

Project Plan

Pharmacy Service Web Application

Industry Partner	
Primary Instructor	
Team Member	Diego Fuentes
Team Member	Hiu Wai Lau
Team Member	Yang Hai
Team Member	Chloe Zeng
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Document Revision History

Revision #	Date
1	10/06/2023

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1. Executive Summary

The following describes the project to be executed.

Objective	To meet the growing demands for healthcare accessibility and convenience by developing the Pharmacy Service Web Application, revolutionizing how individuals interact with local pharmacies.
Corporate Goals Addressed	<ul style="list-style-type: none"> - Increasing operational efficiency. - Enhancing customer satisfaction. - Expanding market reach. - Optimized resources management. - Community Engagement
Planned Start Date	18/09/2023
Planned End Date	29/03/2024

2. Project Approvers, Reviews and Distribution List

Approvers, reviewers and distribution list

Project Role	Name	E-mail	Date
Project Manager	Hiu Wai Lau	hiuwlau@gmail.com	04/10/2024
Technical Manager	Diego Fuentes	diego.fuentesarteaga @georgebrown.ca	04/10/2024
Market Analyst	Yang Hai	yang.hai@georgebro wn.ca	04/10/2024
System Analyst	Chloe Zeng	chloe.zeng@georgeb rown.ca	04/10/2024

3. Scope

In Scope	Out of Scope
Web App	Mobile app
Appointment Schedule System	Electronic Health Records Integration
Appointment Reminders	Payment Processing
Prescriptions Request System	Telemedicine
Stock Forecasting	Customer Support
User Access	Pharmacy Inventory Management(buy process)
Nearby Pharmacy Search	Electronic Prescribing
Prescription Delivery	

4. Deliverables

This project will deliver the following.

Deliverable	Description
Project Summary	A concise overview outlining the key aspects and objectives of the project.
Project Vision	A clear statement describing the desired outcome and purpose of the project
High Level Requirements	An overview of the project's top-level functionalities and features
Team Charter	A document specifying team roles, responsibilities, and guidelines for collaboration
Project Plan	A detailed roadmap outlining tasks, timelines, and milestones for project execution
User Personas	Detailed profiles representing the target audience, their needs, and behaviors
Product Backlog	A prioritized list of features, enhancements, and user stories for the product
Spring Backlog	A subset of the product backlog items selected for a specific sprint or iteration

Database Diagram	A visual representation of the database structure and relationships
User Profile Design	The layout and visual elements of user profiles within the application
Appointment System	The functionality enabling users to schedule and manage appointments.
Reminder System	A feature for sending automated reminders to users about appointments or tasks
Prescription System	A system for managing prescription medications
Stock Forecasting System	A tool for monitoring required level of vaccines and medicines
Pharmacy Preferences System	A feature allowing users to set preferences for pharmacy locations and pickup times

5. Assumptions

This project makes the following assumptions;

1. Pharmacies' Integrity and Professionalism. It is assumed that pharmacies engaging with our application will operate their businesses with honesty, integrity, and professionalism. We expect them to provide accurate and reliable information, adhere to ethical business practices, and deliver high-quality services to patients through our booking system. This assumption is foundational to the successful implementation and functionality of the application, ensuring a positive and trustworthy experience for all users.
2. Security. The user data can be stored securely to meet the law and the government's regulation.
3. Accuracy of information. The vaccine details posted on the website are accurate, including but not limited vaccine name, brand, manufacturer name, lot number.
4. Real-time data update. The availability of vaccines on the website is real-time updated and the appointment slot information is accurate to make sure the user can get the vaccine or access the services at the time of their appointment.
5. Verify information with health authorities. Pharmacies have their own system to verify the users health card information.
6. User access environment. The users can be connected to the Internet to access the functionalities of the system, and users have proper devices and the basic ability to use the system.
7. Stability of the system. The application is stable enough to provide reliable service to users. The system is well monitored and can be fixed quickly even when some errors happen to ensure that users have access to stable services at all times.

6. Dependencies

The following are the internal and external dependencies that will have to be acknowledged and addressed;

Internal Dependencies:

1. **Technology Infrastructure:** The project relies on a stable and well-maintained technology infrastructure, including servers, databases, and networks, to support the web application.
2. **Development Team:** The availability of skilled developers, designers, and IT professionals is crucial for the successful development and maintenance of the platform.
3. **Data Security Measures:** Internal security protocols and measures must be in place to protect sensitive patient data from breaches and cyberattacks.
4. **Compliance Experts:** Healthcare compliance experts are needed to ensure that the platform adheres to all relevant regulations and privacy laws.
5. **Financial Resources:** Adequate financial resources are required to fund the development, marketing, and operational expenses of the project.

External Dependencies:

1. **Third-Party Services:** The project may rely on third-party services and APIs for features such as payment processing, geolocation services, and data analytics.
2. **Suppliers and Partners:** Suppliers providing software, or other components, as well as potential partners such as healthcare professionals, are external entities that may impact the project.
3. **User Adoption:** The success of the platform depends on user adoption by pharmacies, healthcare providers, and patients, which is an external factor.

4. Market Conditions: The project's success is influenced by external market conditions, such as changes in healthcare trends, competition, and economic factors.
5. Internet Infrastructure: The stability and performance of the broader internet infrastructure, including ISPs and cloud services, can affect the project's availability and performance.

7. Risk Management

Potential Risk	Severity (H/M/L)	Likelihood (H/M/L)	Management Strategy
Competitive Landscape	H	H	-Continuously innovate and enhance the platform's features to maintain a competitive edge. -Monitor competitors' actions and adjust strategies as needed.
Technical Dependencies	H	M	-Implement robust IT infrastructure and cybersecurity measures. -Develop a contingency plan to address technical issues and outages promptly.
Regulatory Changes	H	M	-Establish a dedicated compliance team to stay updated on changing regulations. -Develop a compliance framework to ensure adherence to evolving healthcare laws.
Cybersecurity Risks	H	M	-Invest advanced cybersecurity measures, including encryption, firewalls, and regular security audits. -Develop an incident response plan to address potential breaches promptly.

Economic Factors	H	M	-Maintain financial flexibility and reserves to withstand economic downturns. -Diversify revenue streams to reduce reliance on specific economic conditions.
Data Privacy Concerns	H	L	- Ensure strict compliance with data privacy regulations through secure data handling practices. -Conduct regular privacy audits and assessments.
Healthcare Trends	M	H	-Stay informed about evolving healthcare trends and adapt the platform’s services accordingly. -Continuously monitor the industry for emerging opportunities.
User Acceptance	M	H	-Continuously gather user feedback and make improvements based on user preferences. -Invest in user engagement initiatives to enhance adoption rates.
Adoption Challenges	M	M	-Provide comprehensive training and onboarding for pharmacy owners and staff. -Offer ongoing support and resources to address any difficulties encountered during adoption.
Market Expansion	M	M	-Conduct thorough market research and feasibility studies before expanding to new areas. -Gradually scale up services to manage expansion risks.
Diversification	M	M	-Evaluate potential diversification opportunities carefully and conduct market analysis.

			-Seek partnerships with established healthcare professionals to reduce risks.
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8. Communication

Reporting

The following reports will be produced;

Report	Audience	Frequency
Project Progress Report	Team members, Project Manager	Bi-weekly
Sprint Review Report	Team members, Project Manager	At the end of each sprint
Risk Assessment and Mitigation Report	Team members, Project Manager	Monthly
Meeting Minutes	Team members, Project Manager	weekly
Project Closure Report	Team members, Project Manager	At the end of the project

Meetings

The following meetings/communication will be established;

Meeting	Purpose	Attendees	Frequency
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1#	Kick-off meeting, initial project planning	Hiu Wai Lau Diego Fuentes Chloe Zeng Yang Hai	Weekly meeting on Wednesdays from 2pm - 4pm
2#	Review of the previous meeting, further project planning	Hiu Wai Lau Diego Fuentes Chloe Zeng Yang Hai	Weekly meeting on Wednesdays from 2pm - 4pm
3#	Review of the previous meeting, progress on Personas and User Stories	Hiu Wai Lau Diego Fuentes Chloe Zeng Yang Hai	Weekly meeting on Wednesdays from 2pm - 4pm
4#	Review of the previous meeting , progress on project plan, product Backlog and Sprint Backlog	Hiu Wai Lau Diego Fuentes Chloe Zeng Yang Hai	Weekly meeting on Wednesdays from 2pm - 4pm

9. Task Listing (WBS- Work Breakdown Structure)

The following resource proposal template summarizes the resource hours committed to this project, upon final approval of this document.

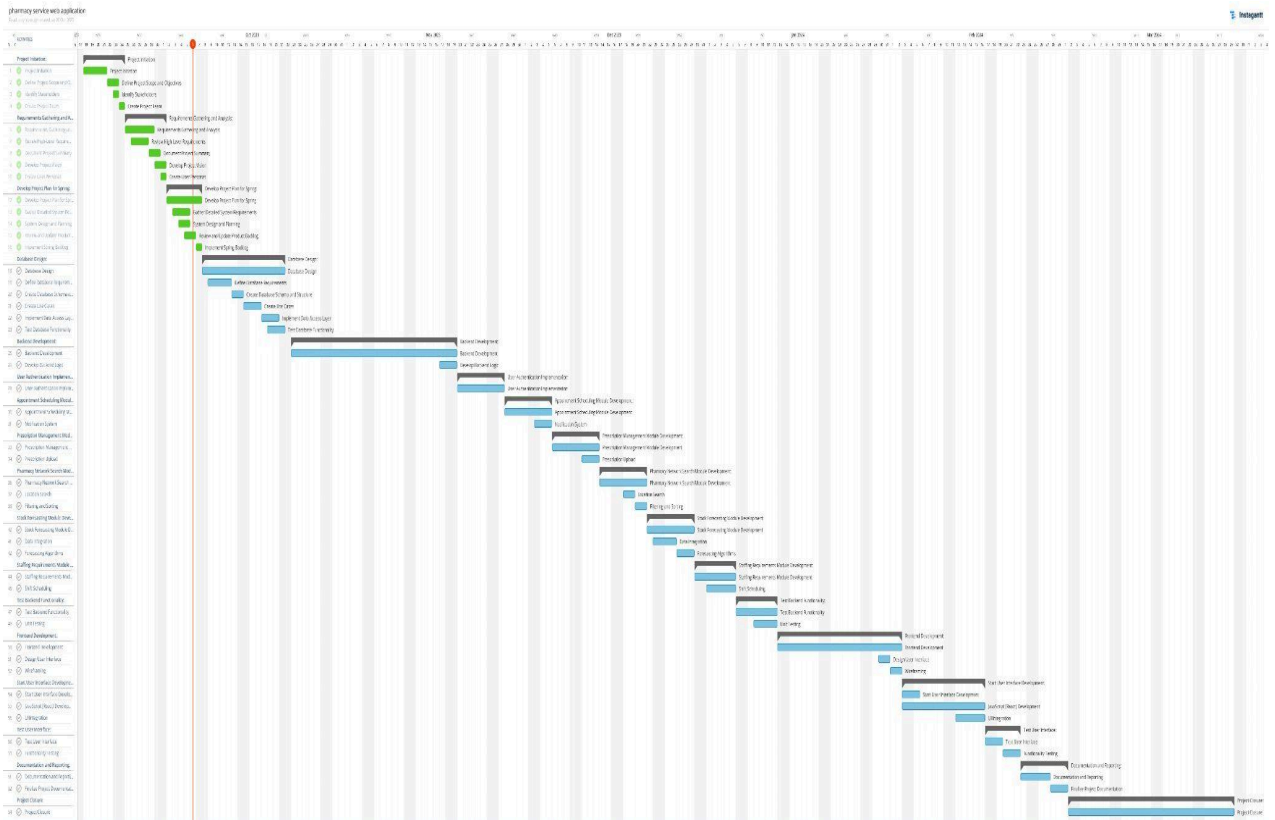
Reference	Tasks	Duration	Dependency
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1	Project Initiation	1 week	-
1.1	Define Project Scope and Objectives	2 days	1
1.2	Identify Stakeholders	1 day	1
1.3	Create Project Team	1 day	1
2	Requirements Gathering and Analysis	1 week	1.1, 1.2, 1.3
2.1	Review High-Level Requirements	3 days	-
2.2	Document Project Summary	2 days	-
2.3	Develop Project Vision	2 days	-
2.4	Create User Personas	1 days	-
3	Develop Project Plan for Sprint 2	1 week	2.2,2.3,2.4
3.1	Gather Detailed System Requirements	3 days	3
3.2	System Design and Planning	4 days	2.1,2.2,2.3, 3
3.3	Review and Update Product Backlog	1 day	-
3.4	Implement Spring Backlog	1 day	3.3
4	Database Design	2 weeks	3
4.1	Define Database Requirements	4 days	4
4.2	Create Database Schema and Develop Structure	2 days	4
4.3	Create Use Cases	3 days	4.2
4.4	Implement Data Access Layer	3 days	4,3
4.5	Test Database Functionality	3 days	4,4
5	Backend Development	4 week	4
5.1	Develop Backend Logic	3 days	-
6	User Authentication Implementation	1 week	5
7	Appointment Scheduling Module Development	1 week	5

7.1	Notification System	3 days	7
8	Prescription Management Module Development	1 week	5
8.1	Prescription Upload	3 days	8
9	Pharmacy Network Search Module Development	1 week	5
9.1	Location Search	2 days	9
9.2	Filtering and Sorting	2 days	9.1
10	Stock Forecasting Module Development	1 week	5
10.1	Data Integration	4 days	10
10.2	Forecasting Algorithms	3 days	10.1
11	Staffing Requirements Module Development	1 week	5
11.1	Shift Scheduling	5 days	11
12	Test Backend Functionality	1 week	6,7,8,9,10,11
12.1	Unit Testing	4 days	6,7,8,9,10,11
13	Frontend Development	3 week	6,7,8,9,10,11
13.1	Design User Interface	2 days	13
13.2	Wireframing	2 days	-
14	Start User Interface Development	3 days	13
14.1	JavaScript (React) Development	2 week	-
14.2	UI Integration	5 days	14.1
15	Test User Interface	3 days	14
15.1	Functionality Testing	3 days	14.2
16	Documentation and Reporting	5 days	3.2
16.1	Finalize Project Documentation	3 days	2
17	Project Closure	1 week	16

10. Gantt Chart

Create a detailed Gantt Chart from your Task Listing(Use any software tool and paste the image or upload as a separate file that can be opened as pdf/doc/xls)



11. Milestones

Major Activity or Milestone	Estimated Milestone Target date	Owner/Reviewer Team Members
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Project Initiation Complete	24/09/2023	Project Manager Project Team
Requirements Gathering and Analysis Complete	01/10/2023	Market Analyst Project Team
Project Plan for Spring 2 Ready	01/10/2023	Project Manager Market Analyst
Database Design and Schema Defined	21/10/2023	Database Team
Backend Development Phase Completed	19/11/2023	Technical Manager Technical Team
User Authentication Implemented	27/11/2023	Technical Manager Technical Team
Appointment Scheduling Module Developed	05/12/2023	Technical Manager Technical Team
Prescription Management Module Developed	13/12/2023	Technical Manager Technical Team
Pharmacy Network Search Module Developed	21/12/2023	Technical Manager Technical Team
Stock Forecasting Module Developed	29/12/2023	Technical Manager Technical Team
Staffing Requirements Module Developed	05/01/2024	Technical Manager Technical Team
Backend Functionality Testing Complete	12/01/2024	Technical Manager Technical Team
Frontend Development Phase Complete	02/02/2024	Technical Manager Technical Team
User Interface Design and Wireframing Done	16/02/2024	UI/UX Designer Technical Team
User Interface Development Underway	22/02/2024	Technical Team

12. RAM – Responsibility Assignment Matrix

Create a RAM from your Task Listing. A sample is shown below:

Project Team Responsibilities

Project Name: New Package Installation

Project Manager: Al Q. Hall

Task	John	Frank	Linda	Jean	Larry
Assess Requirements	P	S	S		
Design Business System			S	P	
Modify Purchased Package	S	P			
Modify In-House Procedures			P	S	
Testing	S				P
Implement New Package		P		S	
Train Staff		S		S	P

P = Primary S = Secondary

Project Team Responsibilities
Project Name: Pharmacy Service Web Application
Project Manager: Hiu Wai Lau

Task	Hiu Wai	Diego	Yang	Chloe
Project Initiation	P	S	S	S
Define Project Scope and Objectives	P		S	
Identify Stakeholders	P	S		
Create Project Team	P	S		
Requirements Gathering and Analysis	P	S	S	S
Review High-Level Requirements	P	P	S	S
Document Project Summary	S	P		S
Develop Project Vision	S	S	P	
Create User Personas		P	S	
Develop Project Plan for Spring 2	S		S	P
Gather Detailed System Requirements	P	S		
System Design and Planning			S	P
Review and Update Product Backlog	P	S		
Implement Spring Backlog		P	S	
Database Design			S	P
Define Database Requirements	P	S		
Create Database Schema and Develop Structure		P	S	S
Create Use Cases	P	S	S	S
Implement Data Access Layer		S	P	
Test Database Functionality			S	P
Backend Development		P		S
Develop Backend Logic	S	P	S	S
User Authentication Implementation		P	S	S
Appointment Scheduling Module Development	P	S	S	S
Notification System			S	P
Prescription Management Module Development			P	S
Prescription Upload		S	P	
Pharmacy Network Search Module Development	S	P	S	S
Location Search			S	P
Filtering and Sorting		P		S
Stock Forecasting Module Development		S	P	S
Data Integration	S	P	S	
Forecasting Algorithms		S		P
Staffing Requirements Module Development		S	S	S
Shift Scheduling			S	P
Test Backend Functionality	S	S	P	S
Unit Testing		P		S
Frontend Development		P		S
Design User Interface			P	S
Wireframing	S	P	S	
Start User Interface Development			S	P
JavaScript (React) Development		P		S
UI Integration			P	S
Test User Interface	P		S	
Functionality Testing	S	P		S
Documentation and Reporting	P	P	P	P
Finalize Project Documentation	P	S	S	S
Project Closure	P	S	S	S

P = Primary S = Secondary

13. Approval

The signatures below indicate their approval of the contents of this document.

Project Role	Name	Signature	Date
Project Manager	Hiu Wai Lau		10/06/2023
Technical Manager	Diego Fuentes		10/06/2023
Market Analyst	Hai Yang		10/06/2023
System Analyst	Chloe Zeng		10/06/2023