HuaChang Growmax

Project Plan

Musang King

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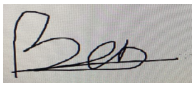
DOCUMENT CHANGE CONTROL

Version	Date	Authors	Summary of Changes
1	25/9/24	Benjamin Tan Che…	Section 2 and 8
2	25/9/24	Wallace Iglesias Chandrio	Section 1 and 3
3	25/9/24	Hein Htet Naing	section 6 and 7
4	25/9/24	Mahanthe Acharige Sachindri Sudeepa Chandrasiri	section 4 and 5

DOCUMENT SIGN OFF

Name	Position	Signature	Date
Benjamin Tan Chen Hern	Leader		17/09/2024
Wallace Iglesias Chandrio	Member		17/09/2024
Hein Htet Naing	Member		17/09/2024
Mahanthe Acharige Sachindri Sudeepa Chandrasiri	Member		18/09/2024

CLIENT SIGN OFF

Name	Position	Signature	Date
See Thoo Wai Hao	Account Executive		22/11/2024
Organisation			
HUACHANG GROWMAX (M) SDN. BHD.			

CONTENTS

1. INTRODUCTION

The main purpose of this documentation is to outline the project plan for developing a sales order application for Huachang Growmax. The documentation will offer an organized approach of project management by outlining the objectives, scopes, deliverables, timeline, resources and other key elements. This document is meant for all parties involved in this project, including stakeholders and project team members. This documentation will help to make sure the project stays on track, achieves its objectives, and delivers a functioning sales order application to Huachang Growmax.

1.1. BACKGROUND

Huachang Growmax needed a more effective and efficient order management system, thus the project to develop a sales order application was initiated. Huachang Growmax is a company in the fertilizer industry, established in 2012. Huachang GrowMax's goal to enhance customer satisfaction, increase order accuracy, and optimize its order processing operations is what motivates this initiative. Adding a cutting-edge, web-based sales order tool will help the business meet its operational demands and strategic objectives as it expands.

Key Huachang GrowMax stakeholders are involved in the project, including their General Manager, Dr. Tang, IT and sales teams, as well as maybe outside consultants or vendors with experience developing web-based apps. The objective is to create a solution that will enable Huachang

GrowMax's continued success in the cutthroat fertilizer market and smoothly integrate with their current systems.

1.2. KEY PROJECT PERSONNEL

The key personnel involved in this project are as follows:

- Huachang Growmax
- Musang King Team

1.2.1. CLIENT

The Client of this project is Huachang GrowMax, it is a company that moves in the fertilizer industry, established in 2012. Huachang Growmax is a local fertilizer company that is rising rapidly in the industry with a well-known reputation of their high-quality products and commitment to excellence in their services to customers.

1.2.2. OTHER STAKEHOLDERS

General Manager

- **Name**: Dr. Tang
- **Role**: The General Manager of Huachang GrowMax, responsible for providing strategic direction and ensuring the alignment of the sales order system with business objectives.
- **Contact**: +60 13-362 6778

IT Department Lead

- **Role**: Oversees the integration of the new system into Huachang GrowMax's existing IT infrastructure. Responsible for technical support and providing feedback on system compatibility.

Sales Department Lead

- **Role**: Responsible for ensuring the sales order application meets the requirements of the sales team, including customer interaction, order processing, and reporting features.

Project Supervisor

- **Role**: The supervisor lecturer for this project. Responsible for overseeing the project's progress and providing academic guidance.

1.2.3. PROJECT SUPERVISOR, TEAM LEADER AND KEY PROJECT MEMBERS

Project Supervisor

- **Name**: Ms. Robina
- **Description**: The supervisor lecturer for this project. Responsible for overseeing the project's progress and providing academic guidance.
- **Contact**: [Provide specific contact details here, e.g., Email, Phone]

Project Team Leader

- **Name**: Benjamin Tan Chen Hern
- **Description**: The person who is responsible for leading the project, coordinating tasks, and ensuring the project objectives are achieved.
- **Contact**: +601110660387 / 104477174@student.swin.edu.au

Key Project Members

2. **Name**: Wallace Iglesias Chandrio

   Role: Database Designer/Back End Developer

   Contact: +60166082100 / 104180579@student.swin.edu.au

3. **Name**: Hein Htet Naing

   Role: Front End Developer

   Contact: +60134942987/104329055@student.swin.edu.au

4. **Name**: Mahanthe Acharige Sachindri Sudeepa Chandrasiri

   Role: Back End Developer / Documentation Specialist

   Contact: +60108932476/104338967@student.swin.edu.au

2. TERMS OF REFERENCE

The project's objective is to make a web based form with mobile responsiveness so that the order management procedure for salespeople under HuaChang Growmax is more straightforward and efficient. The proposed solution aims to increase the speed and accuracy of the sales process overall, facilitate smooth communication between salespeople, administrators, and warehouse staff, and improve efficiency in handling client orders.

Intended User Group

The salespeople handling customer orders, the administrators organizing these orders, and the warehouse staff preparing and shipping the items are the main users of this system.

2.1. OBJECTIVES

1. Create a Web-Based Order Management System: Create a mobile- and desktop-friendly web application that enables salespeople to handle customer orders.
2. Stock Availability: To help salesmen, put in place a system that automatically determines and shows stock availability, however manual modifications can be made.
3. Track Last Sold Price: Make sure salespeople have up-to-date pricing knowledge when placing new orders by giving them access to each customer's last sold price.
4. Order Status Tracking: Assist administrators and salespeople in monitoring the status of orders from creation to delivery, guaranteeing visibility at every stage. Permit updates for "Order Processing," "Out for Delivery," and "Delivered" to be tracked.
5. Create New Customer or Check for Existing Customers: Provide the option to add features to the system that allow you to create new customer profiles or look up existing ones.
6. Enable role-based access to data and capabilities for salespeople, administrators, and warehouse staff through protected login access.
7. Summary Report: Offer resources for monitoring daily sales and producing summaries of data broken down by sales representative and area.
8. Message updates for Stakeholders: Use Whatsapp to send managers, administrators, salespeople, and warehouse employees automatic message updates on order status and problems.
9. Online Banking Payments: Install a system that handles payments via online banking to speed up the ordering and payment processes.

2.2. SCOPE

Project Boundaries:

- Inclusions:
    - Development of a web application that works well on desktops and mobile devices to help salesmen manage customer orders.
    - Installation of a system with manual override options that automatically shows stock availability.
    - Salespeople's access to the most recent pricing to a customer has been sold.
    - Complete tracking of orders, including updates on "Order Processing," "Out for Delivery," and "Delivered."
    - Features for establishing new customer profiles and searching for current clients.
    - Administrators, salespeople, and warehouse staff can log in securely and access content based on their roles.
    - Daily summary reports and sales tracking broken down by salesman and region.
    - Notifications about modifications to orders via WhatsApp are distributed to the appropriate parties (managers, admins, salespeople, and warehouse workers).
    - Processing payments through online banking.

- Exclusions:
    - Does not support multi-language functionality.
    - Integration to HuaChang Growmax’s database will not be implemented.

- Timeline:
    - Start Date: 30/8/2024
    - End Date: 15/07/2025

2.3. CRITICAL SUCCESS FACTORS

- User Experience and Usability: Salespeople, administrators, and warehouse employees should be able to operate the online application with ease and minimal training if it is user-friendly and intuitive, especially when accessed from a mobile device.
- Stock Availability Accuracy: The system must deliver sufficiently accurate stock availability information, allowing salespeople to make well-informed judgments at the moment, even though it need not be 100% precise.

- Safe Role-Based Access: To guarantee that administrators, salespeople, and warehouse staff may only access pertinent information and features, the login system must securely enforce role-based access.
- Order Status Tracking: All orders must be properly tracked by the system, from creation to delivery, and stakeholders must be notified instantly via WhatsApp.
- Sales Reporting: To enable efficient analysis of sales success, the sales tracking function must include precise daily summaries that are categorized by salesman and region.

2.4. ACCEPTANCE CRITERIA

The project will be considered acceptable when:

1. The web application satisfies all established usability and accessibility requirements and is completely usable on PC and mobile platforms.
2. Role-based access allows salespeople, administrators, and warehouse staff to safely and efficiently manage orders.
3. The stock availability system gives enough information for salesmen to work with during their conversation with the customer, and salespeople can manually modify it if necessary.
4. Order status tracking is up and running, enabling customers to receive updates on "Order Processing," "Out for Delivery" and "Delivered".
5. Salespeople may show and explain to the customer about the recent change in pricing thanks to the implementation and accessibility of the last sold price functionality.
6. Daily sales summary and geographical breakdowns are accurate and easy to compile.
7. Payments made through online banking are handled accurately, enabling users to finish transactions without any problems.

3. ESTABLISHMENT

3.1. PROCESSES, PROCEDURES AND STANDARDS

Software Development Methodology:

For this project, the Waterfall development methodology has been chosen. The Waterfall model is a linear and sequential approach, making it an ideal fit for projects with well-defined requirements and clear objectives, like the Sales Order Application for Huachang GrowMax. Each phase in the Waterfall model must be completed before moving on to the next. The phases include Requirement Analysis, System Design, Implementation, Testing, Deployment, and Maintenance. Waterfall is particularly

suitable here because it allows the team to follow a structured plan with clearly documented deliverables and milestones, which is important when working with multiple stakeholders.

Version Control System:

A Git-based versioning system will be used, with repositories hosted on GitHub. Git will allow the team to manage source code changes and track the progress of each phase sequentially, ensuring proper version control and accountability at each step of the Waterfall process.

User-Centered Design (UCD) Process:

Even with the Waterfall model, a User-Centered Design (UCD) approach will be integrated during the Requirement Analysis and Design phases. User research, personas, and feedback will be gathered early on to ensure that the system's design aligns with the needs of Huachang GrowMax's end users. This process will not be revisited until after deployment, making it crucial to get it right early in the project lifecycle.

Program Coding Standards:

The project team will adopt strict coding standards to ensure code quality, maintainability, and consistency. These include:

- **Naming Conventions:** Clear and descriptive names for variables, functions, and classes, using camelCase for variables and PascalCase for class names.
- **Commenting:** Code will be well-documented, with comments explaining the purpose of functions and complex logic, especially since the Waterfall model limits revisiting earlier phases.
- **Code Reviews:** At the end of each phase (particularly the Implementation phase), code reviews will ensure adherence to standards and prevent errors from cascading into later stages.
- **Documentation:** Comprehensive documentation will be provided for each phase of development, particularly during the System Design and Testing phases. This will serve as a reference for stakeholders and developers during and after the project.

3.2. PROJECT ENVIRONMENT

The project environment will include the necessary resources and tools for efficient development and deployment:

Workspaces:

- **Physical Workspace:** The project team will primarily work from Swinburne University's lab facilities, which are equipped with high-performance computers and all required software.
- **Remote Collaboration Tools:** For remote work, the team will use Microsoft Teams, Slack, and Zoom for communication, alongside project management tools like Trello to track the Waterfall phases.

Computers and Servers:

- Each team member will use personal computers with installed tools such as Visual Studio Code, Git, XAMPP, and database management systems.
- **Server Accounts:** The project will utilize a hosted server for deployment testing (such as AWS or Heroku). These environments will be used primarily during the Testing and Deployment phases.

DBMS:

The project will use MySQL as the primary database management system, with phpMyAdmin used for local development. A remote AWS RDS instance will be set up during the deployment phase for production.

User Accounts:

- User accounts will be set up for each team member to manage access to the database, servers, and version control system (GitHub).
- For user testing during the Testing phase, dedicated test accounts will be created for Huachang GrowMax stakeholders, including the sales team and IT department.

Stationery:

Basic office supplies such as whiteboards, notebooks, and sticky notes will be required for brainstorming sessions during the Requirement Analysis and System Design phases.

3.3. PROJECT TEAM SKILL DEVELOPMENT REQUIREMENTS

Given the Waterfall methodology's structured nature, there are several key skills the team must refine to ensure project success:

1. ***Database Design and Management:***

   Since the project requires a relational database for managing sales orders, the back-end team will need training on:

   - *Advanced database design*
   - *Writing optimized SQL queries*
   - *Managing databases in cloud environments (AWS RDS).*

2. ***Front-End Development & User Experience:***

   The front-end team will undergo additional training on UI/UX design principles. This will help ensure that the user interface is well-designed and user-friendly before the Implementation phase begins.

3. ***Testing Procedures:***

   The Testing phase is critical in Waterfall as all features must be verified after implementation. Team members will need to develop skills in:

   - *Writing and executing test cases*
   - *Identifying and fixing bugs using testing frameworks*
   - *Implementing user acceptance testing (UAT) with stakeholders.*

By ensuring the team is fully trained and prepared, the project can move smoothly through each phase of the Waterfall process, from Requirement Analysis to Maintenance.

4. DELIVERABLES, ACTIVITIES AND CAPITAL RESOURCES

4.1. DELIVERABLES

- **Sales Order Application**: A fully functional web-based sales order application.
- **User Documentation**: Manuals and guides explaining how to use the application (for salespeople, administrators, and warehouse staff).
- **Testing Reports**: A report summarizing test results (e.g., functional tests, usability tests, security tests).
- **Project Report**: A complete project report detailing the development process, testing phases, and final delivery.
- **Presentation Materials**: Slides and materials used to present the project to the client and academic supervisor.

4.2. ACTIVITIES

Project Planning:

- **Activity**: Develop the Project Plan
    - **Tasks**:
        - Outline the entire project, objectives, scope, and deliverables.
        - Assign roles and responsibilities to team members.
        - Identify key milestones and prepare a preliminary project schedule.
- **Activity**: Risk Management Planning
    - **Tasks**:
        - Identify potential risks (technical, operational, and timeline risks).
        - Develop risk mitigation strategies.
        - Assign responsibilities for managing each identified risk.
- **Activity**: Resource Allocation
    - **Tasks**:
        - Identify required resources (software, hardware, personnel).
        - Assign resources to each phase of the project.

Project Analysis:

- **Activity**: Requirement Gathering
    - **Tasks**:
        - Conduct meetings with stakeholders to collect requirements.
        - Document functional and non-functional requirements.
        - Identify user roles and define their interaction with the system.
- **Activity**: Data Analysis
    - **Tasks**:
        - Analyze business data to establish the system's data needs.
        - Document the data flow for orders, inventory, and customer management.
- **Activity**: User Journey Mapping
    - **Tasks**:
        - Create detailed user flows for key system users (salespeople, admins, warehouse staff).
        - Map user interactions with the system at different stages of the order lifecycle.
- **Activity**: Technical Specification Development
    - **Tasks**:
        - Develop detailed technical specifications for the system architecture.
        - Define the software and hardware requirements.
        - List integration points, including APIs and data sources.
- **Activity**: Approval of Requirements
    - **Tasks**:
        - Present the gathered requirements and technical specs to stakeholders.
        - Get feedback and sign-off on the final list of requirements.

Project Development:

- **Activity**: System Architecture Design
    - **Tasks**:
        - Design the overall system architecture (frontend, backend, and database).
        - Create the ERD (Entity Relationship Diagram) and define system components.
- **Activity**: Database Setup
    - **Tasks**:
        - Design the database schema, including tables and relationships.
        - Set up the database server and initial configurations.
        - Populate sample data for testing.
- **Activity**: Front-End Development
    - **Tasks**:
        - Develop the user interface for salespeople and administrators.
        - Ensure mobile responsiveness and user-friendly design.
        - Implement form validation and data entry features.
- **Activity**: Back-End Development
    - **Tasks**:
        - Develop the system to handle sales orders, customer data, and inventory.
        - Implement role-based access and security features.
        - Ensure the backend integrates seamlessly with the frontend.
- **Activity**: Testing and Quality Assurance
    - **Tasks**:
        - Conduct unit testing for each component (frontend, backend, database).
        - Perform integration testing to ensure system modules work together.
        - Conduct user acceptance testing with stakeholders and real users.

Project Deployment:

- **Activity**: User Documentation
    - **Tasks**:
        - Prepare user manuals and guides for different roles
- **Activity**: Final Testing and Bug Fixing
    - **Tasks**:
        - Conduct thorough final testing to ensure system stability.
        - Fix any remaining bugs or issues reported during the final test.
- **Activity**: Project Closure and Product Handover
    - **Tasks**:
        - Handover the finished product to the client.
        - Complete project closure activities, including documentation and review.

4.3. RESOURCES

Software:

- Development IDE
- Database management system

- Deployment platform

Hardware:

- Laptops or desktops for development and testing.
- Mobile devices for testing mobile responsiveness.

Personnel:

- Project team members, including developers and testers.
- Stakeholders for feedback and testing.

5. ORGANISATION AND STRUCTURE

Groups of People Involved in the Project:

1. Project Team:

- **Team Leader (Benjamin Tan Chen Hern)**:
    - Role: Responsible for coordinating all project activities, ensuring team members meet deadlines, and managing communication between the team and client.
    - Interaction: Oversees the project plan, conducts meetings, and coordinates with stakeholders.
- **Backend Developer (Wallace Iglesias Chandrio)**:
    - Role: Responsible for designing and implementing the server-side logic, API development, and managing the database.
    - Interaction: Works closely with the front-end developer and IT teams at Huachang Growmax.
- **Frontend Developer: (Hein Htet Naing)**
    - Role: Builds the user interface and ensures mobile responsiveness and user-friendliness.
    - Interaction: Collaborates with the backend developer and sales staff to ensure the interface meets user needs.
- **Documentation Specialist (Mahanthe Acharige Sachindri Sudeepa Chandrasiri)**:
    - Role: Responsible for writing technical documentation, user manuals, and reporting.
    - Interaction: Works with all team members to collect necessary information and feedback.

2. Client Stakeholders (Huachang Growmax):

- **Mr. Tang (Client Representative)**:
    - Role: Represents Huachang Growmax's interests, provides feedback, and participates in key decision-making stages.
    - Interaction: Regularly interacts with the project team to ensure the solution meets business requirements.
- **Sales Team**:
    - Role: End users who will interact with the sales order application.
    - Interaction: Provide input during the requirements gathering phase and participate in user acceptance testing (UAT).
- **Warehouse Managers**:
    - Role: Key users responsible for managing inventory and tracking orders.
    - Interaction: They will test and provide feedback on features related to stock availability and order tracking.
- **IT Team**:
    - Role: Ensures the application is compatible with existing systems and provides technical support.
    - Interaction: Collaborates with the project team, particularly the backend developer, to ensure proper integration with the company's infrastructure.

3. Project Supervisor (Ms. Robina):

- **Role**: Provides academic and project guidance.
- **Interaction**: Reviews project deliverables, provides feedback, and ensures the project aligns with academic expectations.

4. End Users:

- **Salespeople**:
    - Role: The primary users of the sales order application who create and track orders.
    - Interaction: Provide input during the design phase and participate in user testing.
- **Administrators**:
    - Role: Handle data management, reporting, and order oversight.
    - Interaction: Test the functionality related to reporting, order status, and data entry.
- **Warehouse Staff**:
    - Role: Manage inventory levels and track order fulfillment.

- Interaction: Test features related to stock availability and order processing.

5. Testers:

- **Role**: Conduct thorough testing to ensure the system meets functional and non-functional requirements.
- **Interaction**: Comprises salespeople, warehouse managers, and other staff involved in testing phases to verify usability, functionality, and performance.

Organizational Structure:

The project will adopt a **Matrix Structure** to manage interactions and responsibilities. In this structure:

- The **Team Leader** oversees project coordination, ensuring communication flows between team members and client stakeholders.
- **Project Team Members** (frontend, backend, documentation) work collaboratively to deliver technical components of the solution while receiving input from business users.
- **Client Stakeholders** (Mr. Tang, Sales Team, Warehouse Managers, IT Team) provide crucial feedback and validation at each project phase.
- **End Users** (salespeople, administrators, warehouse staff) are involved during requirements gathering and testing to ensure the system is designed according to their needs.
- **Project Supervisor** ensures the project is academically sound, monitors progress, and evaluates deliverables.

Activities	***Deliverables***	***Group Involved***
Requirement Gathering	Documented project requirements	Project Team, Huachang Growmax Team
System Design	UI/UX Wireframes, Technical Specifications	Project Team

Activities	*Deliverables*	*Group Involved*
Requirement Gathering	Documented project requirements	Project Team, Huachang Growmax Team
Database Setup	Database schema and initial setup	Backend Developer, Huachang Growmax Team
Front-End Development	User Interface	Frontend Developer, Huachang Growmax Team
Back-End Development	System backend logic	Backend Developer
Testing and User Acceptance	Test results, User feedback	Project Team, End Users
Final Documentation	User manuals, Final project report	Project Team
Product Handover and Closure	Final product delivered and signed off	Project Team, Huachang Growmax Team , Supervisor

Table 1 Activities and Deliverables

6. RISKS

Number : 1

Name: Payment Gateway or API Integration Failures

Description: Failure to integrate with third-party services such as payment gateways, accounting software, or CRM systems could affect the ability to process orders and track sales.

Likelihood of occurrence: Moderate

Severity: High

Mitigation Strategy:

1. Conduct early testing of third-party services to ensure compatibility.
2. Build modular, flexible architecture that allows easy replacement of third-party services.

3. Maintain close communication with the service providers for timely updates.

Contingency Plan:

If integration fails, fall back to manual processing for payments and sales tracking until the issue is resolved.

Number : 2

Name: Low User Adoption

Description: If the fertiliser company's employees or customers find the web app hard to use, sales could drop, and the tool may not be fully utilized.

Likelihood of occurrence: Low

Severity: Medium

Mitigation Strategy:

1. Involve end-users (sales staff and customers) in the design process to make sure the UI is intuitive.
2. Provide thorough user documentation and training sessions for both the internal team and external customers.
3. Conduct usability testing and adjust the design based on feedback.

Contingency Plan:

Provide dedicated customer support to help users during the transition phase and refine the app's user interface with future updates.

Number: 3

Name: Data Breaches or Non-compliance with Regulations

Description: Personal and transactional data could be at risk of being exposed, especially with financial data (sales, customer information).

Likelihood of occurrence: Low

Severity: Very High

Mitigation Strategy:

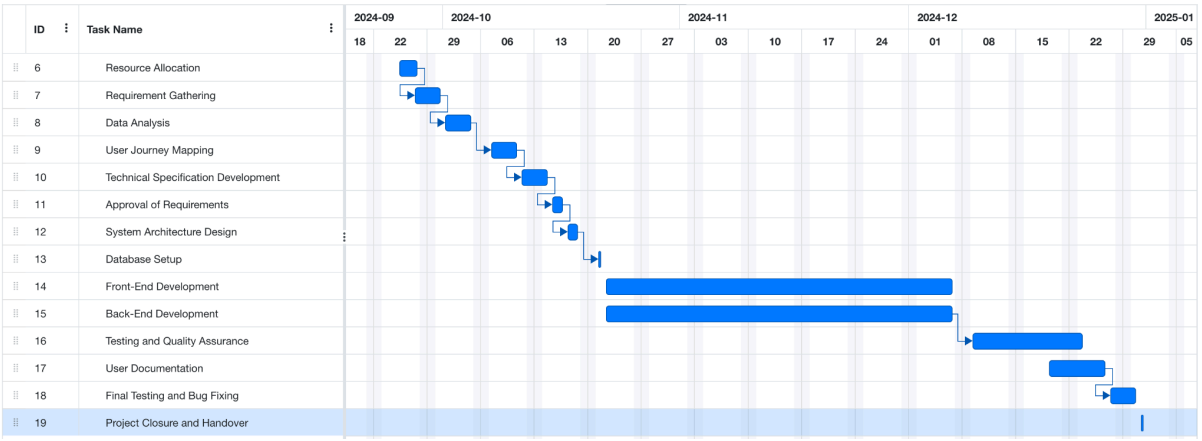
1. Implement end-to-end encryption for data transmission and storage.
2. Follow industry security standards like HTTPS, firewalls, and two-factor authentication for users.
3. Conduct regular security audits and testing, including penetration tests.

Contingency Plan:

In case of a breach, immediately disconnect vulnerable systems, notify the affected parties, and follow a pre-established incident response plan. Temporarily disable transactions while securing the system.

7. SCHEDULE

7.1. PROJECT TIMELINE



Task	Start Date	End Date	Assigned Members
Resource Allocation	2024-09-25	2024-09-27	Wallace & Ted
Requirement Gathering	2024-09-27	2024-09-30	Sachi & Ben
Data Analysis	2024-10-01	2024-10-04	Wallace & Sachi
User Journey Mapping	2024-10-07	2024-10-10	Ted & Sachi
Technical Specification Development	2024-10-11	2024-10-14	Ben & Ted
Approval of Requirements	2024-10-15	2024-10-16	Wallace & Ben
System Architecture Design	2024-10-17	2024-10-18	Ted & Sachi
Database Setup	2024-10-21	2024-10-21	Wallace & Ben
Front-End Development	2024-10-22	2024-12-06	Sachi & Ted
Back-End Development	2024-10-22	2024-12-06	Ben & Wallace
Testing and Quality Assurance	2024-12-09	2024-12-23	Ted & Sachi
User Documentation	2024-12-19	2024-12-26	Ben & Wallace

Final Testing and Bug Fixing	2024-12-27	2024-12-30	Sachi & Ted
Project Closure and Handover	2024-12-31	2024-12-31	Ben & Wallace

7.2. EXTERNAL DEPENDENCIES

Stakeholder Feedback (Approval of Requirements - 2024-10-23 to 2024-10-25)

- *Input: Feedback and approval from key stakeholders (management, clients, or end-users) are required to finalize the project requirements. Delays in receiving this input may push the entire timeline forward.*
- *Critical Point: If stakeholders do not approve the requirements on time, further tasks like system architecture design and development cannot proceed.*

User Testing and Feedback (Testing and Quality Assurance - 2024-11-07 to 2024-11-09)

- *Input: Feedback from external users or beta testers is needed during the testing phase. Any delays in gathering meaningful feedback can delay final testing and bug fixing.*
- *Critical Point: Feedback is critical to ensure that the final product is user-friendly and meets requirements. If not received in time, it could delay the project closure and handover.*

Final Approval and Sign-off (Project Closure and Handover - 2024-11-15 to 2024-11-17)

- *Input: The final sign-off from project sponsors or executives is required for the project to be considered complete. Any delays in this process can push back the official project handover.*
- *Critical Point: Without this sign-off, the project cannot be formally closed, and final resources cannot be released.*

7.3. ASSUMPTIONS

1. Resource Availability

- *It is assumed that all team members (Wallace, Sachi, Ted, Ben) will be available and dedicated to their assigned tasks as per the timeline. No unplanned absences or shifts in responsibility will occur during the project.*
- *Any team member unavailability could lead to delays, especially in tasks requiring specific expertise (e.g., technical specification development or system architecture design).*

2. Stakeholder Engagement

- *Stakeholders will provide timely feedback, especially during critical review phases (e.g., Approval of Requirements). It is assumed that stakeholders will be available for scheduled meetings and provide quick feedback when requested.*
- *Delayed feedback may impact the System Architecture Design and subsequent development phases, pushing back the entire timeline.*

3. No Major Technical Issues

- *It is assumed that the technologies used in the project, such as development frameworks, databases, and APIs, will function as expected with no major technical hurdles.*
- *Any major technical challenges, such as compatibility issues, bugs, or unexpected delays in database setup, could push back the Front-End Development, Back-End Development, and Testing phases.*

8. BUDGET

Personnel Cost

Name	Rate per Hour
Benjamin Tan Chen Hern	RM 50
Wallace Iglesias Chandrio	RM 45
Ted	RM 45
Mahanthe Acharige Sachindri Sudeepa Chandrasiri	RM 50

Table 3 Personnel Cost

Time Estimated to Complete Each Task

Activity	Task	Estimated hours needed (hrs)	Total per activity (hrs)
Project Planning			
Develop Project Plan	Outline objectives, scope, and deliverables	3	
	Assign roles and responsibilities	2	
	Identify key milestones and prepare a preliminary project schedule.	4	9
Risk Management Planning	Identify risks, develop mitigation strategies	2	
	Assign responsibilities for managing risks	1	3
Resource Allocation	Identify and allocate resources	2	2
Project Analysis			
Requirement Gathering	Conduct meetings , document requirements	8	
Data Analysis	Analyze data needs, document data flow	4	
User Journey Mapping	Map user flows for key system users	4	
Technical Specification Development	Develop system specifications, define software/hardware requirements	3	
Approval of Requirements	Present and approve gathered requirements	2	21
Project Development			

System Architecture Design	Design system architecture and ERD	6	
Database Setup	Set up database schema and server	20	
Front-End Development	Develop the user interface, mobile responsiveness	40	
Back-End Development	Develop backend system, implement security features	60	
Testing and Quality assurance	Conduct unit and integration testing	6	132
Project Deployment			
User Documentation	Prepare user guides and manuals for each role.	5	
Final Testing and Bug Fixing	Conduct final testing, fix issues	10	
Project Closure & Product Handover	Handover product and complete documentation	5	20
		Total	182

Table 4 Task time estimate

9. REFERENCES

Kissflow (2023). *5 Phases of Project Management Process | Kissflow Projects*. [online] Kissflow. Available at: https://kissflow.com/project/five-phases-of-project-management/.

10. TABLES INDEX