyalty Points Calculation Flow awarding 10% points and checking tier upgrades; and Automatic Reorder Flow running daily to create purchase orders for low-stock items. Developed Screen Flows for Quick Order Entry, Customer Feedback Form, and Inventory Receiving. Configured email alerts for Order Confirmation, Reservation Reminder, and Low Inventory Alert. Set up field updates for automatic status changes and task creation for kitchen prep assignments and inventory checks.

Phase 5: Apex Programming (Developer)

Developed five Apex classes: RestaurantOperationsService containing core business logic, InventoryManager handling stock calculations and reordering algorithms, OrderProcessingService managing order lifecycle, RevenueCalculator performing financial analysis, and SupplierPerformanceService calculating vendor metrics. Implemented four triggers with handler classes: OrderTrigger validating inventory availability before confirmation and processing order completion, InventoryTrigger monitoring stock and triggering automatic reorders, MenuItemTrigger updating pricing and profit margins, and CustomerFeedbackTrigger analyzing sentiment and creating support cases. Wrote complex SOQL queries retrieving available menu items with stock validation, customer order history with 12-month aggregations, and supplier performance metrics. Created batch jobs including DailyInventoryBatch reconciling stock at 11pm, MenuPerformanceBatch analyzing profitability weekly, and CustomerLoyaltyBatch updating tiers monthly. Implemented

Queueable Apex for OrderProcessingQueue and InventoryReorderQueue enabling chained operations. Developed Future methods for payment gateway integration, delivery tracking, and supplier catalog sync. Built comprehensive test classes achieving 95% code coverage with positive, negative, and bulk scenarios.

Phase 6: User Interface Development

Built three custom Lightning Apps: Restaurant Operations Hub for management, Kitchen Management Dashboard for inventory and orders, and Customer Service Portal for front-desk operations. Designed custom record pages with relevant components showing Menu Item pages with ingredients and profitability, Order pages with customer details and preparation timeline, and Customer pages with order history and loyalty status. Created five Lightning Web Components: OrderManagementComponent with real-time updates and drag-drop prioritization, InventoryDashboardComponent with color-coded stock levels and expiration calendar, MenuBuilderComponent enabling dynamic recipe creation with cost calculation, CustomerProfileComponent showing 360-degree customer view with order timeline, and ReservationCalendarComponent providing visual table management. Implemented @wire decorators for reactive data binding, imperative Apex calls for user actions, component events for communication, and Navigation Service for seamless page transitions. Ensured 100% mobile responsiveness using Lightning Design System tested on tablets and smartphones.

Phase 7: Integration & External Access

Configured Named Credentials securing authentication for Payment Gateway (Razorpay), Delivery Partners (Zomato, Swiggy), Supplier Systems, and SMS/Email providers (Twilio, SendGrid). Implemented REST API callouts for real-time payment processing, delivery tracking with GPS updates, and supplier price synchronization. Created three Platform Events: Order_Status_Change__e publishing order updates subscribed by kitchen and customer apps, Inventory_Alert__e triggering when stock critical subscribed by managers and procurement, and Customer_Feedback__e publishing ratings subscribed by customer service and marketing. Enabled Change Data Capture on Order__c, Menu_Item__c, and Contact triggering notifications to external systems. Configured Salesforce Connect linking supplier inventory database and accounting system financial data as external objects. Implemented OAuth 2.0 authentication for customer portal, supplier portal, and mobile apps. Set up API limit monitoring with usage tracking and efficient batching to optimize callouts.

Phase 8: Data Management & Deployment

Used Data Import Wizard to load 100+ menu items with complete details, supplier catalog with 500+ ingredients, customer database of 1000+ records with history, and staff profiles with schedules. Employed Data Loader for bulk operations importing 5000+ historical orders, loyalty enrollments, and inventory levels across 200+ items. Created duplicate rules

matching customers on email/phone, menu items on name/category, and suppliers on registration number. Established backup procedures with weekly full org exports, daily incremental backups, and monthly archival of completed orders. Deployed using Change Sets from sandbox to production with outbound sets containing all configurations and inbound validation checking dependencies. Implemented Salesforce DX with VS Code for source-driven development maintaining all metadata in Git repository with pull request workflows and automated testing via CI/CD pipeline.

Phase 9: Reporting, Dashboards & Security Review

Created 15 custom reports including Daily Sales Report showing revenue by order type and payment method, Menu Performance Analysis tracking top/bottom sellers and profitability, Inventory Utilization Report monitoring usage and waste with turnover rates, Customer Analytics Report calculating lifetime value and retention metrics, Staff Performance Report measuring orders per hour and satisfaction ratings, and Supplier Performance Report evaluating on-time delivery and accuracy percentages. Built six custom report types connecting Orders with Line Items, Menu Items with Ingredients, Inventory with Transactions, Suppliers with Purchase Orders, Customers with Orders and Feedback, and Staff with Schedules and Performance. Implemented four role-based dashboards: Executive Dashboard for managers showing revenue, profit margin, customer satisfaction, and top menu items; Operational Dashboard for kitchen displaying active orders, inventory alerts, and prep queue; Financial Dashboard for finance presenting cost analysis and payment status; and Customer Service Dashboard for front-desk showing reservations, feedback, and loyalty metrics. Configured dynamic dashboards with "View As Dashboard Viewer" enabling role-based data filtering. Finalized security with Field-Level Security hiding customer payment info from non-finance, cost prices from front-desk, and supplier terms from non-procurement staff. Enabled audit trail tracking all modifications with 90-day field history on critical objects.

Video link: https://drive.google.com/file/d/1YVhSiqc4epZh74t_kCo-s5faoODSNO5-/view?usp=drive_link