Lustra & Bloom: Salon Appointment System

Group Members:
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RSDY3S1G5

Project Background

Yuen Yun Jia

Project Title: Salon Appointment System

Project Client: Lustra & Bloom Salon

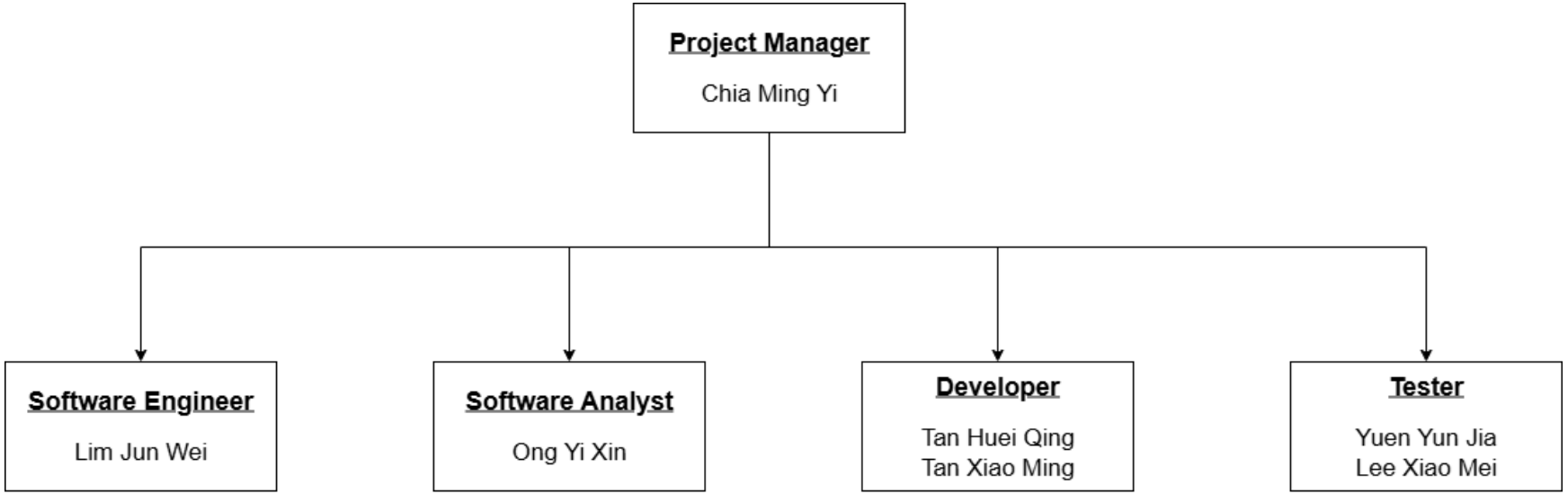
Objective: To develop and deploy a secure, fully digital salon appointment system within 5 months that streamline operation and enhance Customer satisfaction.

LUSTRA & BLOOM

Development Team

Yuen Yun Jia

CodeHive



Cost Estimation

Total Estimated Cost: RM 184,715

Category	Description	Cost (RM)
Hardware	Desktop, laptop, external storage, barcode reader	33,119
Software	Code editor, UI/UX design tool, visual code, database management tools, project management tool	1,566
Hosting and Cloud	Service for web, backend, database, storage, domain	2,250
Third-Party APIs	Stripe, google calendar API, email API	975
Manpower	Development team salaries	145,000
Documentation and Training	User manual, live demo and training session	2,000

Stakeholder

Salon Owner

- Sponsor & Decision Maker
- Expectation:
  - Track revenue
  - Generate reports
  - Ensure data security

Salon Manager

- Supervisor
- Expectation:
  - Manage staff, appointment, pricing
  - View performance

Stylists

- Service Provider
- Expectation:
  - View up-to-date appointment
  - Access customer preference

Receptionist

- Front Desk Staff
- Expectation:
  - Book appointment quickly with minimal system downtime

Customer

- End users
- Expectation:
  - Easy self-booking
  - Reliable notification

Communication Plan

Yuen Yun Jia

Communication	Purpose	Audience
Project Kickoff Meeting	To start the project and get everyone on the same page about goals and roles.	Client, Development Team
Requirement Clarification Session	To clarify exactly what the system needs to do with the client.	Client representatives, Software Analyst, Project Manager
Process model decision workshop	To decide on the best way to build the project	Project Manager, Development Team
Architecture Design Review	To review technical plans and catch any issues early.	Project Manager, Development team

Communication Plan

Yuen Yun Jia

Communication	Purpose	Audience
Weekly Progress Meeting	To check progress, solve problems, and plan the week's work.	Project Team
Stakeholder Status Update	To keep the client informed on progress and discuss any decisions.	Client stakeholders, management
Test Result Review	To share test results and make sure all bugs are fixed.	Development team

Project Scope

Tan Huei Qing

User

- Registration
- Login
- Profile
- Account security

Appointment

- Booking
- Rescheduling
- Reminders
- QR check-in

Service Management

- Service creation
- Service listings
- Updates

Payment

- Multiple payment methods
- Refunds
- Invoicing
- Tax compliance

Analytic Report

- Performance reports
- Trend prediction
- Export/sharing

Project Exclusion

Tan Huei Qing

Not included in current project scope: ❌

- On-premise POS hardware integration (printers, cash drawers, terminals).
- Third-party accounting software integration (QuickBooks, Xero, Sage).
- Inventory management system (beauty products stock).
- Multi-branch/franchise management.

Engagement Strategies

Tan Huei Qing

Salon Owner

- Strategy 1:
  - Structured governance & decision forums
- Strategy 2:
  - Executive Briefings with Strategic Alignment Focus

Customer

- Strategy 1:
  - Early Involvement through Survey and Usability Testing
- Strategy 2:
  - Continuous Feedback and Incentivized Participation

Project Schedule
&
Corrective Action

Project Calendar Setting

Project Period

- 1 Aug 2025 - 3 Dec 2025 (~4 month)
- 5 Holiday
- Working Hours: 10:00 a.m - 6:00 p.m. (Mon-Fri)

Resource Setting

- Manpower Resource: 7 staff
- Material Resource: 16
- Cost Resource: 2

Resource Calendar Setting:

- Project Manager (Wed 11:00 a.m - 6:00 p.m)
- Software Engineer (1 Study Leave - Aug)
- Software Analyst (1 Annual Leave - Aug)
- Tester (1 Annual Leave - Oct)
- Developer (1 Annual Leave - Oct)
- Tester (2 day Annual Leave - Oct)

Ong Yi Xin

Project Schedule - 6 Phase

0.0 Project Initiation

- ~5 days
- Kick-Off Meeting
- Quality Planning

1.0 Requirement Analysis

- Identify Stakeholders
- System Requirements Gathering

2.0 Design

- UI Design
- Database Design
- Class Diagram
- Report Design
- Sequence Diagram

3.0 Incremental 1 (User & Service)

- Development
- Testing
- Implementation & Deployment

4.0 Incremental 2 (Appointment, Payment, Report)

- Development
- Testing
- Implementation & Deployment

5.0 Project Closure & Continuous Improvement

- Post-Deployment Review
- Corrective Actions & Continuous Monitoring

Corrective Action

Add More Staff

Advantages

- Increased workforce capacity
- Reduced Pressure on current team
- Fresh Skills and Perspective

Disadvantages

- Onboarding and Training Time
- Higher Costs

Subcontracting Part of WorkUser

Advantages

- Faster Project Delivery
- Access to Specialized Expertise
- Resource Optimization and Focs

Disadvantages

- Coordination and Communication Challenges
- Cost Overruns and Dependency Risks

Ong Yi Xin

Milestone Setting - 6 Milestone

Requirement Analysis Checkpoint

- Functional & Non-functional requirements
- Confirm by stakeholders

Design Completion Checkpoint

- Before coding
- System architecture
- Database Schema
- User interface design

Incremental 1: Development Checkpoint

- Planned model coded and integrated
- Verify -> testing & quality review

Incremental 1: Completion Checkpoint

- User Acceptance Testing (UAT) done
- Deliverables approved

Incremental 2: Development Checkpoint

- Planned model coded and integrated
- Verify -> testing & quality review

Incremental 2: Completion Checkpoint

- User Acceptance Testing (UAT) done
- Deliverables approved

Process Model Selection: Benefits and Challenges

Incremental Model

How?

- Clear defined requirements
- Breakdown project into smaller and manageable modules
- Sequence:

  Core modules → Submodules
- Refinement involved (delivery → review → enhance)

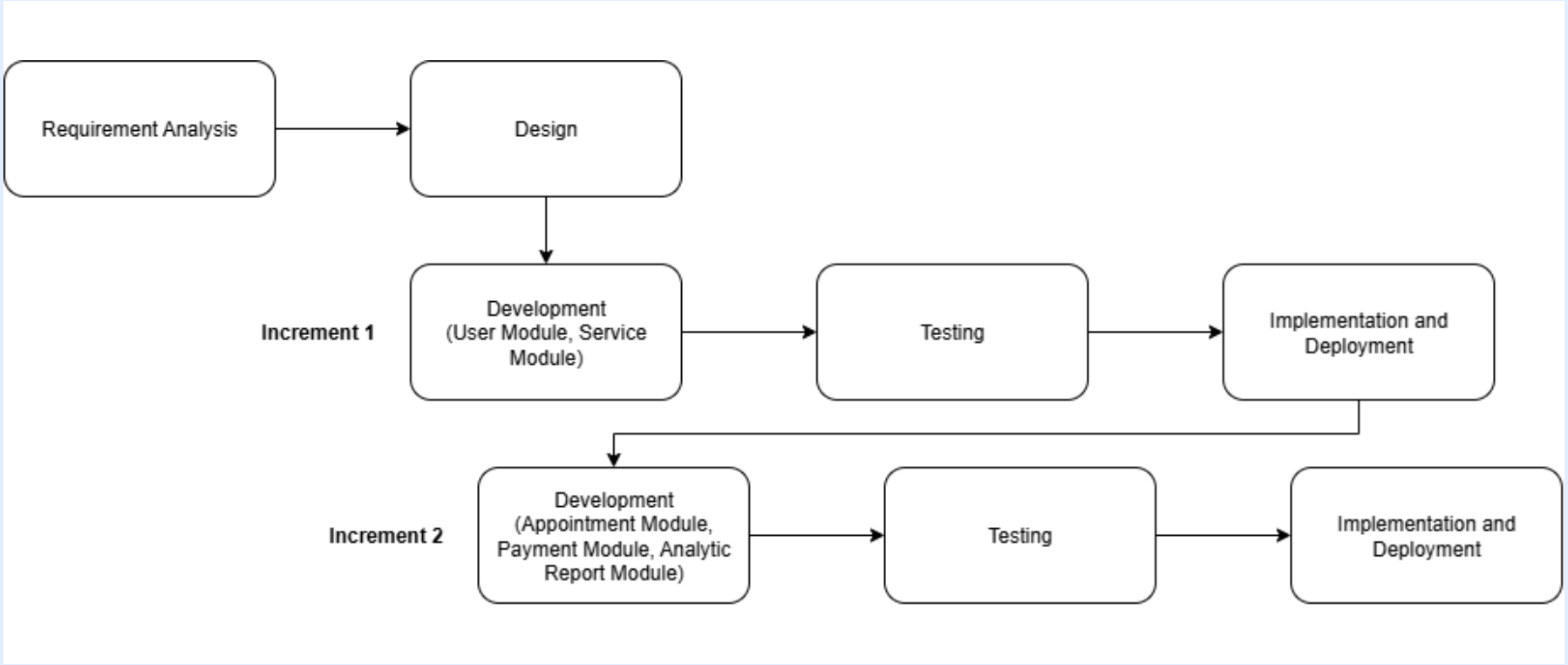
Why?

- Short development time: 3 - 5 months
- Clear requirements
- High & valuable feedback
- Limited team & resources: 5 members
- Tight budget

Advantages?

- Early delivery of core features
- Better resource and workload management for small teams
- Improved risk management through feedback loops

Incremental Model Flow Chart



Incremental Model Disadvantages

- **Integration challenges between modules**
  - Compatibility issues
  - Long time taken for troubleshoot & rework
  - Postponed delivery of complete system
- **Difficulty in estimating total cost and schedule**
  - Sudden change or addition of new features
  - Rescheduling of project tasks
  - Difficulty of achieving targeted quality, time & budget constraints

Reasons of Disclosing Disadvantages of Chosen Model

Disadvantage 1:

Difficulty in estimating total cost and schedule

- To prevent financial overruns and budget crises
- To avoid operational disruptions and missed business opportunities
- To manage stakeholder frustration and maintain project support

Disadvantage 2:

Integration challenges between modules

- To manage stakeholder expectations on system reliability
- To allow better resources and timeline planning

Quality Plan

Project Risk Overview

Quality Name: Reliability (Availability)

- Protecting Brand Reputation: Downtime erodes client trust.
- 24/7 Booking Convenience: Capture bookings outside business hours.
- Streamlining Operations: Avoid manual errors & staff overload.
- Maximizing Revenue: Prevent empty slots & lost income.
- Competitive Advantage: Always-on access strengthens loyalty.

Scale & Target

Unit: % uptime (monthly/quarterly).

Minimum acceptable: 99% uptime.

Desired range: 99.9% – 100% uptime (~≤43 min downtime/month).

Current value: 99.5% uptime (3.6 hrs downtime in 30 days).

Project Risk Overview

Pre-Testing

Architecture review

Stress/load testing

Failover testing

DB replication check

During Testing

Uptime monitoring

Recovery time (RTO) → Restore service < 5 mins.

Error handling

Peak load validation → 150+ concurrent users test.

Post-Testing

Continuous monitoring & monthly uptime reports.

Incident tracking & root cause analysis.

Periodic recovery drills (quarterly).

User/staff feedback analysis for performance issues.

Example Availability Result

Period: 30 days = 720 hrs.

Downtime = 3.6 hrs.

Availability = **99.5% uptime**.

Risk Table

Project Risk Overview

Risk Title: Project Conflicts Not Resolved in a Timely Manner

Risk Category: Project Management Risk

Risk Description:

- Conflicts arise from personnel disagreements or task dependencies.
- Incremental model means delays in sub-tasks block subsequent iterations.
- Examples: design disagreements, scheduling conflicts, delayed dependencies.

Risk ID: RSK-003

Date: 01-08-2025

Probability: 80%

Impact: Conflicts may arise between team members or across subtask dependencies. If not resolved quickly, they can cause **schedule delays, rework and reduce productivity** which will lead to **missed milestones before final delivery**.

Project Risk Mitigation Strategies

Define Roles & Responsibilities

- Use RACI matrix to clarify task ownership.

Centralized Decision-Making Process

- Minor issues → module manager; major issues → project/product manager.

Maintain Transparent Documentation

- Use requirement documents and specs as reference.

Apply Conflict Resolution Policies

- Stepwise escalation: private discussion → PM mediation → team meeting → senior management.

Encourage Team Collaboration & Motivation

- Conduct retrospectives and reward contributions post-conflict.

Project Risk Monitoring & Management Strategies

Monitoring Actions:

- Regular Progress Review Meetings: Weekly/daily syncs to identify issues.
- Project Management Tools: Track task status, dependencies, delays.
- Monitor Logs & Activity: Identify module issues and responsibility.
- Collect User/Stakeholder Feedback: Detect requirement gaps early.
- Track KPIs: Bug fix time, task delays, conflict frequency.

Management Actions:

- Define Clear Roles and Responsibilities
- Establish a Centralized Decision-Making Process
- Maintain Transparent Documentation
- Apply Conflict Resolution Policies
- Encourage Team Collaboration and Motivation