# STOCK INVENTORY MANAGEMENT SYSTEM (RMSys)

# FARRA ALIA BINTI ROSLI

# Bachelor of Computer Science (Software Engineering) with Honours

UNIVERSITI MALAYSIA PAHANG

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# STOCK INVENTORY MANAGEMENT SYSTEM (RMSys)

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Thesis submitted in fulfillment of the requirements for the award of the degree of Bachelor of Computer Science (Software Engineering) with Honours

Faculty of Computing

UNIVERSITI MALAYSIA PAHANG

2023

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#### ABSTRAK

Projek ini adalah berkenaan dengan sistem pengurusan inventori yang juga bermaksud sebagai alat perisian yang dapat membantu perniaagaan menjejak dan mengurus tahap inventori, pesanan, jualan, dan penghantaran. Sistem ini membolehkan pengesanan tahap inventori yang cekap, menetapkan pesanan semula, dan memproses pesanan pembelian dengan lebih cepat. Hal ini dapat membantu perniagaan tersebut untuk memastikan mempunyai stok produk yang betul dan cukup pada masa yang betul. Ia juga dapat mengurangkan lebihan inventori dan kos bawaan yang berkaitan. Sistem ini tersedia untuk beberapa kategori pengguna termasuklah pemilik perniagaan, pengurus cawangan dan juga kerani. Ini adalah untuk membantu mereka memberikan pandangan yang lebih komprehensif tentang operasi perniagaan. Secara keseluruhannya, sistem pengurusan inventori boleh membantu meningkatkan kecekapan dan keuntungan untuk perniagaan.

#### ABSTRACT

This project is about an inventory management system which defined as a software tool that helps businesses track and manage their inventory levels, orders, sales, and deliveries. The system allows for efficient tracking of inventory levels, setting re-order points, and manage flow of the stock purchases. This helps the businesses to ensure they have the right products with the right quantity at the right time, while also reducing excess inventory and associated carrying costs. The system are available with several category of users such as owner, branch manager, and also clerk user. This is to helps them to provide a more comprehensive view of the business operation. Overall, an inventory management system can help improve efficiency and profitability for a business.

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# LIST OF ABBREVIATIONS

RMSys	RMS system
ERD	Entity Relationship Diagram
GUI	Graphical User Interface
PHP	Hypertext Preprocessor
ID	Identification
mySQL	Structured Query Language

#### **CHAPTER 1: INTRODUCTION**

#### **1.1 Background of Study**

Due to the current global economic crisis, many people are affected by the job losses and declining business income. Because of that circumstances, those who are affected has comes with their alternatives ways to generate income and sustain their livelihoods. One of the leading solutions for them is by starting a new business with a high demand products. Based on the conducted research, one of the top high demand is the food and beverages business sector. However, venturing into this industry needs to careful planning and execution to stand out in the competitive market. Even though the food and beverage industry may sound attractive, it's important for business owners to do careful market research and financial planning. To ensure long-term sustainability and profitability, it is essential to fully understand the target market, evaluate competitors, and estimate operating costs, including those for ingredients, equipment, and permits.

It goes without saying that an effective stock inventory management is crucial for businesses across all sectors, particularly in the food and beverage industry. They risk suffering losses on a regular basis if they can't create and implement good management of the stock of their cooking and sales materials (Lynda Moultry Belcher, 2019). It is essential for them to establish and implement effective strategies to manage their cooking and sales materials efficiently. Therefore, the business owners can find a solution by embracing current technology, specifically by implementing a stock inventory management system (Indeed Editorial Team, 2021). This can help streamline their business operations and ensure efficient management of their inventory. When it comes to stock inventory management, it involves various crucial aspects that business owners need to consider. These include tracking the quantity and availability of ingredients, raw materials, packaging supplies, and finished products. An effective stock inventory management process is necessary for running a profitable food business. The sellers can try to apply it by using the system that is already developed to help them in management. Most of the system will provide the same functions including ordering, receiving, storing, and distributing food products (Food Industry Inventory Management Guide for Manufacturers — Katana, n.d.).

For the proposed system for this project which is the "RMSys System" will be focusing on the stock quantity management. This is because the system are specifically delivered for the RmsRay Company which has several branches of the business. The general purpose of this system is to manage the stock that will be distributed to all available branches. In essence, implementing a stock inventory management system provides RmsRay Company with an effective platform to track and manage their raw materials needed in the kitchen for producing their final products. By implementing those solution, the company not only ensures better stock management but also has the potential to gain more profit for the business.

#### **1.2 Problem Statement**

Oftentimes, there are significant possibilities that a company may experience problems, including losses to their business if they are unable to generate and manage their inventory well. Some of them may not have sufficient funds to purchase the required stock. Due to that problem, some ingredients or materials that are in high demand and used more frequently than others could not be sufficient for use in everyday sales. And when the supply of materials is insufficient, the company or seller may only make a small number of its products, leaving some of its regular customers unhappy if they were unable to purchase the goods.

Furthermore, there are also some materials or ingredients that will go to waste because they are over purchased due to improper stock calculations and not being utilised because of low demand. Other than that, as mentioned before, there might have insufficient stock if did not able to manage it properly. If the seller still needs to seek for the material someday, they must swiftly locate another material that is similar somewhere close by. The material that was purchased might not be of the same quality as that which was typically used for the sale. The final products' quality might not be as good as usual as an outcome of this. Of course, all of this will have a negative effect on sales since customers' perceptions of the seller will shift negatively as a result of the inconsistent quality of the products produced.

#### 1.3 Aim & Objective

The aim is to develop an online system that can help the RmsRay company to manage their stock of raw materials and ingredient for the sales product preparation. In this project, there will be 3 types of user which is branch manager, clerk, and owner. The Clerk will be able to manage the user registration, manage product and manage branches product limit. The Branch Manager user are responsible to update their weekly sales of the branch and upload their evidence of the sales. They are also able to request the selected products on the system. Lastly, the Owner will be able to manage the status of the uploaded evidence from the Branch Manager. The objective is as below;

- 1. To design the RMSys system.
- 2. To develop the RMSys system.
- 3. To test the functionality of the RMSys system.

#### 1.4 Scope

- Only RmsRay company has the access to use the RMSys system. The system will be focusing on this company to satisfy the clients' needs in the system.
- The system can only be used to manage the stock of raw materials and ingredients that being used for the preparation of the end products of the RmsRay companies selling.
- Clerk user can login to the system and manage the other user registration by add, update, and delete the selected user account. Clerk also responsible to manage the product (create, read, update, delete), and manage the branches request limit.
- Branch Manager user will be able to upload their weekly sales with evidence and request for the product stock quantity.
- Owner are responsible to approve or reject the uploaded sales evidence uploaded by the Branch Manager.

#### **1.5** Significance of Project

The purpose of this project is to replace the client's present manual stock inventory management system with one that is systematic. Since this system will have numerous features to keep the stocks under control, all management can be done in an easy way. They will be able to increase their sales when they practice good stock inventory management because it may prevent any issues with the management of commercial items (Ginting, 2022).

#### **1.6** Thesis of Organization

The 3 main chapters of this report are the Introduction, Literature Review, and Methodology. The general concept of the suggested project will be discussed in Chapter 1's Introduction. It includes a background analysis, problem statement, objective, project scope, and project significance. In Chapter 2, which is titled "Literature Review," the current systems that serve the same role as the project are fundamentally compared. The two essential components are Work Relevancy and Work Analysis. Last but not least, Chapter 3, or Methodology. This chapter can be regarded as the most important because it is here that the best development strategy will be decided after taking into account a number of factors. Project Management Framework, Project Requirement, Data Design, Testing Plan, etc. are all included in this chapter.

#### **CHAPTER 2: LITERATURE REVIEW**

#### 2.1 Introduction

This chapter to assist any sellers who want to acquire a better management of their stock inventory, there are currently numerous inventory management systems that are already available and developed on the website that are offering the very similar functionalities. When compared to other websites that are available on the internet or public, most websites will each have their own advantages and disadvantages in term of the quality, design, functionality, and other aspects.

#### 2.2 Existing System

Referring to the research that has been done through the internet surfing, there are numerous existing website that sharing the same purposes with RMSys including foodmarkethub.com website, sortly.com website, and xero.com website. All of these website are already achieve their aim and goals of the website system which is to assist sellers in order to get a better and proper stock inventory management of their business sales.

#### Food Market Hub System

Food Market Hub is a system for managing inventories and procurement for the food and beverage industry. Back-end activities like ordering, inventory management, and an effective inventory and cost management solution are optimized and automated by this platform. One of the aim of this system is to help the seller to avoid any of their ingredients and food often go to waste because of their bad stock inventory management. This website system will shows the exact total stocks to order and produce based on the sales history (*Procurement & Inventory Management System for Restaurants / Food Market Hub*, n.d.).

:: ☆ ●	Dashboard Overview				CREATE ORDER +
€0 €0	Welcome RMS! Set up your workspace that you can star	t using Food Market Hub with your own f	eatures!	<	
C.	æ	$\sim$	<b>a</b>	H	3/6 Completed
۲	Create branch	Invite suppliers	Create supplier	Create order	
	EXPLORE	EXPLORE	EXPLORE DISMISS	EXPLORE DISMISS	QUICK LINKS 3 TASKS TO GO
					Create branch
	Create branch Create a branch to start selling				Invite suppliers
					Create supplier
					Create order
2					Upload stock
	-		12		st Create or upload menu items
			A Cas		
	FOOD MARKET				
	HUB				
		4			
<u></u>					

Figure 2.1 Food Market Hub Dashboard

Prod	ucts					+ UPLOAD PRO	IMPORT / EXPORT
Q S	earch 2 products					Search categories	
	Product code \$	Branch	Product alias name \$	Master product	Description \$	Tags	Actions
23	123		ABRF BLACK PEPPER CHICKEN CHOP / 黑榆鸡扒	ABRF BLACK PEPPER CHICKEN CHOP / 黑柳鸡扒		-	ACTIONS
•	1234		Rice Flour / Tepung Beras (500g)	Rice Flour / Tepung Beras (500g)			ACTIONS -

Figure 2.2 Food Market Hub Products Page.

*	Products		Upload product		×
0			Product  Pro		
			 Category Flour / Starch ~ Alas name (optional) Rice Flour / Tepung Beras (500g)	Base UOM  Tax rate PKT (Packet) Product code Product code	
			Tags Select tags Description (optional)	Picture (optional) Upload or drop files to upload	UPLOAD
1				4	
6			DISCARD	UPLOAD PRO	ODUCT

Figure 2.3 Food Market Hub Upload Product Page.

* Mercelters & Recipes		Add menu & red	cipe			×
		Details logradie				
-		Product @				
36 C		ayam gunting				
		Item code (optional)		Туре	No. of serving	
		AYMGTG		Menu 🗸	1.00	
		Item code will be general	ted by system if it is empty	Category	Rase LIOM	
		ayam gunting	Search menu catego	Cooked Dish / Rte Pro	SLICE (Slice)	
	Summer of	Description (optional)	Category is required	Picture (optional) Upload or drop files t	io upload	UPLOAD
		Menu served in branc	hes			
		Select				v.
		Menu served in branche     CANCEL	s is required		NEXT: INGRED	DIENTS

Figure 2.4 Food Market Hub Add Menu Page.

部 金 👩	Purchase Analysis In-depth analysis of all your purchases		8	06/11/2022 - 06/12/2022 All	branches: V ACTIONS: V
63 52 6 6 0	Purchase value     No of orders     RM 0.00 ▲ 05; Compare to 06 Nov - 06 Dec     Compare to 06 Nov - 06 Dec     RM 160 10     RM 080 05     RM 080     RM 080				
2	Top products	Top categories		Top suppliers	
<u>.</u>	Q Search entries		Search products	Sear Search suppliers	✓ APPLY.

Figure 2.5 Food Market Hub Purchase Analysis Page.

88 순 💊	Suppliers				+ INVIT	E SUPPLIER + CREATE SUPPLIER
æ	Q Search 1 supplier					
≤Ő	Supplier \$	Status	Supplier code 🗢	Tags	Last updated date 🗢	Actions
D.	Eyaz Sponsored	Active	Ø	Add more tags 🔻	01/12/2022	ACTIONS 🔻
			You have reached th	e last data		
0						
2						
6						
and the second s						

Figure 2.6 Food Market Hub Supplier Page.

This Food Market Hub website system can be categorized as a good inventory management system since it provides many advantages of the website system, including;

- The website's design is straightforward but attractive. The system features a clear activity flow, which qualifies the website as user-friendly because users can immediately know how to use it when first time using it.
- This system allow the users especially for the restaurant users to search their products that has been uploaded in the system to be inserted to their business account. If the entered product are not yet available in the system, they can upload their own product manually by insert the product's details or they also can just import the product by upload the available file in their devices.
- Provides the chat section that will connect the users directly to the customer services.
   The users can communicate with them if there is any problem or question that they want to ask about their account in the system.

Although this website has numerous benefits, it also has several downsides that may be improved to make it even better. A few of the disadvantages are as follows:

- It cannot be disputed that this website includes useful features for cost and price management calculations that must be completed by information from the business's menu and recipe sections. However, several users, particularly newcomers, were unable to estimate their costs. The system did not provide them with any other options, such as a clear user manual to perform the calculation.

#### Sortly System

Another selected existing system to be compared is the Sortly website system. Sortly are also an inventory and asset tracking and management system that will allow the users to visually tracks the selected item and its details about quantity, price, condition, remark notes, etc. There are also providing several functionality including Catalog- to add own products to the inventory with its details, Manage – update inventory by categorizing it by folders, Report – generate simple report of current inventory activity that can be export to the users, etc. All of these functionality would make the system to be a good stock inventory management system (*What Is Sortly? – Sortly Support*, n.d.).

Construction   Construction <th></th> <th></th> <th>Get instant access</th> <th>s to your inventory in the fie</th> <th>old, anywhere by download</th> <th>ling the Sortly app on iOS or <i>i</i></th> <th>Android.</th> <th></th>			Get instant access	s to your inventory in the fie	old, anywhere by download	ling the Sortly app on iOS or <i>i</i>	Android.	
Conthourse   I tense   C sourch   C sourch   C sourch   C rogs   D keports	Sortly	Dashboard						
Items Inventory Summary   Items Imports   Imports Imports   Impo	C Dashboard	Selected Folders: All Folders						
C Search   C Togs   Beports Image: Search   Beports Image: Search   C Togs   D Reports   C Togs   D Reports   C Togs   D Reports   C Togs   D Reports   C Togs   C Togs   C Upgrobe   C Upgrobe   C Upgrobe   C Togs   C Upgrobe   C Togs   C Togs <t< th=""><th>🖹 Items</th><th></th><th>1</th><th>nventory Summary</th><th></th><th></th><th></th><th></th></t<>	🖹 Items		1	nventory Summary				
Constant   Const	Q Search			2				
Peports Poilors Poilor <td< th=""><th>🔊 Tags</th><th></th><th></th><th>7</th><th>-</th><th></th><th>DMG</th><th>EK</th></td<>	🔊 Tags			7	-		DMG	EK
Particulty       Recent Activity       Recen	III Reports			items	Folders	Total Quantity	Total V	alue
Percent Activity             Forma Alla created item Ryebi Drill/Driver - 18v in Tools & Equipment (Sample Items)           All Activity             Porma Alla created item Ryebi Drill/Driver - 18v in Tools & Equipment (Sample Items)           All Activity             Porma Alla created item DeWalt Pressure Washer - 3000 PSI in Tools & Equipment (Sample Items)           All Activity           Organization           Forma Alla created folder Tools & Equipment (Sample Items)           All Activity             Organization           Forma Alla created folder Tools & Equipment (Sample Items)           All Activity             Tops           Torna Alla created folder Tools & Equipment (Sample Items) in Items           Divitional Activity             Autos           Torna Alla created folder Tools & Equipment (Sample Items) in Items           Divitional Activity             Settings           View all activity								
Image: Constraint of the mark o			I	Recent Activity			All Ac	tivity 🚔
Forma Alia created item DeWait Pressure Washer - 3000 PSI in Tools & Equipment (Sample Items)     62/12/2021       Grana Alia created item DeWait Pressure Washer - 3000 PSI in Tools & Equipment (Sample Items)     62/12/2021       Forma Alia created folder Tools & Equipment (Sample Items)     62/12/2021       Tops     Forma Alia created folder Tools & Equipment (Sample Items)     62/12/2021       C Ators     Forma Alia created folder Tools & Equipment (Sample Items)     62/12/2021       S settings     View all activity     62/12/2021				Farra Alia created item Ryof	bi Drill/Driver - 18v in Tools & B	quipment (Sample Items)		02/12/2022
Parta Alia croated Rem John Deere Riding Mower - 60in 244P in Tools & Equipment (Sample Rems)       02/02/022         Tps       Farta Alia croated folder Tools & Equipment (Sample Rems) in Rems       02/02/022         Alers       Farta Alia croated Rem Xerax Vitality Printer Paper - 500 sheet pack in Office Supplies (Sample Rems)       02/02/022         Is settings       View all activity       View all activity				Farra Alia created item DeW	Valt Pressure Washer - 3000 P	SI in Tools & Equipment (Sample	Items)	02/12/2022
Image: Settings     Farra Alla created folder Tools & Equipment (Sample Items) in Items     62/12/2022       Image: Settings     Farra Alla created folder Tools & Equipment (Sample Items) in Items     62/12/2022				Farra Alia created item John	n Deere Riding Mower - 60in 2	4HP in Tools & Equipment (Samj	ple items)	02/12/2022
C Alerts     Forra Alia croated Rem Xerax Vitality Printer Paper - 500 sheet pack in Office Supplies (Sample Rems) 02/02/002     View all activity	⑦ Tips			Farra Alia created folder Tor	ols & Equipment (Sample Item	ns) in Items		02/12/2022
Settings	(‡ Alerts			Farra Alia created item Xerc	ox Vitality Printer Paper - 500 s	sheet pack in Office Supplies (Sa	imple Items)	02/12/2022
	段: Settings				View o	Il activity		

Figure 2.7 Sortly Dashboard Page.

Exclusive Offer     Limited-time of	offer: 40% off annual Ultra and Advance	ed plans.			REDEEM OFFER	×
Sortly	Q Search folders	All Items > Office Sup	plies (Sample Items)			··· ADD NEW
<ul> <li>Dashboard</li> <li>terns</li> <li>Search</li> <li>Tags</li> <li>Reports</li> </ul>	<ul> <li>Alitams</li> <li>Office Supplies (Sample</li> <li>Tools &amp; Equipment (Sam</li> </ul>	Q search office supplies ( ) Folders: 0 Items: 3 Folders: 0 Items: 3 F	Coron Disinfecting Wipes - 700 Wipes S units MTR 2000	Total Value: MYR 1,040.00 #3 units: Employee Uniform - Mens Shirts 80 units : MYR 72000		Updated At ↓ 88
<ul> <li>Upgrade</li> <li>Tips</li> <li>Averts</li> <li>Settings</li> </ul>	<ol> <li>History</li> </ol>	Show 20 • per page				

Figure 2.8 Sortly Item Page

Add Item	×
Name*	
Quantity* Min Level	۵
Price, MYR	
(Max 8 photos, 30 MB Total)	
This item has variants 🔵 🕜	
Bhow all fields	
Add to Folder	ADD -

Figure 2.9 Sortly Add Item Page.

		Get instant access to your inventory in the field, anywhere by downloading the Sortly app on iOS or Android.	×
Sortly	Filters	Advanced Search	
	∧ Folders All Folders Q		
Constant Dashboard	<ul> <li>All Items</li> </ul>		
🖹 Items	<ul> <li>Office Supplies (Sample Items)</li> </ul>		
Q Search	Tools & Equipment (Sample Ite	Create lists of items across your inventory using multiple filters	
🔊 Tags	∧ Name Q		
III Reports	clorox disinfecting wipes - 700 wipes	🖻 ½ ½	
	dewalt pressure washer - 3000 psi	Folders Quantity Min Level	
	john deere riding mower - 60in 24hp	Get a list of items in specific Filter items based on their Identity items balow or above folders stock levels their min levels	
	🔲 ryobi drill/driver - 18v		
	∧ Quantity		
	Any Units 🗸 🗸		
	0	Barcode / QR code         Custom filters         Summaries           Find all items matching         Add filters matching any         Group items with the some	
© Upgrade	Min Max	specific barcodes or gr codes custom fields in your system Sortly ID	
① Tips	Exact value		
(3 Alerts			
ঠ্টে Settings	APPLY FILTERS		
			⑦ Help

Figure 2.10 Sortly Search Page.

		Get instant	access to your inventory in 1	the field, anywhere I	by downloading the	Sortly app on iOS or Android.			×
Sortly	Inventory Summa Inventory Summa	iry							EXPORT REPORT
양 Dashboard 은 items Q Search	Q Search Rems     Image: Comparison of Compari	Any item	Any folder 🚎						۵
🕅 Tags	NAME	QUANTITY	MIN LEVEL	PRICE	VALUE	FOLDER	TAGS	NOTES	BA 🕕 Edit 🤉 R
III Reports	DeWalt Pressure Washer - 300	1 unit	0 unit	MYR 299.00	MYR 299.00	Tools & Equipment (Sample Items)	S dewalt S power washer	-	-
	John Deere Riding Mower - 60	1 unit	0 unit	MYR 4,999.00	MYR 4,999.00	Tools & Equipment (Sample Items)	🛇 John Deere	-	80 8×
	Ryobi Drill/Driver - 18v	1 unit	0 unit	MYR 140.00	MYR 140.00	Tools & Equipment (Sample Items)	Tools 🔊 Ryobi	_	BC BX
	Xerox Vitality Printer Paper - 5	10 units	5 units	MYR 12.00	MYR 120.00	Office Supplies (Sample Items)	⊗ stationery	-	eo ex
	Clorox Disinfecting Wipes - 70	5 units	2 units	MYR 40.00	MYR 200.00	Office Supplies (Sample Items)	-	_	-
	Employee Uniform - Mens Shir	80 units	-	MYR 9.00	MYR 720.00	Office Supplies (Sample Items)		-	- 💌
Upgrade     Tips	Show: 20 - per page							-	
🕼 Alerts									
(2) Settings									() Help

Figure 2.11 Sortly Reports Page.

Different to the previous existing website, the Sortly system had their own benefits in term of the website flow, quality, design, etc. One of the advantages of this website system are as shown before;

- In term of design, this website could be better in term of the usage of image. As an example, Sortly system are emphasizing the usage of images especially for the inventory product. Each products need to have their own image to make it easier for users to see and differentiate each product in the system.
- Sortly are also implementing a user-friendly website design since the user did not have to struggle in order to understand the flow of the system to complete their activities.
- One of the unique features of this website system are there will have a barcode and QR code that will automatically implemented to each products. This code can be search at the Search page which will make it easier for the users to search their required item.

#### **Biztory System**

The Biztory website system is a platform that provides many management features including for the sales, purchases, cash flow, accounting, and products/services or also known as inventory system. The company claimed the system as the accounting solution system for the start-up in Malaysia. To be compared with the proposed system which is the RMSys system which prioritizing the stock inventory management, there will only focusing on the inventory management of the Biztory system that will be located at the Products/Services features. There also provides the report features where there will be an automatic generated report based on the selected filters (*About Biztory*, n.d.).

Your trial plan is M.	Trial ends in 29 days. Upgrade now to enjo	y early bird rewards without losin	ng your free trial!	
ab BIZTORY 🛃 😭 🔘	% 🛢 🕹		🗘 🔍 🚺 UPGRADE 💇 🧐 🕑 👘 🗸	
(C) RMSRA	(			150
Hi, Build your a Insert your data now to know what on working your during performance in you can overview your durings performance in you can overview your durings to be lost after y watch the dashboard Marine to be lost after y watch the dashboard Marine to be lost after y	CCOUNTING NOV the going on in your company. and we databasis and we databasis the fair toor	V. BIZTORY TU BIZTORY TU Watch the	utorial) Biztory Dashboard Intr : JTORILE Deskboard Subroduction dashboard tutorial to understand more!	
Cashflow Overview C3 Cash In Hand M 0.00 Business Overview Sales RM 0.00	Cash In Bank RM 0.00 Purchases RM 0.00	▲ Total Due RM 0.00 06/12/22	(1 Forecast my call) ▲ Total Outstanding RM 0,00 ■ VS 29/11/22 ■ or Expense RM 0,00	
Sales RM 0.00 VS <sup>str</sup> 0.00	Purchases RM 0.00 VS <sup>M</sup> 0.00	•	Expense RM 0.00 VS M 0.00 -	Help

Figure 2.12 Biztory Dashboard Page.

	Your trial plan is M. Trial ends in 29 days. Upgra	de now to enjoy early bird rewards	s without losing your free trial!	
b BIZTORY	🗹 🏋 🖶 💷 🗶 💷 🔬		<u>۵</u>	UPGRADE 💇 😨 🕞 -
DASHBOARD	Products/Services > Products/Services			
🗮 🛛 Add New 🕂 👻		Search (code/name.	/supplier)	٩
0				Category All ~
🗆 👻 Item Code	Name	Supplier	Sell	Stock Level
EXP001	Sample Product 1		100.00	0 🗾 🙆 💼
123	Ayam		12.00	0 💋 🙆
				(2 / 2 records)
f 🚵 © 2014-24	018 biztory weeks	About biztory   Privacy F	Policy   Terms of Service   He	elp Center   Submit Ticket   中文版

Figure 2.13 Biztory Products/Services Page.

			Your trial p	olan is N	A. Trial (	ends in 2	9 days.	Upgrade now to enjoy early bird rewards without losing your free trial!	
BIZTOR	r Le	~ `	<b>=</b> 🕀	۲	%	۲	æ	🗘 🔍 🗾 UPGRADE 🖉 🥹 🕞 -	
< Back								🛱 Save	
DASHBO	RD	Produc	ts/Services	> Proc	lucts/S	ervices >	Create	new	
⊞ Details								Simple Advanced	
						Item I	Name *		
						Item	Code *		
							Group	Choose From Selected Item	
						Deer			
						Desi	cription		
							Images		
								•	
								Upload File	
									Hep

Figure 2.14 Add Product Page.

ы, вістору 🗠 🎘 🚍 🐼 🖉 🗞	û 💭 💭 💭 🖓 🖓 🖓 🕞 -
	1 17 18 19 29 23 29 29 29 29 29 29 29 29 29 29 29 29 29
Biz Integrations  Uva have installed ACTIVATE BIZ INTEGRATION NOW. Browse Integrations	Expenses Det 202 Provide the second
Estimated Payable Tax for 2021 RMO.000 Consult a professional about this Ø	Sales     Total     Sales     Sales     Sales     Target       Sales     Tatal     Sales     Sales     Target       System Info       No object record found. Start creating one.
f a c 2014-2018 biztory (453)	About biztory   Privacy Policy   Terms of Service   Help Center   Submit Ticket   中文版

Figure 2.15 Biztory Chart Dashboard.

Same as another existing website which is Food Market Hub and Sortly websites system. This Biztory system are also providing some advantages that makes it to be a good website system in term of design, functionality, security, etc. Some of the advantages of Biztory are as shown below;

- Develop the system by using a user-friendly design which will makes users to know immediately on how to use the website system.
- Not similar to other system, the Biztory provides a functionality of sock level for each of the registered product for the company.

Although there are many benefits of the Biztory system, this website also has their own disadvantages that would make the system to be less-perfect to be compared with others. One of the disadvantages that has been notice are;

- For the website design, they using too many combination of colors which will makes the design seems clumsy and crowded.
- It also takes time to load each page in the website.

## 2.3 Analysis/Comparison of Existing System

<b>^</b>	Food Market Hub	Sortly	Xero	Proposed
	foodmarkethub.com	sortly.com	xero.com	System
				(RMSys)
Content	English	English	English	English
Languages	-	_		_
Programming	JavaScript Libraries	PHP	TypeScript	HTML
Language	(jQuery 3.5.1)	MySQL	JavaScript	CSS
		(database)	Libraries	PHP
		JavaScript	(jQuery)	Javascript
Advantages	- Provides a user-	-	- Provides a	-Using
	friendly design of	Emphasizing	user-friendly	appropriate and
	website.	the usage of	design of	simple GUI
	- Provides a live-	images in the	website.	that can fit with
	chat section for users.	website.	- Provides	the website
	- Allow users to	- Provides	stock level details	type.
	create their own	a user-friendly	for each	-User can
	product manually or by	design of	products.	quickly
	import documents.	website.		understand
		- Generate		how to use the
		the QRcode		website.
		and barcode to		
		each products.		
Disadvantages	- Did not provides a	-	- Using too	Only
	simple user guideline		many colors for	available and
	for the users to		the website	accessible for
	calculate their cost		design (make it	RMS company
	management since it is		looks crowded)	only.
	required on the menu's		- Takes a	
	form section.		little bit time to	
			load each page in	
			the website	
			system.	

Table 2.1 Comparison of Existing System

## Relevance of comparison with project title

Refer to all of the comparison among those three existing website application, it can give a big impact to the proposed project development which is the RMSys stock inventory system.

#### 2.4 Summary

In a nutshell, the purpose of the system that will be develop is to ensure the RMS company to get a better management of their stock inventory process of their food business. Basically, this system can be better than other existing system in term of user's satisfaction because of the analysis and comparison that has been made to collecting all the needed requirement of being a better website system.

#### **CHAPTER 3 : METHODOLOGY**

#### 3.1 Introduction

This chapter is about further explanation of development and designing work of "RMSys", RMS Inventory Management System. This chapter contains System Development Life Cycle (SDLC) Model, system requirement, user requirement, database design, interface design, Gantt chart and conclusion. In addition, there will be Use Case Diagram, flowchart of the system, Entity Relationship Diagram and Data Dictionary.

#### 3.2 Project Management Framework/Methodology

SDLC is a process that produces software with the highest quality and lowest cost in the shortest time. SDLC includes a detailed plan for how to develop, alter, maintain and replace a software system. The life cycle defines a methodology for improving the quality of software and the overall development process.

Rapid Application Development (RAD) SDLC are chosen for this project because the key benefit of a RAD approach is fast project turnaround. RAD's focus on minimizing the planning stage and maximizing prototype development. This results in greater efficiency, faster development, and effective communication (*SDLC - RAD Model*, n.d.).



Figure 3.1 Rapid Application Development image.

#### Phase 1 (Requirements Planning)

The Requirements Planning phase of the project was initiated to identify all the key stakeholders involved. Various requirement planning methods, such as interviews, surveys, and data analytics, were employed to gather comprehensive information. In this particular project, a meeting method was chosen, involving a staff member from RmsRay Company, to gather specific requirements for the proposed system. During the meeting, the current challenges faced by the company were carefully noted and given due consideration. The aim was to understand these challenges and find ways to address them effectively.

By evaluating the identified problems, the project's expectations were set, aligning with the project's objectives to develop a website system that would provide enhanced stock inventory management capabilities for users. By critically evaluating the project's objectives and taking into account the identified issues faced by RmsRay Company, the project team aims to create a system that will empower users to better manage their business's stock inventory. The systematic evaluation of requirements and the establishment of clear goals will guide the project's development, ensuring that it meets the specific needs and expectations of the company.

#### Phase 2 (User Design)

Once the project is scoped out, it's time to jump right into development. Refers to the collected functional and non-functional requirements, also the estimate duration has for this project with the person involved, the RMSys system are being designed by based on the Software Development Life Cycle (SDLC) which is the Rapid Application Development (RAD). During this phase, some of the system design has been made by the developer such as the flowchart of the system, Entity Relationship Diagram (ERD), Context Diagram and Use Case Diagram. All of this system design are being developed by using the selected tools which is Draw.io.

After being consider with the stakeholders, it will be proceed with the system interface design. In this process, it will be work closely with the stakeholders which is the RmsRay Company. Some prototypes are being made by using the Figma tools and
are send to the stakeholders for their approval on the design. These prototypes are then shown to the clients who decide what they like and what they don't. This is intended to satisfy project results with no mistakes. The final product is only created during the finalization stage where the client and developer can both agree on the final design.

#### Phase 3 (Construction)

During Phase 3 of the project, the focus shifts towards transforming the prototypes created in the design phase into a fully functional working model. This phase involves several smaller steps, including preparation for rapid construction, program and application development, coding, and system testing. To facilitate the coding process, Visual Studio Code tools, along with the Laravel framework, are selected for the development work. The RMSys system is being developed using PHP, Javascript, HTML5, and CSS to handle the system's design and functionality. Additionally, MySQL is employed as the database for the system.

Throughout the development process, the team draws upon the knowledge gained from previous projects and engages in self-learning online sessions to address any potential mistakes or doubts that may arise during system development. The RmsRay Company ensures that all components of the system work seamlessly together and that the end result aligns with the client's expectations and objectives. If necessary, the company can propose alterations, changes, or new ideas to resolve issues as they arise. This iterative process takes into account any feedback provided by the client, ensuring that the system meets their specific requirements and preferences.

#### Phase 4 (Cutover)

The last phase will be carried out when the product is launched. It means all the requirements has been generated includes data conversion, testing, and changes to the new system, as well as user training. All final changes are made while the coders and clients continue to look for bugs in the system. After all the design and development of the RMSys system has been complete, User Acceptance Test (UAT) will be create where

the user evaluates the system before being exported to the client. It is to make sure it can handle required tasks in real-world scenarios, according to the specifications.

### 3.3 **Project Requirement**

### System Requirement

This section will explain about all the requirements that will be used in developing this web management system. There are only two types of requirements that involved in this system which is software and hardware.

Software	Purpose
Adobe XD	Adobe XD is used to create prototype of the website interface.
Visual Studio Code	The coding for the website will be written by using VS Code.
Draw.io	Draw.io is used to create Flowchart, Use Case Diagram, and Entity Relationship Diagram.
Github	Used to manage all of the system code development among all of the developers in this team.
XAMPP	Used as a local host or server to test the developed system before releasing the system to the main server.
Microsoft Office	Gantt chart will be creating by using Microsoft Excel and report of the project by using Microsoft Word.
Canva	Canva is used to create the presentation slide.

Table 3.1 Software Requirement

Table 3.2 Hardware Requirement

Hardware	Specification	Purpose
Laptop	HP, 4GB RAM, Intel Core i5	Used to develop the project and
Monitor	HP 22inch screen	Used to extend the screen view
		while in the developing phases of
		this web application.
Mouse	Logitech, wireless	Used to ease the movements on the
		screen.
Printer	Canon, wired connection	Printer used for printing all the
		project report and questionnaire.

### **User Requirement**

A user requirement is needed since it describes what user does with the system, such as what activities that users must be able to perform. Below is a list of modules that are used for this project. User requirement are also can be known as the functional requirement. For the proposed project which is the RMSys system, the functional requirement are as below;

Table 3.5 I unetional Requirement.	Table 3.3	Functional	Requirement.
------------------------------------	-----------	------------	--------------

Functional	Description
Login Module	- The system must allow users to log in to the system
	by entering their email and password.
Manage Registration Module	- The system must allow the Clerk user to manage
	the registration of other users account.
Manage Product Module	- The system must allow Clerk user to manage the
	product by view, add, update, and delete the selected
	products.

Manage Sales Module	- The system must allow Branch Manager users to
	update their weekly sales with the evidence.
	- The system must allow the Owner user to verify the
	evidence of the sales.
Manage Stock Module	- The system must allow the Clerk user to manage
	the request stock limit for each branch.
	- The system must allow the Branch Manager user to
	request selected product according to the limit set.

Other than functional requirement, the non-functional requirements are also significant for all web application to specify the quality of all attributes of the system. For the RMSys system, its non-functional requirements as below;

Table 3.4 Non-Functional Requirement.

Non-Functional	Description
Perfomance and Scability	To give a better performance of this website when
	experiencing a higher workloads
	(Solutions@altexsoft.com, 2019).
Security	To protect user's data and information against any
	attacks from outsider (Solutions@altexsoft.com,
	2019).
Usability	To let all users use the website system without
	having any trouble to understand the flow to
	complete their activities in the system
	(Solutions@altexsoft.com, 2019).
Reliability	To maintain the website when experiencing any
	critical failures.

#### **Constraint and Limitation**

According to research that has been done through the internet surfing (Solutions@altexsoft.com, 2019), there will have to category of constraint which is Client constraint and also Project constraint. The constraint itself can also be defined as limitation which is something that limits and controls anything we do. To relate with this project, constraint and limitation are something that has been set as a limit within the website development and design. One of the limitation and constraint of this website are;

- The RMSys website system will only supports up to 20 million users at one time to access the system. Any more than that will make the system prone to lagging and slow response.
- The RMSys system did not support the offline usage, and only can be accessed if the internet connection are available.
- The RMSys will require permission from the user to keep all the user's personal data that has been entered and saved into the website system.

### 3.4 Proposed Design

#### Flowchart

#### 3.4.1.1 Clerk User's Flowchart



# 3.4.1.2 Branch Manager User's Flowchart



### 3.4.1.3 Owner User's Flowchart



## **Context Diagram**



Figure 3.2 Context Diagram

### Use Case



## 3.4.1.4 Use Case Diagram & Description



# 3.4.1.5 Manage Registration



# Figure 3.4 Use Case Diagram - Manage Login

Use Case Name	Manage Login	
Use Case Ivallie		
Brief Description	The use case is used by Clerk, Branch Manager, and Owner	
	user to login into the system.	
Actor	Clark Branch Managar Owner	
Actor	Clerk, Branch Manager, Owner	
Pre-Conditions	The Owner must has already registered to the system.	
Basic Flow	1 The use cose begins when the owner user are already.	
	1. The use case begins when the owner user are already	
	at the login page	
	ut the login puge.	
	2. User can enter their login details in the login form.	
	3. The use case end	
Alternative Flow	Not Applicable	
Exception Flow	[E1: Invalid login details]	
	Condition: The owner user entered invalid login details which	
	Condition. The owner user entered invalid login details which	
	are not saved in the database.	

Table 3.5 Use Case Description - Manage Login

	Dedscription: The RMSys system will show an error message
	to inform that the entered details are invalid.
Post-Conditions	The login are success.
Rules	[R1: Valid details format]
	The entered input details must have been registered in the system.
Constraints	Not Applicable.

## 3.4.1.6 Manage Registration



## Figure 3.5 Use Case Diagram - Manage Registration

Table 3.6 Use Case Description - Manage Product

Use Case Name	Manage Registration
Brief Description	The use case is used by Clerk user to manage the registration of Branch Manager and Owner user profile.
Actor	Clerk
Pre-Conditions	The Clerk users must be logged in into the RMSys system.

Basic Flow	1.	The use case begins when the owner user are already
		at the home page.
	2.	User can choose to:
		[A1: Register new user]
		[A2: View user details]
		[A3: Update selected user]
		[A4: Delete selected user]
	3.	The use case end.
Alternative Flow	[A1: R	tegister new user]
	1.	The user click on the "Add New User" button.
	2.	The system shows the form and user need to fill the form with the user details.
		[E1: Invalid details format]
	3.	User click the "Save" button to register the account into the system.
	[A2: V	view user details]
	1.	User click on the "View" icon button on the selected user from the register user list.
	2.	The system shows the User Details Page of the selected user.
	[A3: U	Jpdate selected user]

	3. User click on the "Edit" icon button on the selected
	user from the register user list.
	4. The system shows the update user form with the saved
	details. User need to enter the updated details in the
	form.
	[E1: Invalid details format]
	5. User click the "Update" to continue.
	6. The data will be saved and system will show the updated User List Page.
	[A4: Delete selected user]
	1. User click on the "Delete" icon button on the selected user from the register user list.
	2. The system shows the confirmation message and
	user can click the "Yes" button.
	3. The system shows the validation message and
	shows the updated User List Page.
Exception Flow	[E1: Invalid details format]
	Condition: The clerk user entered invalid format user details.
	Description: The RMSys system will show an error message
	to inform that the entered details are invalid.
Post-Conditions	The user details are successfully saved in the system.
Rules	[R1: Valid details format]
	The entered input details must be in a valid format.
Constraints	Not Applicable

# 3.4.1.7 Manage Product



# Figure 3.6 Use Case Diagram - Manage Product

Use Case Name	Manage Product	
Brief Description	This use case is used by Clerk to manage the product details in the RMSys system.	
Actor	• Clerk	
Pre-Conditions	The users must be logged in into the RMSys system.	
Basic Flow	1. The use case begins when the owner user are already at the home page.	
	2. User can choose to:	
	[A1: Register new product]	
	[A2: View product details]	
	[A3: Update selected product]	
	[A4: Delete selected product]	

Table 3.7 Use Case Description - Manage Product

	1. The use case end.				
Alternative Flow	[A1: Register new product]				
	1. The user click on the "Add New Product" button.				
	2. The system shows the form and user need to fill the form with the product details.				
	3. User click the "Save" button to register the account into the system.				
	[A2: View product details]				
	1. User click on the "View" icon button on the selected user from the register product list.				
	2. The system shows the Product Details Page of the selected user.				
	[A3: Update selected product]				
	1. User click on the "Edit" icon button on the selected user from the register product list.				
	2. The system shows the update product form with the saved details. User need to enter the updated details in the form.				
	3. User click the "Update" to continue.				
	4. The data will be saved and system will show the updated Product List Page.				
	[A4: Delete selected product]				
	1. User click on the "Delete" icon button on the selected user from the register product list.				

	<ol> <li>The system shows the confirmation message and user can click the "Yes" button.</li> </ol>			
	3. The system shows the validation message and shows			
	the updated Product List Page.			
Exception Flow	Not Applicable			
Post-Conditions	The updated product data are successfully saved in the system.			
Rules	Not Applicable			
Constraints	Not Applicable			

# 3.4.1.8 Manage Stock





Table 3.8 Use Case Descri	ption - Manage Stock
Use Case Name	Manage Stock
Brief Description	This use case are used by Clerk and Branch Manager. The
	Clerk user are able to manage stock limit for the selected
	branch. Branch Manager user are able to request stock limit
	of the selected product.
Actor	Clerk and Branch Manager

 Table 3.8 Use Case Description - Manage Stock

Pre-Conditions	The users must successfully logged in into the system.
Basic Flow	Clerk
	1. The use case begins when the clerk user are already at
	the home page of the system.
	<ol> <li>The user click on the "Branch Limit" button on the navigation bar.</li> </ol>
	3. The system shows the Branch Sales Detail Page and
	user view the uploaded sales from the Branch Manager.
	4. User enter the stock limit based on the sales. Then, the
	system shows the confirmation to allow the selected branch to request the product stock.
	5 The use case end
	5. The use case end.
	Branch Manager
	1. The use case begins when the branch manager user
	are already at the home page.
	2. The user click on the "Request Product" button on the
	navigation bar.
	3. The system shows the Product List Page and click on
	the selected product.
	4. User can enter the required stock quantity and click
	on the "Submit" button. The system will proceed if
	the user is allowed to. Otherwise,

	[A1: Not allowed to request]			
	5. The use case end.			
Alternative Flow	[A1: Not allowed to request]			
	<ol> <li>The system will shows the text message to inform the user that they are not allowed to request because the Clerk are not allows them yet.</li> <li>The system will shows back to the product page.</li> </ol>			
Exception Flow	Not Applicable			
Post-Conditions	The stock limit are successfully saved.			
Rules	Not Applicable			
Constraints	Not Applicable			

# 3.4.3.6.Manage Sales



Use Case Name	Manage Sales
Brief Description	This use case are used by Owner and Branch Manager. The
	Owner are responsible to verify the uploaded sales by the

	Branch Manager. The Branch Manager user are able to update				
	their weekly sales into the system.				
Actor	Owner and Branch Manager				
Pre-Conditions	The users must successfully logged in into the system.				
Basic Flow	Owner				
	<ol> <li>The use case begins when the owner user are already at the home page of the system.</li> </ol>				
	2. The user click on the "Manage Sales" button on the				
	navigation bar and the system will shows the Branch Sales List Page.				
	3. The can choose and select the sales from the list and the system will shows the Sales Details Page.				
	4. The system will display the sales details and uploaded evidence file.				
	<ol> <li>User can choose to click "Approve" or "Reject" for the sales details. The data are being saved.</li> </ol>				
	6. The use case end.				
	Branch Manager				
	1. The use case begins when the Branch Manager user are already at the home page.				
	are uncady at the nome page.				
	2. The user click on the "Sales" button on the navigation				
	bar. The system will shows their Sales List Page.				
	3. User can choose:				
	[A1: View Previous Sales]				

	[A2: Add New Sales]
	6. The use case end.
Alternative Flow	[A1: View Previous Sales]
	<ol> <li>User can choose and enter on the selected previous sales.</li> <li>The selection of the selected previous sales.</li> </ol>
	2. The system will shows the record details of the selected sales.
	[A2: Add New Sales]
	<ol> <li>User can click on the "Add New Sales" button on the top of the screen and the system will shows the Add Sales Page.</li> </ol>
	<ol> <li>User need to enter all the details of sales into the form including the sales evidence file.</li> </ol>
	3. User can click the "Save" button to continue.
Exception Flow	Not Applicable
Post-Conditions	The sales are successfully saved.
Rules	Not Applicable
Constraints	Not Applicable

### 3.5 Data Design

## **Entity Relationship Diagram**



Figure 3.7 Entity Relationship Diagram (ERD)

# **Data Dictionary**

# 3.5.1.1 Data Dictionary for users

Field Name	Description	Data Type	Constraint
id	User id	INT	РК
name	User name	VARCHAR (255)	NULL
email	User email	VARCHAR (255)	NULL
password	User password	VARCHAR (255)	NULL
category	User category	VARCHAR (255)	NULL
profileimg	User image	VARCHAR (255)	NULL
branch	User branch	VARCHAR (255)	NULL

Table 3.10 : Data Dictionary for users

# 3.5.1.2 Data Dictionary for product

rueie ein Dudu Diedendig for produce	Table 3.11	Data	Dictionary	for	product
--------------------------------------	------------	------	------------	-----	---------

Field Name	Description	Data Type	Constraint
id	Product id	INT	РК
productname	Product name	VARCHAR (255)	NULL
productdetail	Product detail	VARCHAR (255)	NULL
stock	Product stock	INT (11)	NULL
productimg	Product image	VARCHAR (255)	NULL

# 3.5.1.3 Data Dictionary for request

Field Name	Description	Data Type	Constraint
id	Request id	INT	РК
product_id	Product id	INT	FK
sales_id	Sales id	INT	FK
user_id	User id	INT	FK
request_status	Product request	VARCHAR (255)	NULL

# 3.5.1.4 Data Dictionary for sales

Field Name	Description	Data Type	Constraint
id	Sales id	INT	РК
user_id	User id	INT	FK
managername	Manager name	VARCHAR (255)	NULL
branch	Manager branch	VARCHAR (255)	NULL
salesdate	Sales date	DATE	NULL
totalsales	Total sales	INT	NULL
date	Current date	DATE	NULL

## Table 3.12 Data Dictionary for sales

# **3.6 Proof of Initial Concept**

# Prototype for Owner user



Figure 3.8 Login Page

≡					Q 🔺 🙀 Ann Lee -
Dankoord Hiji Poolie	Profile List				+ New Profile
Product Disponen	Q Search order ID			Status 🗸	Filter ~
Orsters	user ID	Date	Full Name	Email	Category
Cours	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com	Lolitpur
	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com	Lolitpur
	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com	Lalitpur
	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com	Lalitpur
	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com	Lalitpur

Figure 3.9 Profile List - Owner

		Q 🔺 🏟 Ann Lee -
Dashboord Dashboord	Profile Registration	
Product Duppher		Full name
Ordens Usern		Contact number
	Choose file	Email
		Category
		Password
		Save

Figure 3.10 Profile Registration - Owner

Product	List				+ New (
Q Search				Status ~	Filter ~
	product ID	Date in Stock	Product Name	Quantity	Status
1	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepter
1	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Pending
1	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepte
1	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepte
1	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepte

Figure 3.11 Product List - Owner

$\equiv$					Q 🔺 📢 Ann Lee -
Cathlocord Modie	Supplier	List			+ New Orders
Proclust Disponent	Q Search o			Sto	atus 🗸 Filter 🗸
Citalers	0	user ID	Supplier Name	Email	Contact Number
Cases	0	#7676	Ramesh Chaudhary	test@gmail.com	0123456789
	0	#7676	Ramesh Chaudhary	test@gmail.com	0123456789
	0	#7676	Ramesh Chaudhary	testøgmail.com	0123456789
	0	#7676	Ramesh Chaudhary	testøgmail.com	0123456789
		#7676	Ramesh Chaudhary	testøgmail.com	0123456789

Figure 3.12 Supplier List - Owner

			Q 🜲 🏟 Ann Lee -
Cathloord	Product Update Details		
Product		Product name	
Orders Users		Product details	
	choose file	Quantity	
		Category	
		Save	

Figure 3.13 Product Update Details - Owner

≡					Q 🔺 🙀 Ann Lee -
Daarkenoord Faarkenoord	Product	List			Product Request
Banker Product	Q Search a				Filter 🗸
Drakes	0	product ID	Date in Stock	Product Name	Quantity Left
Concession of the second	0	#7676	06/30/2022	Ramesh Chaudhary	50
	0	#7676	06/30/2022	Ramesh Chaudhary	50
	0	#7676	06/30/2022	Ramesh Chaudhary	50
	0	#7676	06/30/2022	Ramesh Chaudhary	50
	0	#7676	06/30/2022	Ramesh Chaudhary	50

Prototype for Branch Manager user

Figure 3.14 Product List - Branch Manager

$\equiv$		Q 🐥 🙀 Ann Lee -
Daahkoord Notie	Product Details	
Dana Produkt Duppsher Duppsher Ortees		Product name
Circum		Ayam
		Product details
		Testing
		Quantity Available
		50
		Category
		Testing
		Request



≡					Q 🔺 🙀 Ann Lee -
Dest-Record	Product Request	List			
Product Dragofer	Q Search order ID			Status ~	Filter ~
Orstern	product ID	Date in Stock	Product Name	Requested Quantity	Status
Civers	<b>()</b> #7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepted
	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Pending
	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepted
	\$7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepted
	#7676	06/30/2022	Ramesh Chaudhary	Lalitpur	Accepted

Figure 3.16 Product Request List - Branch Manager

# Prototype for Clerk user

				Q 🔺 🙀 Ann Lee -
Castilocord	Report List			+ Add Report
Product Diggetee	Q Search report ID			Filter ~
Orders	report ID	Date	Month	Product
Uners	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com
	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com
	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com
	N7676	06/30/2022	Ramesh Chaudhary	test@gmail.com
	#7676	06/30/2022	Ramesh Chaudhary	test@gmail.com



$\equiv$		Q 🔺 🉀 Ann Lee -
Cashkoord Fashkoord Notke	Report Details	
Duggeber Duggeber Orders		Product name
Laura Usura		Total requested
		Testing
		Month
		50
		Category
		Testing
		Generate

Figure 3.18 Report Details - Clerk

			Q 🜲 🙌 Ann Lee -
Cashboord Profile	Add New Report		
Product		Product name	
Orders Citaters Citaters		Month	
		total requested	
		Category	
	choose file	Add	

Figure 3.19 Add Report - Clerk

### 3.7 Testing/Validation Plan

For the Testing Plan, the RMSys system development are using the User Acceptance Test (UAT) method which define as a form where the users will evaluate the system before being exported to the marketplace. Below is an example of project UAT form.

No.	Module	Activities	Status	Comments
1	Login	Button Login are works	Yes [ ] No [ ]	
		User can fill in the login details in the Login page.	Yes [ ] No [ ]	
2	Manage	Button for "Register New	Yes [ ] No [ ]	
	Registration	Account" works.		
		(Owner user)		
		Able to fill in all the required	Yes [ ] No [ ]	
		details of account registration.		
		(Owner user)		
		Update button for selected profile account works.	Yes [ ] No [ ]	
		(Owner user)		
		Delete button for selected profile account works.	Yes [ ] No [ ]	
		(Owner user)		
3	Manage	Button for "Add New	Yes [ ] No [ ]	
	Products	Product" works.		
		(Owner user)		

Table 3.13 User Acceptance Test (UAT)

		Able to fill in all the required	Yes [ ] No [ ]	
		details of the product		
		registration.		
		(Owner user)		
		Update button for selected	Yes [ ] No [ ]	
		product details works.		
		(Owner user)		
		Delete button for selected	Yes [] No []	
		product details works.		
		(Owner user)		
		Button for "Request Products"	Yes [] No []	
		works.		
		(Branch Manager user)		
		Able to fill in all the required	Yes [ ] No [ ]	
		details of the product request.		
		(Branch Manager user)		
		Submit button are works for	Yes [ ] No [ ]	
		request the products.		
		(Branch Manager user)		
4	Manage	Button for "Add New	Yes [ ] No [ ]	
	Supplier	Supplier" works.		
		(Owner user)		

		Able to fill in all the required	Yes [ ] No [ ]	
		details of the supplier		
		registration.		
		(Owner user)		
			<b>X</b> 7 F1N7 F1	
		Update button for selected	Yes[]No[]	
		supplier details works.		
		(Owner user)		
		(Owner user)		
		Delete button for selected	Yes [ ] No [ ]	
		supplier details works.		
		(Owner user)		
		The "View Supplier List" are		
		works		
		WOIKS.		
		(Branch Manager user)		
5	Manage Report	Button for "Add New Report"	Yes [ ] No [ ]	
		works.		
		(Clerk user)		
		Button for "Submit" works.	Yes [ ] No [ ]	
		(Clerk user)		
			<b>X</b> 7 F 1 X 7 7	
		The "View Report Record"	Yes[]No[]	
		are works.		
		(Owner user)		
L			l	1

## 3.8 Gantt chart

	A ski da s		Month		Octo	ber		No	vem	ber		Dec	embe	er	J	anua	ry		Feb	ruar	Y		Mar	ch		Ap	oril	
NO		Activity		1	2	3	4	5	6	7	8 9	9 10	11	12	13	14 1	5 1	5 17	7 18	19	20	21	22	23 2	4 2	5 26	27	28
Ree	quirement Planni	ing																										
1	Identifying Stake	holder	1																									
2	Observation		1																									
3	Analyse and iden	tify requirements	1																									
4	Define the scope	and requirements	2																									
5	Define the conte	ext diagram and use cases	2																									
6	6 Define the use case description and activity diagram		2																									
7	7 Define the Entity Relationship Diagram and Data Dictionary		2																								$\square$	
Use	er Design																											
8	Drototype	Create the system mockup	1																									
9	Prototype	Create the system prototype design	2																									
10	Test	Test the prototype design	3																									
11	Refine	Refine the mockup and prototype design	3																								$\square$	
Col	struction																											
12	12 Development of the system		9								Τ																	
Cut	over																											
13	Training the Stal	eholder	2																									
14	User Acceptance	? Test	2																									
15	Maintenance		2																									

Figure 3.20: Gantt Chart

#### **CHAPTER 4: RESULTS AND DISCUSSION**

#### 4.1 Introduction

For chapter 4, it will clarify the implementation process and method to develop the RMSys project system which include coding phases, any related settings and installation of system to the server since the system are depends to the server because there are using database to save some data from the users. The database used in this system are MySQL and the installed software used to develop the coding of the project is Visual Studio Code. Other than that, this system used HTML, CSS and JAVASCRIPT as the front end language and PHP as the scripting language run by Xampp software. This phase is the main and important phase since it will develop the Graphical User Interface (GUI) along with the function of the system. The system development are using the Laravel framework since it has been declared as Rapid Application Development (RAD) that allows the developers to create web application quickly and efficiently.

#### 4.2 System Design and Implementation

For this section, there will be covers the system interfaces (UI) and the system features including the coding used in its development. As stated before, the RMSys website system are being built by using the PHP Laravel framework which are using the Xampp as the local database and Heroku as the server. Figure below shows the example of database of user profile that has been developed in the RMSys system.
phpMuAdmin	- (Berver: 127.0.0.1 + (Database: may: + ) fable: user:	* -
05100 B.C	🔟 Browse 🕅 Structure 📳 SQL 🔍 Search 🏂 Insert 🗮 Export 🚟 Import 🛤 Privileges 🥜 Operations 👁 Tracking 🗯 Triggers	
Recent Caucitor		
Recent Pavontes	Showing rows 0 - 1 (2 total, Query took 0.0016 seconds.)	
r li New	SELECT + ERNM 'uname'	
- airplane_system	TRAT LAST A	
- fk_booking	Profiling [Edit Inline] [Edit ] [Explain SQL ] [Create PHP code ] [Refresh ]	
- guestbook		
B-G information_schema	Show all Number of rows: 25 V Filter rows: Search this table Sort by key: None V	
B-a lab10	+ Onlines	
Herei mysgi	+T→ ▼ id name email email_verified_at password category remember_token	creat
performance_schema	Alia Alia	NULL
I Hin New	Hidayah	_
- delection	🗌 🖉 Edit: Bå Copy 🥥 Delete 5 Anjaah @gmail.com NULL \$2\$\$10\$7cH/r.p54aiUaQUFe0\$SlukKPdZOm1PTJIRqwqC8FZx Manager NULL	NULL
Filed_jobs		
- migrations	1_ Check all With selected: 🥜 Edit 💈 Copy 🤤 Delete 🚃 Export	
- password_resets		
- personal_access_tokens	Show all Number of rows: 25 V Fifter rows: Search this table Sort by key: None V	
- V users		
toter	Query results operations	
phpmyadmin	Regist St Conv to disboard 🖂 Event et Display chart 🐨 Craste view	
msys		
Filed jobs	Readenable Sol anan	
The migrations	B provinsix rule and data	
+ password resets	La belt Let every user access this bookmark	
B- password_reset_tokens	Leve	
- personal_access_tokens	Redwark this SOL even	
B-M product		
⊕- ∠ users		-
IE-⊒ test		
	Gonsole	
4		F



🔀 Xampi	Control Pan	el v3.3.0 [ Co	mpiled: Apr 6th 20	21 ]			—		×
ខា	XAN	IPP Cont	rol Panel v3	.3.0				<i>J</i> of C	onfig
Modules Service	Module	PID(s)	Port(s)	Actions				🛛 🎯 Ne	etstat
	Apache	15664 8976	80, 443	Stop	Admin	Config	Logs	- 💽 S	Shell
	MySQL	16924	3306	Stop	Admin	Config	Logs	Ex Ex	plorer
	FileZilla			Start	Admin	Config	Logs	🚽 🛃 Se	rvices
	Mercury			Start	Admin	Config	Logs	<b>0</b> I	Help
	Tomcat			Start	Admin	Config	Logs		Quit
1:50:44 A 1:50:44 A 1:50:44 A 1:50:44 A 1:50:46 A 1:50:46 A 1:50:47 A 1:50:47 A	M [main] M [main] M [main] M [Apache] M [Apache] M [mysql] M [mysql]	All prereq Initializing Starting C Control P Attemptir Status ch Attemptir Status ch	uisites found g Modules Check-Timer anel Ready Ig to start Apach ange detected: n Ig to start MySQI ange detected: n	e app unning L app unning					•

Figure 4. 2: XAMPP Control Panel Interface

## 4.3 System Interface

The interfaces for each module of the RMSys system will be displayed in this section. A number of the system's modules are created to carry out particular tasks for managing user profile and products for the RmsRay's business. Users can interact with the system and carry out certain tasks using the interface that is unique to each module. These user interfaces are created to be simple and straightforward so that users may easily traverse the system. Users may better understand how the RMSys system works and how it might assist them in managing their product stocks by seeing examples of the interfaces. Below are the total module that has been set for this system by each users which is Clerk, Branch Manager, and Owner users.

- a. Clerk
- Manager user registration
- Manage product and set each branch stock request limit
- b. Branch Manager
- Add weekly sales for each branch
- Display total sales with status
- Request registered product
- c. Owner
- Update status of total sales by Branch Manager
- View product request list
- View user registration list

Below is some of the interfaces (progress) that has been developed for the RMSys system according to the stated module. However, the user interface design might change and upgraded to be better design.

RMSys			
		P C R R R R	
Γ		Login Page	
	Email Address	coordinator1@gmail.com	
	Password	•••••	
		Remember Me	
		Login	
		Forgot Your Password?	

Figure 4. 3: Login Page

😥 RMSys		Alia Hidayah Clerk
Dashboard	Welcome! You are successfully logged in a	s a Clerk.
Manage Registration	······································	
Manage Product	Count Status for Request Product Process Total count for each status 6/29/2023	
Branch Limit	5	Pending
		Approved
	06/29/2023	Rejected
	Status	Request Allowed

Figure 4. 4: Dashboard for Clerk

😥 RMSys		Alia Hi Clerk			
Dashboard	List of Registered User				
Manage Registration	5				
🛒 Manage Product	+ Add New User				
💡 Branch Limit					
	Show 10 ¢ entries Q Se	earch By Customer Name			
	Name 1 Email 1 Category 1 Profile In	mage 11 Action 11			
	Ahmad Sulaiman manager3@gmail.com Manager	Edit Delete			
	Alia Hidayah clerk1@gmail.com Clerk	Edit Delete			
	Nur Afiqah manager1@gmail.com Manager	E Edit Delete			
	Nurain Aleeya owner1@gmail.com Owner	E Edit Delete			
	Nurul Huda manager2@gmail.com Manager	Edit Delete			

Figure 4. 5: List of Registered User (Clerk)

RMSys	Cala	· · · · · ·			AI	a Hidayah erk -
Dashboard	Sale	s Image		ser		
Manage Registration				JCI		
📜 Manage Product	+ Add New U					
Branch Limit						
	Show 10	and .		Search By Custo	ner Name	
	Name			le Image 斗	Action	
	Ahmad St			E	Edit Delete	
	Alia Hiday		Close	2	Edit Delete	
	Nur Afiqah	manager rægman.com	wanager	2	Edit Delete	
	Nurain Aleeya	owner1@gmail.com	Owner	E	Edit Delete	
	Nurul Huda	manager2@gmail.com	Manager	E	Edit Delete	

Figure 4. 6: Interface of Pop-up View Profile Image

🚺 RMSys		Alia Hidayah Clerk ~
Dashboard	Limit Details	
Manage Registration		
📜 Manage Product	Branch Name: Kenari, Scientex	
Panch Limit	Total Sales: 5000	
	Updated Sales Date: 2023-06-18	
	Calculated limit percentage based on sales: 50 %	
	Back	
		Copyright © 2023 RMSRay

Figure 4. 7: Limit Details page

💓 RMSys					Alia Hidayah Clerk -
1) Dashboard	Show 10 🗢 entries		Q Search	n By Customer Name	
Manage Registration	Product	Stock	Product		
📜 Manage Product	Name	Stock	†↓ †↓	Action	
Branch Limit	Isi Dada Ayam	$\checkmark$		Update Stock Delete P	roduct
	Lidi			Update Stock Delete P	roduct
	Sosej Che	<b>Deleted!</b> User account has been deleted.	- 8	Update Stock Delete P	roduct
	Tepung	ок	_	Update Stock Delete P	roduct
	Showing 1 to 5 of 5 en	tries		Previous 1	Next
				Cor	wright @ 2023 RM

Figure 4. 8: Delete successful interface

RMSys						Alia Hidayah Clerk	•
Dashboard		List of Red	aistered P	roduct			
Manage Registration							
🍹 Manage Product	+ Add New Pr	$\sim$					
Branch Limit							
	Show 10 4			Search I	By Customer Nam	e	
	Product Name	Are you su	re?	: 11	Action		
	Isi Dada Ayam	Name: Isi Dada A You won't be able to r No, cancel!	yam evert this! lete it!		Update Stock	Delete Product	
	Sosej Cheese	Digunakan sebagai bahan mentah bagi produk sosej gunting.	270		Update Stock	Delete Product	
	Sotong Raja	Digunakan sebagai bahan mentah bagi produk sotong gunting.	95	Ø	Update Stock	Delete Product	
	Showing 1 to 3 c	f 3 entries			Previ	ous 1 Next	

Figure 4. 9: Confirmation message to delete

RMSys						Alia Hidayah Clerk ~
Dashboard	<ul> <li>Product successfully regis</li> </ul>	stered				×
Manage Registration		List of Rec	istered	Produc	t	
📜 Manage Product			,			
Branch Limit	+ Add New Product	t				
	Show 10 🗢 e	entries		<b>Q</b> Search	By Customer Name	
	Product Name ↑↓	Product Detail	Stock Available 14	Product Image	Action	
	Isi Dada Ayam	Digunakan sebagai bahan mentah bagi produk ayam gunting, ayam cucuk, dan ayam popcorn.	250	Ð	Update Stock	Delete Product
	Sosej Cheese	Digunakan sebagai bahan mentah bagi produk sosej gunting.	270		Update Stock	Delete Product
	Sotong Raja	Digunakan sebagai bahan mentah bagi produk sotong gunting.	95	E	Update Stock	Delete Product

Figure 4. 10: List of Registered Product successful added product

Dashboard			
	Add Nev	w Product	
Manage Registration			
🛒 Manage Product	Product Name		
Branch Limit	Enter your product name		
	Product Detail Enter your product details Stock Quantity Enter quantity	Product Image Choose File Chicken Breast Filletjpeg	

Figure 4. 11: Add New Product Page

RMSys		Alia Hidayah Clerk -
<ul> <li>Dashboard</li> <li>Manage Basisterios</li> </ul>	Update Product Details	
Manage Product		
Branch Limit	Product Name Isi Dada Ayam	
	Product Details	
	Digunakan sebagai bahan mentah bagi produk ayam gunting, ayam cucuk, dan ayam popcorn.           Stock Quantity         Product Image           250         Choose File	

Figure 4. 12: Update Product Details Page

RMSys					Nurain Aleeya Owner ~
Dashboard		Sal	es Approval		
Sales Approval					
Registered Users	Show 10 🗢 entries			<b>Q</b> Search By Customer Name	e
Registered Products	Branch 11	Sales Date	Total Sales	Status 11	
	Kelisa, Kota Masai	2023-06-17	3500	Rejected	View
	Kenari, Scientex	2023-06-18	5000	Request Allowed	View
	Pelanduk, Scientex	2023-06-19	4010	Request Allowed	View
	Pelanduk, Scientex	2023-06-18	3020	Request Allowed	View
	Sejora, Air Biru	2023-06-21	500	Request Allowed	View
	Showing 1 to 5 of 5 entries			Previ	ious 1 Next

Figure 4. 13: Sales Approval (Owner)

RMSys				Nur Afiqah Manager 👻			
Dashboard		List of Product					
📰 Sales							
	Show 10 ♦ entrie	is Q	Search By Customer	Name			
	Product Name 11	Product Detail	Stock Available	↓ Action 11			
	Sosej Cheese	Digunakan sebagai bahan mentah bagi produk sosej gunting.	270				
	lsi Dada Ayam	Digunakan sebagai bahan mentah bagi produk ayam gunting, ayam cucuk, dan ayam popcorn.	250	View Details			
	test	tets	200	<ul> <li>View Details</li> </ul>			
	Sotong Raja	Digunakan sebagai bahan mentah bagi produk sotong gunting.	95				
	Showing 1 to 4 of 4 e	entries		Previous 1 Next			

Figure 4. 14: List of Request Product (Manager)

RMSys		Nur Afiqah Manager 👻
Dashboard	List of Product	
Sales		
	Product Name:	
	Sosej Cheese	
	Product Details:	
	Digunakan sebagai bahan mentah bagi produk sosej gunting.	
	Current Available Stock: Limit Percentage:	
	270 PCS 10 %	
	Your Request Limit: Limit Percentage:	
	27 PCS ENTER BELOW YOUR LIMIT	
	Submit	

Figure 4. 15: Request Product (Manager)

## 4.4 Code Module

In this section, it will show selected page and its coding. There also have some explanation on how the users can use it. This system is using front-end language as HTML, CSS and JAVASCRIPT. Also, for the database, it using PHP Laravel framework as the scripting language. All the language are developed by using Visual Studio Code.



Figure 4. 16: Environment in Visual Studio Code (blade.php)

Figure above shows some of the interface file for the RMSys system that are being save as a blade.php file.



Figure 4. 17: Environment Visual Studio Code (Controller)

Figure above shows some of the controllers and models for this system. Since the development are developed by using Laravel, all the controllers and models are being created by using command in the terminal.



Figure 4. 18: Code for differentiate side nav

Figure above shows the codes for side bar navigation that has been separated according to user type which is Client, Branch Manager, and Owner.



Figure 4. 19: Code for User List Page

This figure shows some of the codes for list of user page that can be accessed by the Clerk user. Clerk are responsible to add new profile, update and delete if needed.



Figure 4. 20: Code for Add Product Page

The figure above are some of the codes for add product page for the Client users.

м	9	ProductController.php U 😻 sideNav.blade.php U 🗢 UserC	ontroller.php U 🗙 🛛 🎙	🕴 listuser.blade.php U	😻 addproduct.blade.php U	😻 listproduc	t.blade 护 🖏 💷 …
app )	Ht	ttp > Controllers > 🗢 UserController.php > PHP Intelephense > 😫 UserC	ontroller				
7		use Illuminate\Http\Request;		> undateP	Aa ,ab, 🗚 ? of 2	$\uparrow \downarrow = \times$	The second se
8		use App\Models\User;					
10		class UserController extends Controller					
10							
12		public function register()					
13							
15							
16		<pre>public function listuser()</pre>					
17							
24							
26		public function index()					
27							
28							
39							
40							
41		//insert data into database (register profile)					
42		function adduser(Request \$request)					
67							
68							
69							
70		<pre>public function updateprofile( \$id)</pre>					
71							
83							
04 85		public function undatelleer(Pequest \$request \$id)					
86		{····					
96							
97							
98							
99		<pre>public function delprofile(Request \$request, \$id)</pre>					
100	5	£					

Figure 4. 21: Code for function in User Controller

Figure above shows some of the functions that has been implemented in the UserController. For Laravel framework, all the functions can be controlled in just one controller depending each module. This helps the developer to develop the system efficiently.



Figure 4. 22: Code for Bootstrap implementation

This is some additional file where it contain the bootsrap links implementation for the system.

No	Module	Activities	Stat	ins.	Comments
1	Manage	User can insert their login details in the Login	Ves	1	
	Login	Page.	No		
		Login button are works	Yes	1	
	(AID	the second and the second	Max		
	(	Demonshar Ma lasten an made	- Marca		
		Remember Me builds are works.	100		
		Para Branna I have a second	Pico -	1	
		Forget Password button are works.	Tes		
-			Peo	1	
2	Manage	Able to display all registered user in User List.	Yes	1	
	Registration		No		
		Register New User button are works.	Yes	1	
	(Clerk)		No		
		Able to fill in all the required details for the user	Yes	1	
		registration.	No		
		Save button are works for add new user.	Yes	1	
			No		
		Update button are works.	Yes	1	
		-	No		
		Saved user details are shown in the User Update	Yes	1	
		Page.	No		
		Able to re-enter updated details of user.	Yes	1	
			No		
		Save button are works and data are being saved	Yes	1	
		0	No		
		Dislate better an moder	No.	1	
		Detete builds are works.	100		
		The colored data are defined	Pep		
		The selected data are deleted.	Tes	1	
-		Able to disclose off an electron days days in the days	1960		
- 2	Manage	Able to display all registered product in Product	Tes	1	
	Froquet	LDL	Pec.		
	(COM and in	Register New Product button are works.	Yes	1	
	(Clenc)		No		
		Able to fill in all the required details for the	Yes	1	
		product registration.	No		
		Save button are works for add new product.	Yes	1	
			No		
		Update button are works.	Yes	1	
			No		
		Saved product details are shown in the Product	Yes	1	
		Update Page.	No		
		Able to re-enter updated details of product.	Yes	1	
			No		
		Save button are works and data are being saved.	Yes	1	
		0	No		
		Delete button are works.	Yes	1	
			No		
		The selected data are deleted	Yes	1	1
		The second terms are the second	Ne		
	Manager	Able to display all undated calls for the user in	Yes	1	
-	Calas	Calas I lot only in opened sites by the user in	N.S.		
	2011/23	A 11 New Color Instance on sector	1960		
		And New Sales buildt are works.	105		
1					1

# 4.5 User Acceptance Test

(Branch	Able to fill in all the required details for the sales	Yes	1	
Manager)	registration.	No		
	Save button are works for add new sales.	Yes	1	
		No		
	Delete button are works at the Sales List Page.	Yes	1	
	-	No		
	The selected data are being deleted successfully.	Yes	1	
	× · · · ·	No		
Manage	Able to display all updated sales in Sales List with	Yes	1	
Sales	its status.	No		
	Able to display the Sales details on the Sales	Yes	1	
(Owner)	Details Page.	No		
	Approve and Reject button are works and status	Yes	1	
	being updated.	No		
	Able to display all data of user registration.	Yes	1	
		No		
	Able to display all data of product registration	Yes	1	
		No		
\$ Request	Able to display available product on the system	Yes	1	
Stock	and click on the selected product.	No		
	The system able to show allow status for the	Yes	1	
(Branch	selected product by the user.	No		
Manager)	If allowed, user are able to enter their required	Yes	1	
	stock quantity.	No		
	Submit button are works.	Yes	1	
		No		
Request	Able to display approved sales branch list by the	Yes	1	
Stock	Owner user.	No		
	Able to click on the selected branch and view their	Yes	1	
(Clerk)	sales details.	No		
	Able to enter the limit for each selected branch.	Yes	1	
		No		
	Save button are works.	Yes	1	
		No		
	Able to choose to allow selected user to request	No Yes	1	
	Able to choose to allow selected user to request for the product.	No Yes No	I	

Name: Maisarah binti Faisal

Signature:

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No.	Module	Activities	Stat	us	Comments
	Manage	User can insert their login details in the Login	Yes	1	
	Login	Page.	No		
		Login button are works.	Yes	1	
	(AII)		No		
		Remember Me button are works	Yes		
		PARTICULAR CONTRACTOR AND TIME DO	Max	1	
		Econet Password button are works	Ves		
		The second contract works.	Mar	1	
	Manager	Able to disalars all maintaind man in Dans List	No.	1	
4	Popletestion	Able to display all registered user in Oser List.	100		
	regulation	Doubstas Mass Data bettan an mode	Nex		
	(Clark)	Register New Oser button are works.	1 CB	.r	
	(energy	All an All in all the second of the line in the second	1960		
		Able to fill in all the required details for the user	Tes	1	
		registration.	NO		
		Save bullon are works for add new user.	Tes	1	
			NO		
		Update button are works.	Tes	1	
			No		
		Saved user details are shown in the User Update	Yes	1	
		Page.	No		
		Able to re-enter updated details of user.	Yes	1	
			No		
		Save button are works and data are being saved.	Yes	1	
			No		
		Delete button are works.	Yes	1	
			No		
		The selected data are deleted.	Yes	1	
			No		
3	Manage	Able to display all registered product in Product	Yes	1	
	Product	List.	No		
		Register New Product button are works.	Yes	1	
	(Clerk)		No		
		Able to fill in all the required details for the	Yes	1	
		product registration.	No		
		Save button are works for add new product.	Yes	1	
			No		
		Update button are works.	Yes	1	
			No		
		Saved product details are shown in the Product	Ves	1	
		Update Page.	No		
		Able to re-enter undated details of product.	Yes	1	
			No		
		Save botton are works and data are being saved	Ves	1	
		care canon are works and talk are being sared.	No		
		Delete button are works	Ves	1	
		and a second defined and a second and a second and a	Net		
		The calested data are deleted	Ver	1	
		The screeced data are dereted.	N-		
	Manager	Able to display all undated calls have a user in	Yes	1	
*	Salar	Calas I ist orbit, its status	No.	-F	
	00100	Add Nam Calas homes are seen for	200		
		And twew sales button are works.	TCS	1	
			1 2900		1

	(Branch	Able to fill in all the required details for the sales	Yes	1	
	Manager)	registration.	No		
		Save button are works for add new sales.	Yes	1	
			No		
		Delete button are works at the Sales List Page.	Yes	1	
			No		
		The selected data are being deleted successfully.	Yes	1	
			No		
	Manage	Able to display all updated sales in Sales List with	Yes	1	
	Sales	its status.	No		
		Able to display the Sales details on the Sales	Yes	1	
	(Owner)	Details Page.	No		
		Approve and Reject button are works and status	Yes	1	
		being updated.	No		
		Able to display all data of user registration.	Yes	1	
			No		
		Able to display all data of product registration	Yes	1	
			No		
5	Request	Able to display available product on the system	Yes	1	
5	Request Stock	Able to display available product on the system and click on the selected product.	Yes	1	
5	Request Stock	Able to display available product on the system and click on the selected product. The system able to show allow status for the	Yes No Yes	1	
5	Request Stock (Branch	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user.	Yes No Yes No	1	
5	Request Stock (Branch Manager)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required	Yes No Yes No Yes	1	
5	Request Stock (Branch Manager)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity.	Yes No Yes No Yes	1	
5	Request Stock (Branch Manager)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works.	Yes No Yes No Yes Yes	     	
5	Request Stock (Branch Manager)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works.	Yes No Yes No Yes No	     	
5	Request Stock (Branch Manager) Request	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the	Yes No Yes No Yes No Yes	       	
5	Request Stock (Branch Manager) Request Stock	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user.	Yes No Yes No Yes No Yes No	/ / / /	
5	Request Stock (Branch Manager) Request Stock	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their	Yes No Yes No Yes No Yes No Yes	/ / / / /	
5	Request Stock (Branch Manager) Request Stock (Clerk)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details.	Yes No Yes No Yes No Yes No Yes No	/ / / /	
5	Request Stock (Branch Manager) Request Stock (Clerk)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch.	Yes No Yes No Yes No Yes No Yes No Yes		
5	Request Stock (Branch Manager) Request Stock (Clerk)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch.	Yes No Yes No Yes No Yes No Yes No Yes No		
N .	Request Stock (Branch Manager) Request Stock (Clerk)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works.	Yes No Yes No Yes No Yes No Yes No Yes No Yes		
W .	Request Stock (Branch Manager) Request Stock (Clerk)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works.	Yes No Yes No Yes No Yes No Yes No Yes No Yes No	/ / / / /	
M	Request Stock (Branch Manager) Request Stock (Clerk)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works. Able to choose to allow selected user to request	Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes		
5	Request Stock (Branch Manager) Request Stock (Clerk)	Able to display available product on the system and click on the selected product. The system able to show allow status for the selected product by the user. If allowed, user are able to enter their required stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works. Able to choose to allow selected user to request for the product.	Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes		

Name: Alia Hidayah

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No.	Module	Activities		us	Comments
1	Manage	User can insert their login details in the Login	Yes	1	
	Login	Page.	No	1	
	1007	Login button are works.	Yes	1	
	(All)	×	No		
		Remember Me button are works	Yes		
			No	1	
		Forpet Password button are works.	Yes		
		0	No	1	
2	Manage	Able to display all registered user in User List	Ves	1	
-	Registration	where its analysis regiments and in cost that	No		
	0	Register New User button are works	Yes	1	
	(Clerk)		No		
		Able to fill in all the required details for the user	Yes	1	
		registration.	No		
		Save button are works for add new user.	Yes	1	
			No		
		Undate button are works	Vec	1	
		Contract Control are worked.	Mar		
		Saved user details are shown in the User Undate	Ves	1	
		Base	Max		
		Able to an anter undeted datally of more	No.	1	
		Abie to resenter updated details of user.	A Second	e.	
		Core botton are made and data are bains cared	Max	1	
		bare ballon are works and tall are being sared.	N.C.		
		Dalata hattua an made	No.		
		Defete buildnane works.	N.C.S.		
		The extense didney are defended	1940		
		The selected data are deleted.	No.		
-	Manage	Able to disalars all analstand another in Declarit	No.	1	
-	Product	List	No.		
		B solution Many Brochast Institute and models	No.	1	
	(Clerk)	Register New Froduct button are works.	N.S.	1	
		Able to fill in all the securited details for the	No.	1	
		Active to hit in an the required details for the	N.C.S.		
		product registration.	1940		
		save button are works for add new product.	No.		
		Undata hattan an mada	- Person Mariana		
		Opdate button are works.	1 (23)		
		Constitution description of the second second second second	1960		
		Saved product details are shown in the Product	1 CS	1	
		Opdate rage.	1940		
		Able to re-enter updated details of product.	1 03		
			Pico -		
		save button are works and data are being saved.	TCS	1	
		Palais haites an an de	190		
1		Lociese bullon are works.	Tes	1	
1		The endersed data are deleted	<b>NO</b>		
1		The selected data are deleted.	Tes	1	
		All the standard and the state of souther through a second to	No		
	Manage	Arise to display all updated sales by the user in	res		
	sales	sales List with its status.	NO		
		Add New Sales button are works.	Yes	1	
1			I No	I	

	(Branch	Able to fill in all the required details for the sales	Yes	1	
	Manager)	registration.	8		
		Save button are works for add new sales.	Yes	1	
			No		
		Delete button are works at the Sales List Page.	Yes	1	
		-	No.		
		The selected data are being deleted successfully.	Yes	1	
			No		
	Manage	Able to display all updated sales in Sales List with	Yes	1	
	Sales	its status.	No		
		Able to display the Sales details on the Sales	Yes	1	
	(Owner)	Details Page.	No		
		Approve and Reject button are works and status	Yes	1	
		being updated.	No		
		Able to display all data of user registration.	Yes	1	
			8		
		Able to display all data of product registration	Yes	1	
			No		
5	Request	Able to display available product on the system	Yes	1	
	Stock	and click on the selected product.	No		
		The system able to show allow status for the	Yes	1	
	(Branch	selected product by the user.	<b>N</b>		
	A Report of the second s	If allowed more see able to anter their menied	Sec.		
	Manager)	it another, then are note to caller their required	Tes	1	
	stanager)	stock quantity.	No	1	
	Manager)	stock quantity. Submit button are works.	Yes	1	
	stanager)	stock quantity. Submit button are works.	Yes No	1	
	Request	stock quantity. Submit button are works. Able to display approved sales branch list by the	Yes No Yes	1	
	Request Stock	stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user.	No Yes No Yes No	/ / /	
	Request Stock	stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their	Yes No Yes No Yes No Yes	1	
	Request Stock (Clerk)	Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details.	Yes No Yes No Yes No	/ / / /	
	Request Stock (Clerk)	Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch.		/ / / /	
	Request Stock (Clerk)	Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch.	Yes No Yes No Yes No Yes No Yes No		
	Request Stock (Clerk)	stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works.	Yes No Yes No Yes No Yes No Yes No Yes		
	Request Stock (Clerk)	stock quantity. Submit button are works. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works.	Yes No Yes No Yes No Yes No Yes No Yes No		
	Request Stock (Clerk)	Able to display approved sales branch list by the Owner user. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works.	Yes No Yes No Yes No Yes No Yes No Yes No		
	Request Stock (Clerk)	Able to display approved sales branch list by the Owner user. Able to display approved sales branch list by the Owner user. Able to click on the selected branch and view their sales details. Able to enter the limit for each selected branch. Save button are works. Able to choose to allow selected user to request for the product.	Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No		

Name: Nur Afigah

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## 4.6 Conclusion

This chapter has covered several aspects of the implementation of the RMSys system including software and database implementation, user manual development, and User Acceptance Testing (UAT). Through the use of HTML, CSS, and Javascript, the software for the RMSys has been developed along with a database using Xampp. The user interface for the system has also been designed to be intuitive and user-friendly. UAT has also been conducted to ensure that the system meets the end-users' requirements and expectations. However, there are still many progress that need to be done to complete the system. There are few design that need to be fixed and some requirements that are still not complete.

## 4.5. Conclusion

The RMSys Stock Inventory System is designed to serve as a unified platform for saving stray pets, aiming to streamline the process. Primarily, it assists the RMSRay Company in managing stock flow efficiently across their multiple branches. The system caters to three user types: Branch Managers, Clerks, and Owners. Moreover, the system is custom-built exclusively for the RMSRay Company, as they are the primary stakeholders of this project.

In the previous chapter, the system underwent rigorous testing through User Acceptance Test (UAT), engaging volunteer users to provide feedback and suggestions for improvement. The results were highly positive, as users expressed satisfaction with the system's ability to expedite their tasks. Nonetheless, there are still areas in the RMSys system that require further enhancements.

To sum up, the website development for the RMSys Stock Inventory System has successfully fulfilled its objectives. Overall, the project progressed smoothly, resulting in a final product that is considerably satisfying, despite a few repairable weaknesses.

## 4.7 Recommendation

In the previous chapter, it has discovered some weaknesses in the developed web system. These flaws necessitate certain maintenance measures to address them. One of the identified issues in the RMSys system is related to the functionality of setting stock limits for each Branch Manager user. To enhance this aspect, we propose an improvement where the system automatically sets the limits based on the range of sales uploaded by the Branch Manager, instead of relying on manual input by the Clerk. This modification would reduce the workload for the Clerk user. Ensuring perfection in this system is crucial because it guarantees its effectiveness and long-term usability, enabling it to consistently fulfil its intended purpose.

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