

Aurora Beauty Salon Management System Automation

This scenario focuses on a problem in the beauty and makeup industry: a manual and inefficient appointment and service management process.

The core problem is low customer satisfaction, scheduling errors, and high operational workload.

I analyzed the challenges the salon faces and the benefits that automation will bring, acting as the business analyst of Aurora Luxe Beauty Salon, and used the information to address the required project items below.

1. Company Selection

- ❖ **Company:** "Aurora Beauty Salon"
- ❖ **Mission:** To provide personalized, high-quality makeup and beauty services with fast, smooth, and customer-focused operations.
- ❖ **Major Processes:** Customer appointment scheduling, staff calendar & shift management, product sales & cosmetic inventory tracking, service planning, customer feedback, payment and invoicing.
- ❖ **Information System Users:**
 - **Person 1:** Selin Ayça – Makeup & Beauty Specialist
 - **Person 2:** Elif Aytek – Appointment & Sales Coordinator
- ❖ **Systems They Use:**
 - Selin Hanim uses a Internal appointment & service management panel.
 - Elif Hanim uses a Reception & Sales Management System.
- ❖ **Business Functions:**
 - Selin Hn.'s functions include viewing customer history and upcoming appointments, recording completed services and recording products used and sold during the sessions.
 - Elif Hn.'s functions include managing Daily sales and appointment reports, creating, rescheduling or canceling customer appointments.

2. Problem/Opportunity Definiton & Fishbone Analysis:

- **Problem:** The current appointment & service process is completely manual (phone, paper, Excel), causing frequent double-bookings, inaccurate product inventory, missed sales records, poor customer follow-up, and overall low service efficiency.
- **Fishbone Analysis (Causes):**
 - **Methods:** Appointments managed manually (phone + handwritten notebook), staff calendars separately managed in Excel, sales and stock tracked independently.
 - **People:** Appointment coordinator overwhelmed at peak hours, staff members do not record service details properly, lack of standardized training for new employees.
 - **Technology:** No integrated salon management software, no automated notification (SMS/email) system, inventory, service, and appointment systems are separate.
 - **Environment:** High customer traffic during weekends and evenings, diverse service options increase scheduling complexity, frequent changes in staff availability.
 - **Measurements:** ~20% double-booked or incorrect appointments, lost revenue due to rescheduling/cancellations, product shortages due to inaccurate stock tracking, growing customer dissatisfaction.,

3. Work Breakdown Structure:

- **Task:** "Develop Automated Salon Management & Appointment System."
- **Duration:** Approximately 7 months (Analysis: 1 month, Development: 4 months, Testing & Deployment: 2 months)
- **Predecessors:**
 - Analysis must be completed before development begins.
 - Development must be completed before the testing & deployment phase.

Develop Automated Salon Management & Appointment System

Total Duration: 7 months

Dependencies: Analysis -> Development -> Testing

1.1 Discovery Phase (2 months)

Objective: Understand salon operations, identify automation opportunities, define functional & technical specifications.

Predecessor: None

Subtasks:

- 1.1.1 Conduct stakeholder interviews and workshops (2 weeks)
- 1.1.2 Document current appointment, service, and inventory workflow (2 weeks)
- 1.1.3 Define system requirements and automation objectives (2 weeks)
- 1.1.4 Prepare high-level system architecture and feasibility study (2 weeks)
- 1.1.5 Obtain management approval for the project plan (2 weeks)

1.2 Development Phase (6 months)

Objective: Design, build, and integrate the automated salon management system.

Predecessor: Discovery Phase

Subtasks:

- 1.2.1 Design detailed system architecture and database model (3 weeks)
- 1.2.2 Develop front-end user interface for appointments & staff management (6 weeks)
- 1.2.3 Develop back-end services and APIs for scheduling, services, and sales (8 weeks)
- 1.2.4 Integrate SMS/email notification and inventory system (4 weeks)
- 1.2.5 Configure automated workflows for appointments and service tracking (4 weeks)
- 1.2.6 Perform internal QA and integration testing (3 weeks)
- 1.2.7 Conduct system review and iteration (2 weeks)

1.3 Testing & Deployment Phase (2 months)

Objective: Validate system functionality, ensure stability, train users, and deploy system.

Predecessor: Development Phase

Subtasks:

- 1.3.1 Prepare test plans and test cases (2 weeks)
- 1.3.2 Conduct User Acceptance Testing (UAT) with salon staff (2 weeks)
- 1.3.3 Fix issues and perform regression testing (2 weeks)
- 1.3.4 Deploy system to the live salon environment (1 week)
- 1.3.5 Conduct user training and complete handover (3 weeks)

1.4 Optional Future Enhancements (Post-Go-Live)

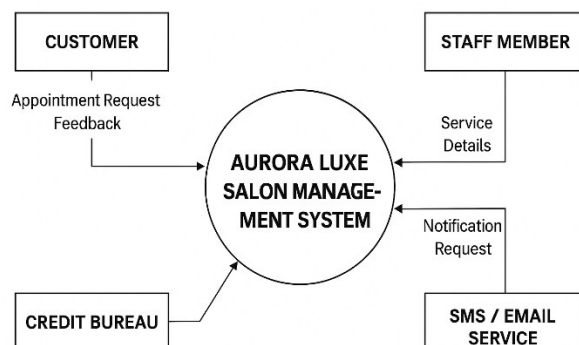
- 1.4.1 Monitor system performance and collect user feedback (1 month)
- 1.4.2 Add AI-based appointment prediction and automated scheduling (future release)

4. Context Diagram & Level 0 DFD:

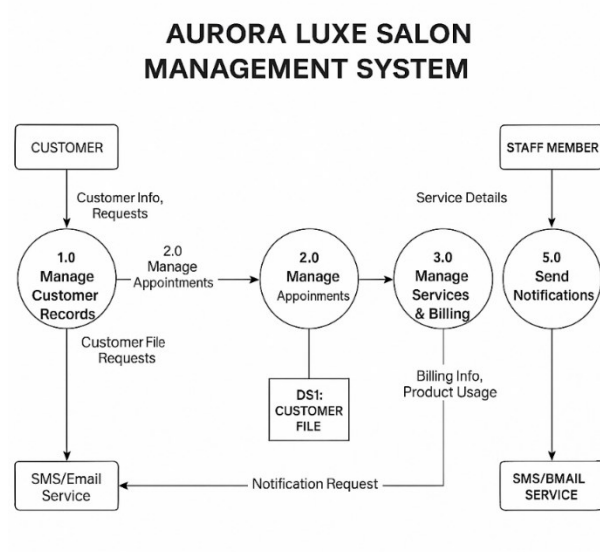
- **Context Diagram:** A single process bubble “Aurora Luxe Salon Management System.”

External entities are “Customer,” “Staff Member,” and “SMS/Email Service.”

Data flows include “Appointment Request,” “Service Details,” “Notification Request.”



- **Level 0 DFD:**
Decomposes the process into sub-processes like “Manage Customer Records,” “Manage Appointments,” “Manage Services & Billing,” “Manage Inventory,” and “Send Notifications.”



5. ERD (Entity-Relationship Diagram):

- **Entities:** Customer, Appointment, Staff, Product, ProductSale.
- **Relationships:** A Customer makes an Appointment, a Staff member performs the Appointment, a Customer has many ProductSales, and each ProductSale includes one Product.

