Project Proposal: Sales Reporting and Prediction System

Background / Problem Description

The company known as People Health Pharmacy (PHP) Inc. is a is a small pharmacy based in Subang Jaya, that provides their customers with health products such as supplements, medications, health care products, accessories etc. But currently they are facing some issues with recording their sales, as it is using a rather old and inefficient system, better known as paper. Not only that, but they are also unable to keep track of items that are sold. Which causes them to frequently run out of stock.

To help solve this issue, we have been requested to develop a/an application/system that helps improve the situation.

Scope

The application/system that we are developing will have key features that help with Generating sales reports on a Daily, Weekly, Monthly & Yearly basis as well as analyse the sales data recorded in those reports. Not only that, but it helps keep track of the items stored in the store, to prevent a sudden stock outage scenario.

The application/system that we are developing will also have side features that help with employee tracking, this is to keep track of the employees who check in for their shift. Another feature that this system will have, is the ability to calculate the prices of the items. This is to reduce the manpower needed to do this task.

Stakeholders

Direct Users

- People Health Pharmacy (PHP) are the direct users, this is because they are our clients. This system is to solve their issues with sales recording as well as improve their workflow.

Secondary Users

- Staff are the secondary users, this is because they are the ones that will be using the features of the system.

Beneficiary

- People Health Pharmacy (PHP) are the beneficiaries, this is because the company is the one benefiting from our system.

Deliverables and schedule

- Proposal
- Project Report
- Manual
- Source Code
- Finished Product

Initial Release Schedule

No.	Item	Dependencies	Business Value (1 least – 10 most)	Release Schedule (Sprint #1 | 2 | 3 | …
1	Add a sales record		7	Sprint #1
2	Edit a sales record	1	6	Sprint #1
3	Display a sales record	1	6	Sprint #2
4	Display monthly sales report	1	8	Sprint #2
5	Predict the sales of an item on a monthly basis	1	9	Sprint #2
6	Predict the sales of a group of similar items on a monthly basis	1	9	Sprint #2
7	Generate a monthly sales report as a CSV file	1	8	Sprint #2
8	Employee Listing		6	Sprint #2
9	Login System	8	6	Sprint #2
10	Price Listing		7	Sprint #2
11	Price Checker	10	7	Sprint #2
12	Calculate Price	10	7	Sprint #2

Solution Direction

Our group has decided on two different solutions which are a Web-based application, this is because we have experience in developing Web-based applications. Not only that, but because the system is needed to store multiple data such as Item, sales, price, discounts etc. We will need a rather large database system. Which is why we opted for a Web-based application.

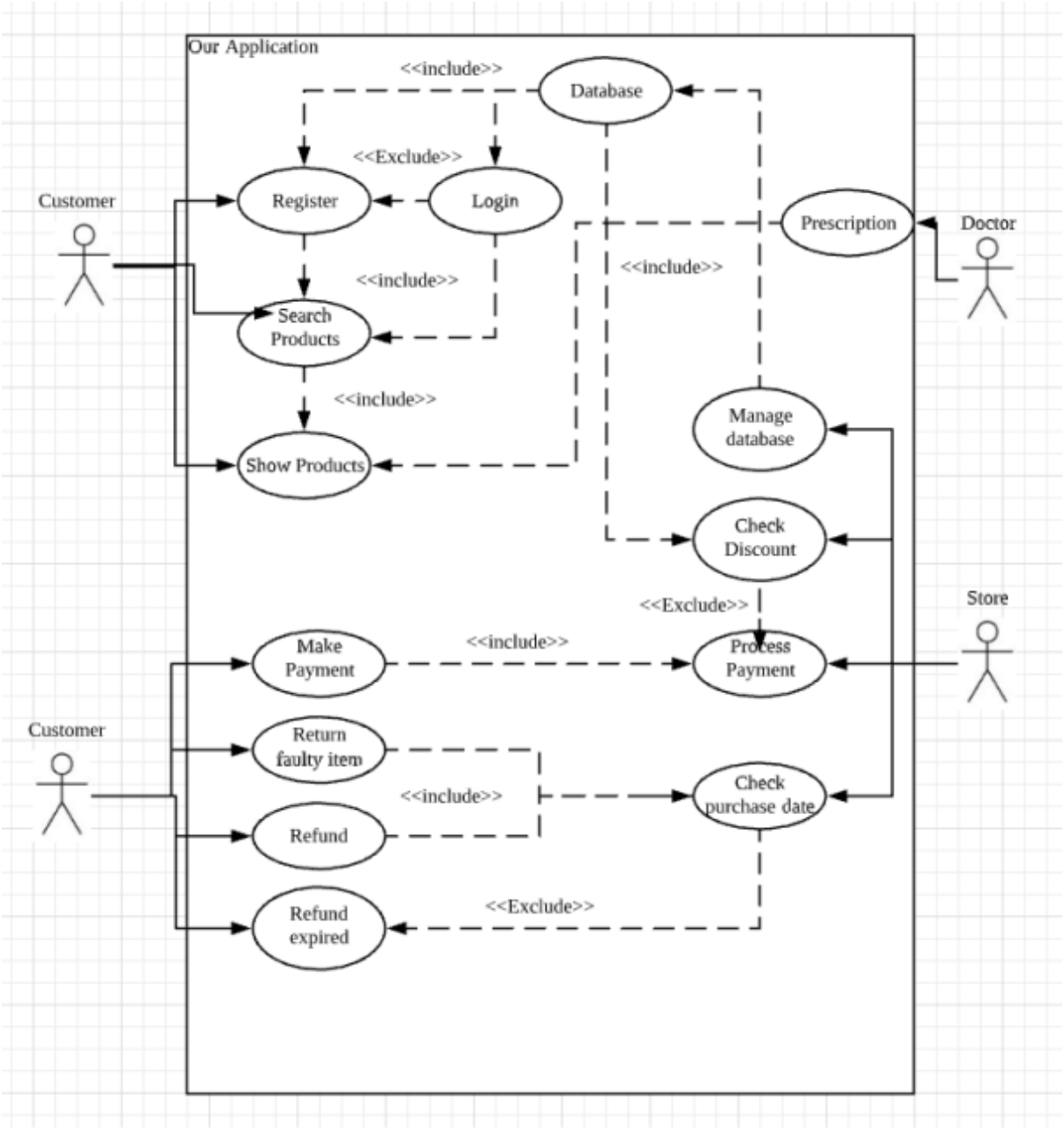
The second solution we have decided to come up with is a Mobile-based application, this is because we have experience in developing Mobile-based applications. Why we have chosen this, is because it is user friendly. I say this because, anyone can download our app to be used to view and purchase our products. Since the world is moving towards a cybernetic future and that everyone is currently addicted to their phones, it would foolish not to take advantage of this

Web-Base application GAPs Analysis

STRENGTHS	WEAKNESSES
• Compatible with all devices. • Easily accessed by anyone. • Ease of use. • Flexible designs. • Easy to edit data. • Easy to maintain.	• Requires internet connectivity. • Relies on browser. • Security concerns.
OPPORTUNITIES	**THREATS**
• Business becoming heavily web based. • IT systems becoming main business focus. • Allows users all over the world to shop. • Wider demographic.	• Vulnerability to hackers. • Server Shutdowns. • Data Loss. • Power Outage

Mobile-Base application GAPs Analysis

STRENGTHS	WEAKNESSES
• Compatible with all devices. • Easily accessed by anyone. • Ease of use. • User-friendly.	• Requires internet connectivity. • Security concerns. • Not compatible with older devices.
OPPORTUNITIES	**THREATS**
• Business becoming heavily mobile based. • IT systems becoming main business focus. • Allows users all over the world to shop. • Wider demographic. • Everyone using mobile devices.	• Vulnerability to hackers. • Server Shutdowns. • Data Loss



Customer
The role customer is based on the customers who will be using our application for purchasing and viewing our products. They can register/login, Search and View products, make payments and returns.

Doctor
The role doctor is based on our pharmacist who will be using our application to talk to customers to help prescribe medications. The prescribed medications are then relocated to the product's page.

Store
The role store is based on our staffs who will be using our application to process the payments. Not only that but they can access the database to generate sales reports.

Quality Management

Definition of Done (DOD)

Functional Suitability:

• **At least 95% of the functions are appropriate to be used at all times.**

- This is because the remaining 5% of the functions are not appropriate to be used in some circumstances. Why 5%, is because some functions require specific circumstances and requirements to be used. Such as the restoration system, it only activates and restores the data when the data or system has been corrupted or during a blackout. As you can see, this is a very specific situation, and that is why the remaining 5% is listed as not appropriate to be used at all times.

• **At least 85% of the functions are completed.**

- While the remaining 15% of the functions might not be functionable due to bugs and errors. Why 15%, is because of the possibility of having errors and bugs found during the development face. We cannot guarantee a 100% completion as we are just humans and errors, and mistakes are bound to happen. Therefore, we have estimated a 15% of uncompleted functions to be found.

• **Maximum of 4 defects per KLOC (Thousand lines of codes).**

- This is because, with a maximum of 4 defects per KLOC, we can create more quality systems. This is just an estimated maximum number of defects we will allow our system to have. Since the number of defects per KLOC is lower than 5, this is regarded as a quality system, why? This is because within thousands of lines of codes, we have concluded that the defect density is only 4.

Performance Efficiency:

• **At least 95% of the functions within the response time is accurate and on time.**

- We will try to reduce the response time of our system as much as possible to reduce latency and delays. This is to prevent as sudden pause in the workflow and prevent a sudden decrease in the time needed to complete a task. Why 95%, is because we cannot guarantee a 100% due to the fact of some unforeseen matters, such as the Wi-Fi having latency, device latency, weak connections etc.

• **At least 2GB of the allocated memory space will be used.**

- This is to store all the data required to operate the system and data given by the user. The memory space used, may vary as time goes on. This is because the data stored will increase as time goes on, as there will be more data to be stored and more data is required to be used to produce stock reports.

• **The system will be able to produce sales reports based on daily, weekly, monthly, and yearly data, as well as predict the items that are in trend.**

- These are the functions requested by the client that must be implemented into the system. To improve accuracy and persistency in the company's profit margin, and in their reputation in the market, they must be able to produce quality and accurate sales reports. This allows them to measure and predict possibilities to increase their stocks and profits.

Usability:

• **Easy and user-friendly interface.**

- This will help the user to navigate around the system easier. To prevent a headache and a decrease in workflow, our system must have an easy to use and user-friendly interface to allow users to navigate around the system easier.

• **User Manual.**

- To guide users on how to operate the system. To allow the user to understand our system fully, we must provide a user manual that teaches and guides them on how to use our system to its fullest potential.

• **Double confirmation feature to prevent users from making errors.**

- This allows the user to confirm their actions before confirmation. This is just an extra security measure to confirm the act of a user before doing so, this is to prevent errors and mistakes of users by accidentally selecting something by mistake.

• **Device compatibility**

- The system will be compatible with different devices to allow users to have easier access. Since our system is web-based, it has the capabilities of being compatible with most devices, since the NO.1 requirement needed to access the system is a browser and WI-FI.

Reliability:

• **80% of the database is reliable under normal operations.**

- The required data used to operate the system is regarding the information of the items stored as well as the information keyed in by the users. Why 80%, is because the 20% may be stored as cache or junk data from other uses and we cannot guarantee a 100% reliability due to the fact that it is uncontrollable.

Maintainability:

• **Functional testing passed**

- To determine and test the functionality of the system. This is to determine and test the system based on its functions to ensure that it is in the best condition and to ensure that all features and functions are capable of doing what it is told with accuracy and precision.

• **The system can be modified without interrupting the existing system**

- System codes can be modified and updated while in use, without interrupting the existing system. This is to ensure that no interruptions will be made during working hours.

Resources:

HENRY SIM CHIN WEI – 103541939 – SOFTWARE DEVELOPMENT

My name is Henry and I'm just a regular old student who is trying to get through life and its difficulties. During my free time, I love to exercise. At this point, I would even call it an addiction. I am the group leader, main programmer, and report writer.

ONG SHENG YANG – 103542466 – DATA SCIENCE

Hey, my name is Ong Sheng Yang and I'm currently taking bachelor's degree in Computer Science. I am the one of the main programmers and data analyst.

CHOO CHUN HANG – 103542314 – DATA SCIENCE

My name is Choo Chun Hang. I have a collection of many exotic pets and I love photographing wild animals. I am one of the main programmers as well as the data analyst.

THULASITHARAN RAO – 103526198 - Cybersecurity

My name is Thulasitharan Rao, but everyone calls me Tharan. I'm 22 and graduated from Diploma in information and communication Technology (DICTN) in March 2021. Currently in Bachelor of Computer Science. I'm also working part-time as an IT support in an animation company. I like to travel but since its MCO just sitting at house and gaming video games. I am one of the main programmers.

Approval Signatures:

Project Team

	Name of student	Student Id	Signature
1	Henry Sim Chin Wei	103541939	
2	Ong Sheng Yang	103542466	
3	Choo Chun Hang	103542314	
4	Thulasitharan rao vemkitaramana	103526198	

Project Sponsor [Robina Tinawin]

Tutor's name (on behalf of the client)	Signature: