

# **PHARMACY MANAGEMENT SYSTEM**

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering.

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**DAFFODIL INTERNATIONAL UNIVERSITY**

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## APPROVAL

This Project titled “**Pharmacy Management System**”, submitted by **Md. Hazrat Ali** ID No: **162-15-7902** and **Md. Hasibul Islam** ID No: **183-15-11942** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 13 September, 2022.

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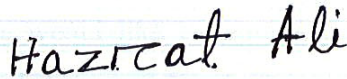
## DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Dr. Sheak Rashed Haider Noori, Associate Professor & Associate Head, Department of CSE Daffodil International University**. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.



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## **ABSTRACT**

Pharmacy management system is one of the most essential tools that are mostly used in medical store nowadays. It is mostly used to manage pharmacy related activities such as medical inventory, record keeping, sales management as well as managing the drug stock and information of the expired medicines. Many pharmacies in Bangladesh are still operating manually. They don't have proper knowledge and software to manage the pharmacy on a digital way. Pharmacy assistant needs to check the date and stock every two or three day in a week; it take a lot of time to find out whether certain medicine are out of stock. In this project we tried to develop a computerized and web based Pharmacy management system. Our main motive is to allow the usage of this system for most of the pharmacy of our country. This system is designed to overcome all challenges related to the management of medicine that were used to be handled locally and manually. This system is manually difficult because of its information changeability and data completeness problem. This system is developed to maintain the manual system digitally or more efficient way. We want to manage the pharmacy on a digital way. By keeping it in mind we have developed this web based system that would replace the existing manual system.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

This is the digitalization era. As the world changes, so does our use of technology. We now use updated technology in every sector to make our lives easier. Technologies are widely used in the medical sector in every country. We use technology as well, but not in every area. In our country, the majority of pharmacies use a manual system to complete their tasks. It means they manually record all of their data. We wanted to replace this type of traditional system with a digital way of managing a pharmacy. That is why we created a web-based system to keep track of sales, purchases, inventory, customer records, invoices, employees, sales reports, profit reports, and a variety of other things. This system will manage all of the data so that the user can easily handle all of the business's records, reducing the risk of loss and allowing for timely reporting. It provides statistics on medicines or drugs in stock, and the data can be updated, deleted, or edited. This system will also be capable of printing invoices and other reports. We can say that this is a system that handles essential data, saves data, and is actually about a pharmacy's database and its management. So, if we can make this product available to all pharmacies in our country, this system will benefit greatly.

### 1.2 Motivation

The majority of our country's pharmacies use an analog or manual method to manage all of their records, medication details, and buy-sell records, among other things. We followed many pharmacies, the majority of which use the analog method. This method wastes time, which is their most valuable resource. That is why we wanted to create an automated system that would handle all of the tasks such as medicine records, stock, customer information, sell and due, and so on. The main goal of this system is to digitize the pharmacy system so that it can be managed easily and efficiently.

### **1.3 Objective**

The primary goal of this system is to create a system for pharmacy shops in order to improve the performance and efficiency of pharmacy shop management. Some specific objectives should be implemented in order to achieve this goal effectively.

The following are the project's specific goals.

- ❖ To create a system that allows easy access to customer information.
- ❖ To create a system that allows easy access to stock reports.
- ❖ To create a system that allows easy access to sales reports.
- ❖ To create a system that allows easy access to debtor reports.
- ❖ To create a system that allows easy access to employee records.
- ❖ To create a system that allows customers to easily print and prepare invoices.
- ❖ To create a system that can reduce human errors.
- ❖ To provide optimal drug inventory management by tracking the movement of drugs in the pharmacy unit.

### **1.4 Expected Outcome**

This web-based application is expected to make the pharmacy management system easier, more efficient, and error-free. This system is intended to improve the pharmaceutical store's accuracy, safety, and efficiency. Pharmacy shops will be able to easily maintain the records of sales, purchases, inventory, customer records, invoices, employees, profit reports, and many other things that are currently maintained manually by using this system. If the shops use this application correctly, they should not be concerned about data loss because they will be able to easily maintain any type of data and quickly find out any necessary information. This application will save them time while increasing their sales, and making them money.

## 1.5 Report Layout

The layout of the report will include a summary of the entire chapter. All of the chapters are summarized below:

- Chapter 1:** Describes the introduction of ‘Pharmacy Management System’, motivation, objective, outcome and the design of the report.
- Chapter 2:** Describes the introduction, related works, and comparative analysis, scope of the problem and the challenges of the project.
- Chapter 3:** Describes the business process modeling, requirement collection and analysis, use case modeling and description, ER diagram and design requirements
- Chapter 4:** Describes the front-end design, back-end design, interaction design and user experience (ux) and implementation requirements.
- Chapter 5:** Describes the implementation of database, implementation of front-end design, testing implementation, the result and reports.
- Chapter 6:** Describes the impact on society, impact on environment and sustainability plan.
- Chapter 7:** Describes the discussion and conclusion and scope for further developments.

## **CHAPTER 2**

### **BACKGROUND STUDIES**

#### **2.1 Introduction**

The use of computers in our daily lives has grown rapidly in recent years. We have seen that computer use has become mandatory in every industry, including pharmacies. In the current system, almost all pharmacies do not use computerized systems, but instead use computers to bill users only for the medicines they have purchased. And use manual searching of medicines on shelves because the system is manual and there is no alarm for finished or sold medicines. However, this analog method is too time consuming, and many errors can occur during the work. It's also difficult to edit, delete, or search for any record. That is why we intended to create a computer-based application that could manage all of a pharmacy's records. We have created a web-based application called 'Pharmacy Management System,' which will manage all inventory records and transactions as well as sales management. Essentially, the Pharmacy Management System will assist us in keeping track of sales, purchases, inventory, customer records, invoices, employees, profit reports, and a variety of other things. We can easily check whether a medicine is in stock or out of stock using this system; it also notifies management about stock and expired items in stock, allowing management to take appropriate action. Using this system, managers can easily monitor the details of customers and their paid or due information. So a pharmacy management system is a complete solution for a pharmacy to manage all records and inventory.

#### **2.2 Related Works**

The use of technology in pharmacies is growing by the day. There has been a lot of work done internationally, but there aren't many of them available in our country. Some of them are provided as examples.

## 2.2.1 RetailPharma

Figure 2.1 is a screenshot of the Mediasoft website. Mediasoft Data Systems Limited in Bangladesh created RetailPharma POS software. Their Pharmacy POS systems include inventory management, a barcode system, payment and purchase processing, damage and loss adjustment, reports, product exchange and discounts, and much more [1].



Figure 2.1: RetailPharma

## 2.2.2 ePharma360

Figure 2.2 is a screenshot of Next Page Technology's website. Next Page Technology Limited in Bangladesh created ePharma360, a pharmacy management software. Their software can handle all pharmacy shop management tasks, including ensuring efficient operation, a modern billing system, user and data analysis, stock management system, store management, purchase history, income history, POS, and so on[2].



Figure 2.2: ePharma360

### Features [1] [2]

- Point Of Sales (POS)
- Inventory Management
- Product Details
- Track available stock & expired product
- Accounts Management
- Invoice
- Supplier & Client Management
- Buy & Sales reports.
- Barcode Generator
- Employee Management



## **2.3 Comparative Analysis**

We discovered a lot of information about the 'Pharmacy Management System' while working on this project. In our 'Related Work' section, we discussed two related works. One is 'RetailPharma,' and the other is 'ePharma360,' and both are OS-based software such as 'Windows' and 'Android.' In this case, we must first purchase the software and then install it on our preferred OS-based device. The main issue with these two pieces of software is that when a consumer installs them on a device, he or she must use the software from that device. This means that this software cannot be used dynamically. However, our developed application is a web-based application. As a result, users can access the application at any time using a browser on an internet-enabled device. As a result, unlike the other applications, ours can be accessed dynamically.

## **2.4 Scope of the problems**

We ran into a number of problems while working on the "Pharmacy Management System" project. It was not easy for us to create a fully functional pharmaceutical management system. First, we gathered information from previous research on a relevant topic conducted in Bangladesh. Then we started working on our system. To create our system, we used a variety of programming languages, including PHP and JavaScript. We used markup languages such as HTML, CSS, and Bootstrap to provide a physical overview of the system. To bring the system online, JQuery and Ajax were used. In order to build this system, we conducted research and attempted to properly implement this language. We tried exception handling so that our system would run properly and not crash if we entered incorrect data. Then we attempted to gather information from pharmacies, but they were initially unwilling to cooperate. We had to manage them in order to get the data we needed to build a fully functional system.

## 2.5 Challenges

We encountered some difficulties while developing the project, and the majority of them were resolved by our efforts. Some of the issues we have encountered are listed below:

- Obtaining information from pharmacies.
- Project planning and execution
- Handling large amounts of data was a significant challenge for us.
- Handling the authentication and authorization was a difficult task for us. We created separate parts for each position so that they could not access each other's parts. This type of thing was extremely difficult for us to implement.
- It was difficult to keep the login information and login token up to date.
- It was a huge challenge to design the UI and make it pixel perfect so that it could fit on any size of the screen.
- Connecting the UI, backend, and database was difficult because we needed to get data from the database and fetched it into our front end. In addition, we must transfer data from the frontend to the server and then to the database. We must ensure that these data feeds are functioning properly.

# CHAPTER 3

## REQUIREMENT SPECIFICATION

### 3.1 Business Process Modeling

A business procedure model is a flowchart or model that is used to create a task or system. A version of a business method is a mapping concept that defines the actual flow of facts. Using this method, we can create a structural view of a system or device. Before starting a job or machine, all developers must create a business method model. Figure 3.1 illustrates the business technique model for this system.

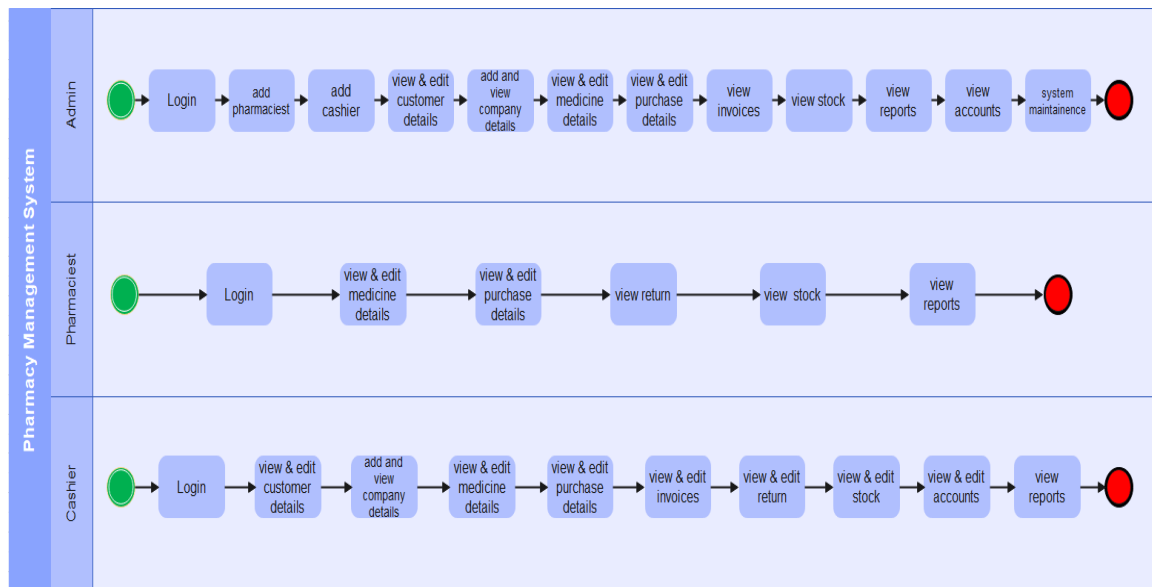


Figure 3.1: Illustrates the business technique model for this system.

### **3.2 Requirement Collection and Analysis**

A project's requirements collection is critical. We should gather proper information and data before developing a system in order to make the system more efficient. Our application is a web-based pharmacy management system. We didn't have much data to start our project with. We worked extremely hard to gather the information needed to build our system. It was challenging to develop a project plan that included all of the necessary features. First and foremost, we examined the structure to determine the number of items required to construct our system. We encountered numerous difficulties when dealing with a large amount of data in our database. Maintaining data and ensuring data security is a difficult task. Authenticating and authorizing each component is a difficult process. These requirements are necessary because we intend to build a fluent, efficient, and user-friendly system for pharmacies so that they do not encounter any issues when switching from an analog system to our modern pharmacy management system. Our structure's initial components are the Plan of Business Demonstration, Use Case Display, Data Model, and Implementation Prerequisites.

### 3.3 Use Case Modeling and Description

A UML diagram, also known as a Unified Modeling Language diagram, is a graphical representation of how a system works or how a user interacts with the system. Typically, the UML illustrates how the user's objectives, interactions with the system, and system behavior are required to meet these objectives. The primary goal of the UML diagram is to illustrate the functionality of a system and how each process performs its task in accordance with the roles assigned to it.

Our project includes three UML diagrams. One for administrative purposes, one for the pharmacist, and one for the cashier.

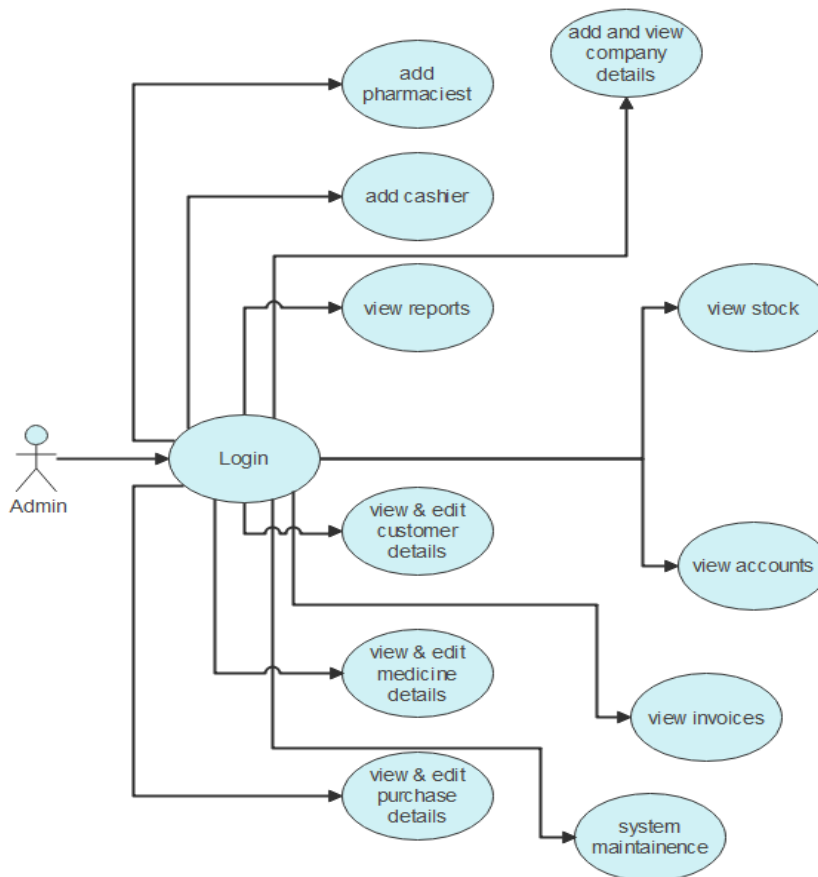


Figure 3.2: Admin Use case diagram

Figure 3.1 illustrate the admin use case diagram. Admin can access the system using the specific user id and password. Admin can delegate roles to pharmacists and cashiers. Admin has complete access to the system, allowing him to control or monitor it as needed. He can assign roles to people who need them for their jobs.

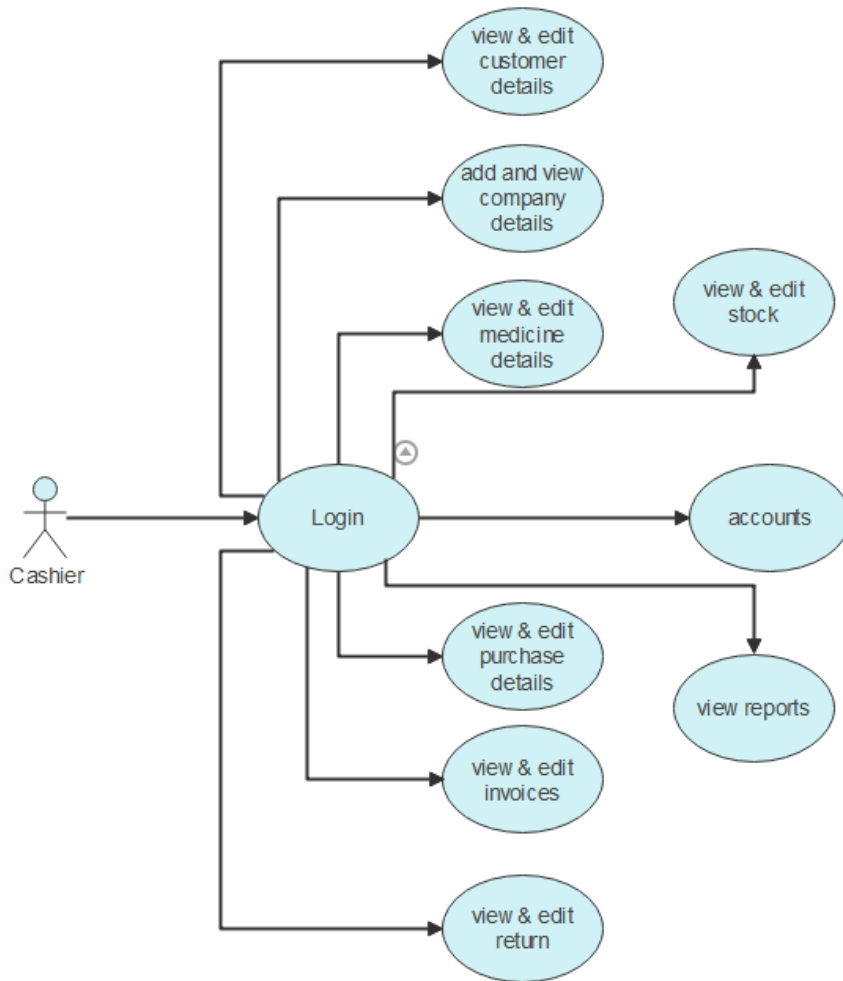


Figure 3.3: Cashier Use case diagram

Figure 3.2 illustrate the cashier use case diagram. The cashier will log in using the user id and password provided by the administrator. He or she is capable of managing or operating the part that has been assigned to him or her. He or she did not have full access to the system. Because admin will clearly state that assigned roles can only see their part.

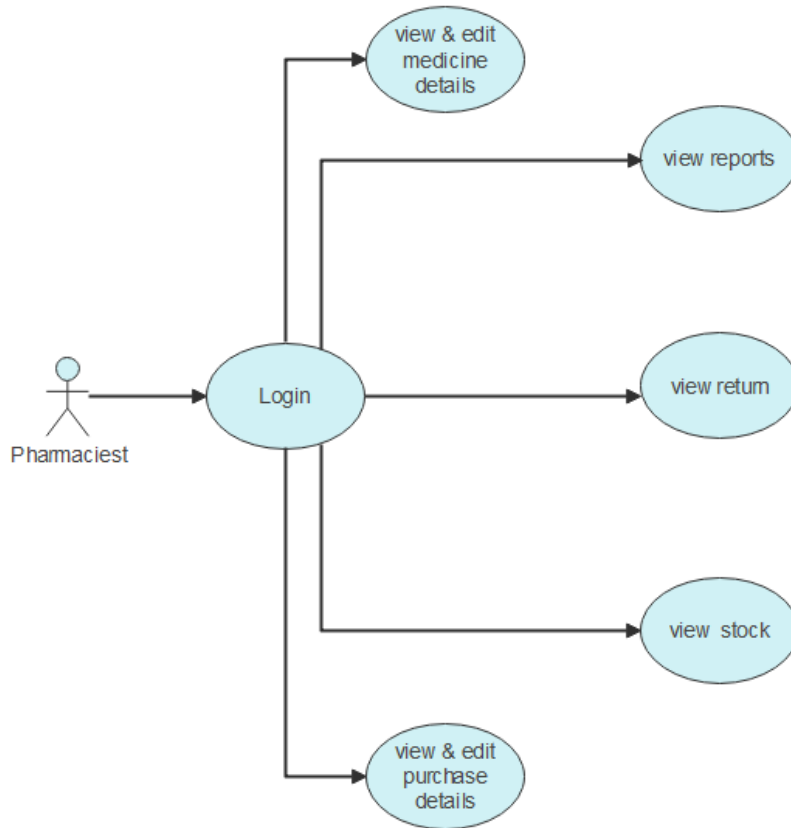


Figure 3.4: Pharmacist Use case diagram

Figure 3.3 illustrate the pharmacist use case diagram. The pharmacist will log in using the user id and password provided by the administrator. He or she is capable of managing or operating the part that has been assigned to him or her. He or she did not have full access to the system.

### 3.4 ER Diagram

The Entity Relationship Diagram (ER diagram) depicts the graphical relationship between some system entities. Each admin, pharmacist, and cashier in these graphics have a unique id, name, phone number, or email address. Admin has the ability to add or remove pharmacists and cashiers, as well as view or edit medicine details, company details, sales and invoices, stock, reports, and many other things. A pharmacist can manage purchase reports, medications, and inventory. The cashier is in charge of purchasing reports, sales reports, and invoices. Figure 3.4 illustrate the ER diagram.

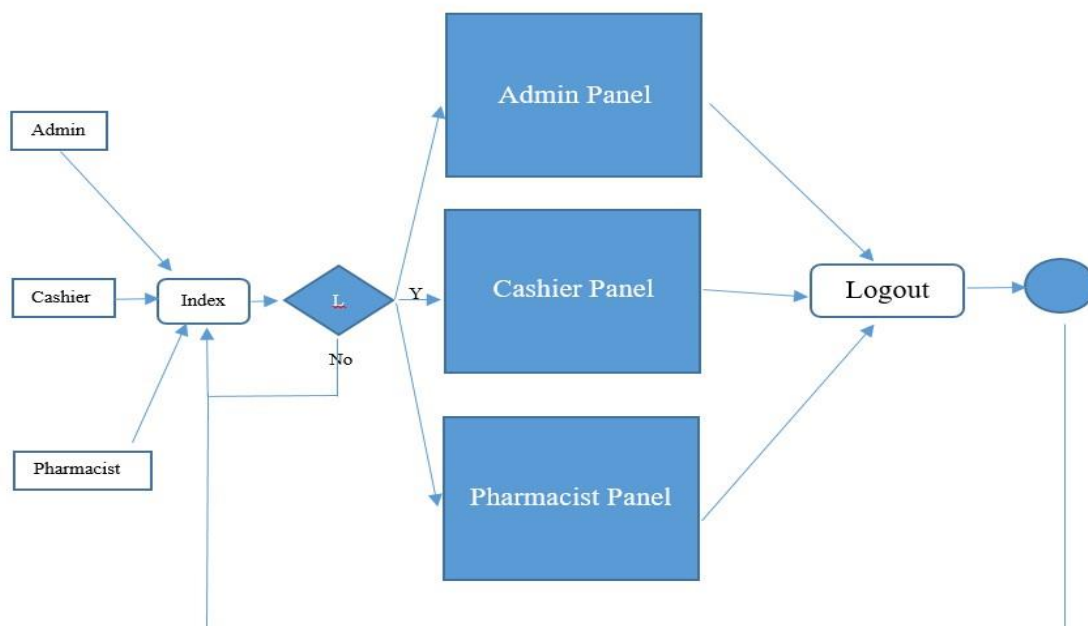


Figure 3.5: ER diagram

### 3.5 Design Requirements

We attempted to create a fluid, efficient, and user-friendly web-based application that anyone could easily use. We created a business process model, use case diagram, er diagram, and a consistent information model to better understand our system. We used some programming languages and tools for our application. For frontend design, we used HTML, CSS, javascript, jQuery, and Bootstrap. For backend design, we used AJAX and PHP. For our database, we used MySQL. We attempted to make our system error-free so that users could use it without any difficulty.



# CHAPTER 4

## DESIGN SPECIFICATION

### 4.1 Front-end Design

We attempted to make our UI clean and fluid so that users could easily use the system. To provide the overall structure of our system, we used HTML, CSS, Javascript, JQuery, and Bootstrap. HTML, CSS and Bootstrap are primarily used to create the system's structure, textual styles, and so on. To make our system interactive, we used javascript, jquery as well as a drop-down menu, buttons, and so on. We have created a popup window on some pages so that users can do the necessary work on the same page without having to navigate to another page. It will save them time because loading a new page will take longer. We have ensured that our system does not crush or display any errors while in operation. That is why we attempted to make our system as lightweight as possible. Figure 4.1 is a screenshots of dashboard.

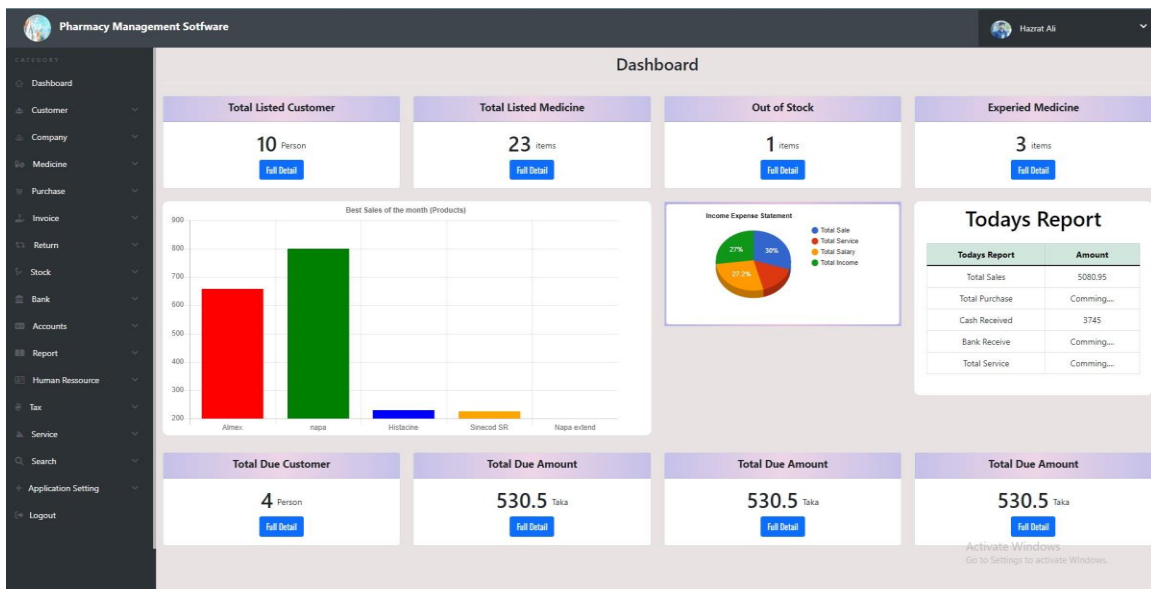


Figure 4.1: Small screenshots of dashboard

## 4.2 Back-end Design

The back end is the most important component of the system. The front end is the client side that the client sees or accesses. The server side refers to the back end of a website. We used the PHP framework as well as AJAX. PHP Language is a library that is used to provide a basic foundation for PHP web application development. The goal of implementing AJAX is to make our system site fast and dynamic. AJAX allows a webpage to be updated behind the scenes by exchanging small amounts of data with the server. So that a portion of the web page could be updated without having to reload the entire page. The main benefit of using AJAX is that the applications built with it are browser and platform-independent. Our database server is powered by MySQL. We chose MySQL because it is fast, dependable, and simple to use. Figure 4.2 is a screenshots of database (MySQL).

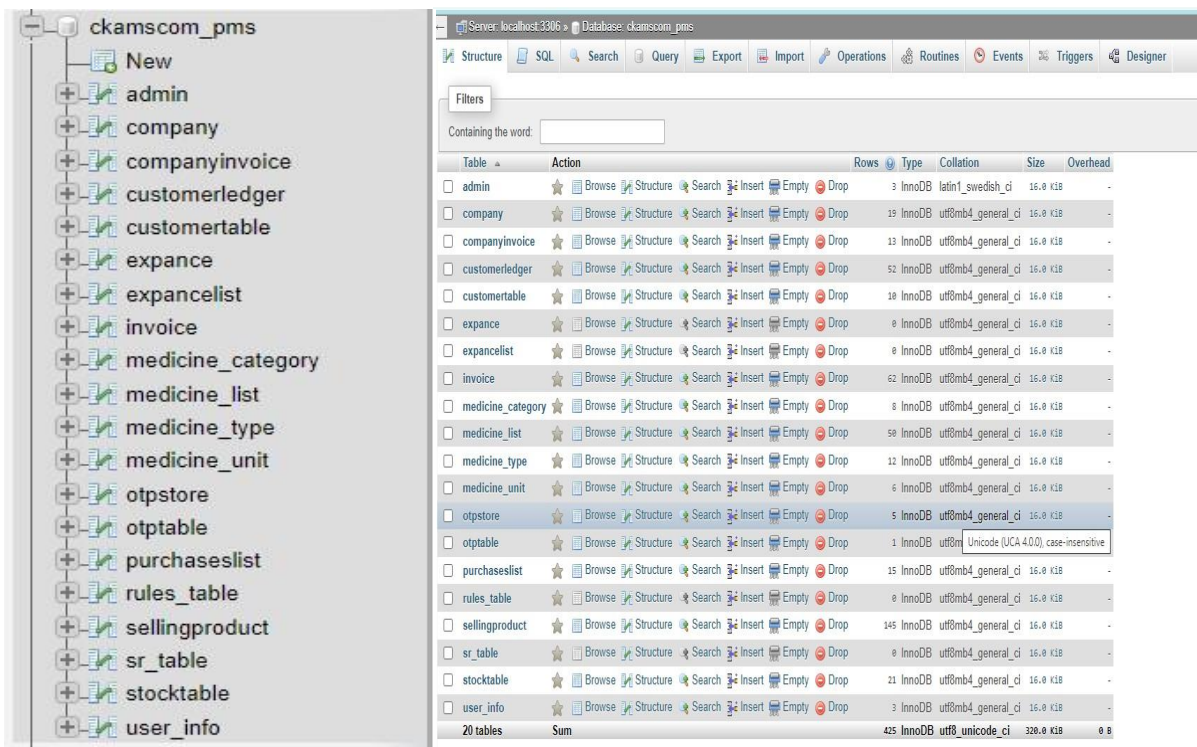


Figure 4.2: Small screenshots of database (MySQL)

### 4.3 Interaction Design and User Experience (UX)

During the development of our front-end design, we ensured a fluid and user-friendly user interface so that our users could easily operate our system. We attempted to make the system more responsive so that it could be used on any type of device.

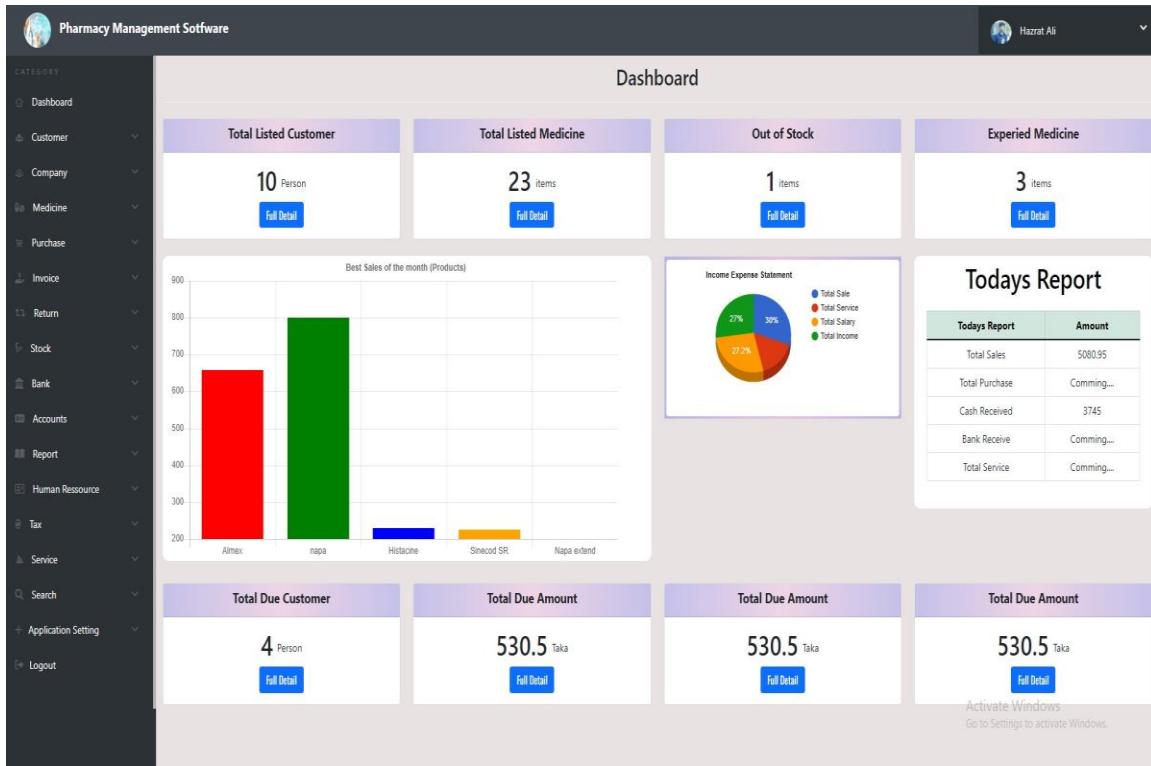


Figure 4.3: Design for Pc Browser

Figure 4.3 is a screenshots of design for Pc browser. This is a PC browser view for the Google Chrome browser. When we switch to another device, the viewpoint will be reduced and the sections will be automatically divided into sections to provide a better viewing experience.



Figure 4.4: Design for Mobile Browser

Figure 4.4 is a screenshots of design for mobile browser. This is the Realme GT Neo 2 mobile browser view. When the viewpoint is reduced and the sections are automatically divided into parts, the viewing experience improves.

## **4.4 Implementation Requirements**

For the front-end design, we are using HTML, CSS, Javascript, JQuery, and Bootstrap. As well as PHP and AJAX for back-end implementation. The database is powered by MySQL. We are using vs code as our code editor to implement the codes. We're also using the Git Hub repository to share code so that both of us can work on it. We also use the Git Bash application to push, pull, and check the status of our code from our shared repository. MySQL is being implemented using the XAMPP server. The client and server sides used different port numbers. We have to run the backend server to get the data from the database and on the other port, we have to run the front-end part so that we can fetch the data from the database through the server side. In this case, we are actually getting data from the front-end and sending it to the back-end and getting the data from the database by the server side, and again fetching data to the frontend. By this method, we are creating the communication portal between the server side to the client side and the client side to the server side. We must run the back-end server to retrieve data from the database, and we must run the front-end part on the other port to retrieve data from the database via the server side. In this case, we are retrieving data from the front-end and sending it to the back-end, as well as retrieving data from the database on the server side and returning it to the front end. By using this method, we can create a communication portal from the server to the client and from the client to the server.

# CHAPTER 5

## IMPLEMENTATION AND TESTING

### 5.1 Implementation of Database

A database is an essential component of any web-based application. One of the most important aspects of our project was the design of our database. We need to store a lot of data for our project, such as company information, medicine information, payment details, user information, customer details, and so on. Aside from storing such a large amount of data, we must also ensure its security. However, we wanted to be able to easily manage our data, so we chose MySQL as our database. Below are some screenshots from our database.

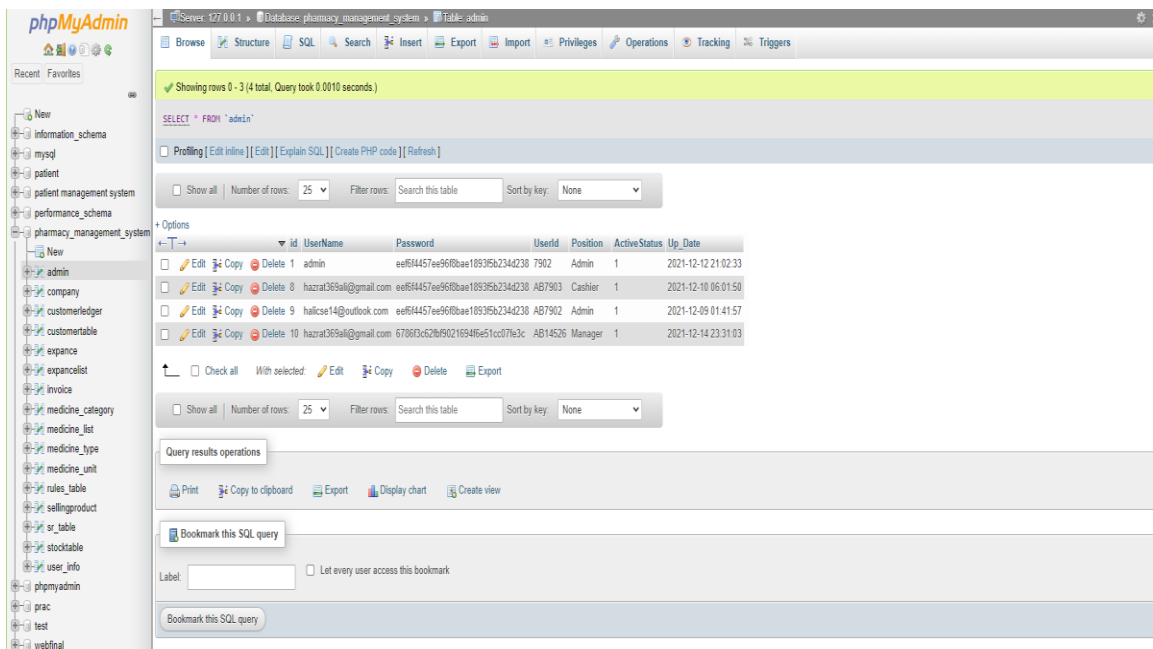


Figure 5.1: Database implementation of Admin

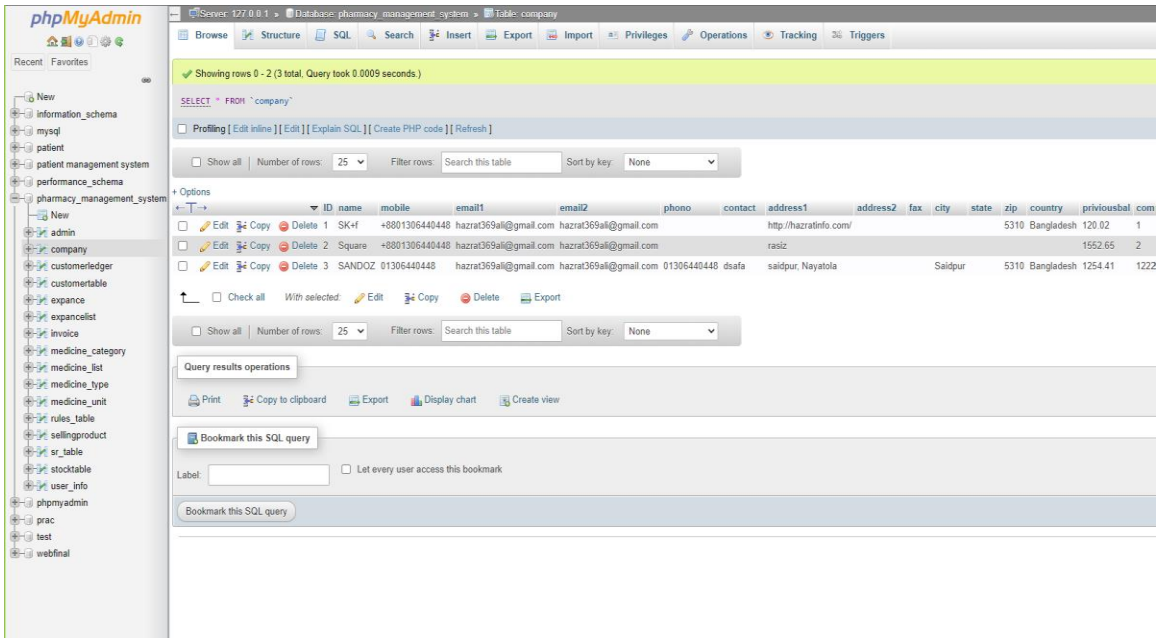


Figure 5.2: Database implementation of Company

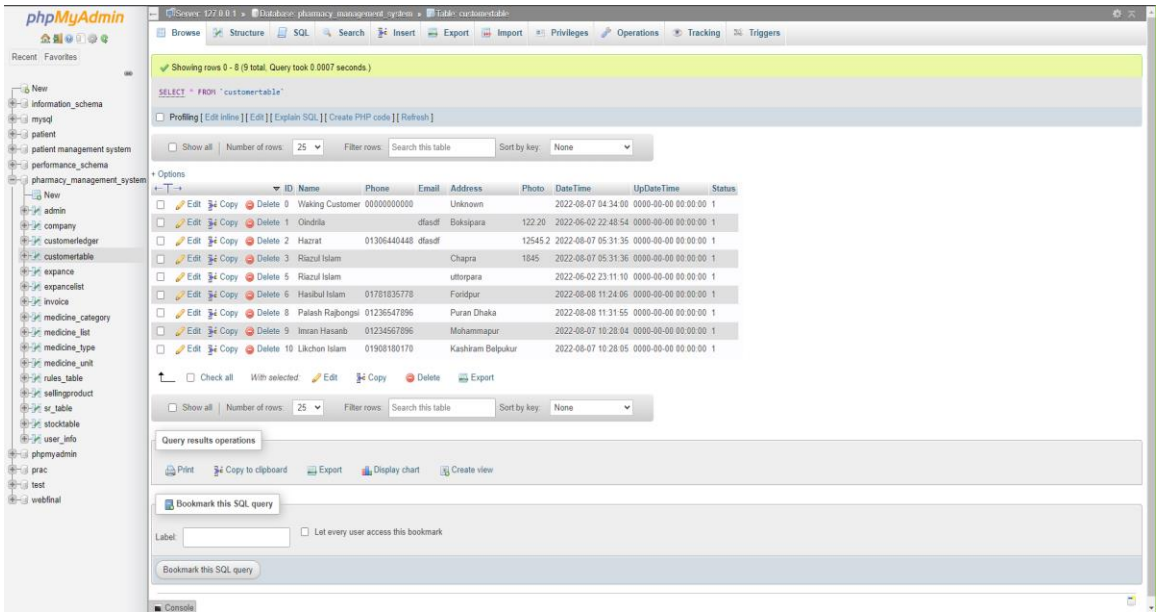


Figure 5.3: Database implementation of Customer



ID	InvoiceId	CustomerID	SellerID	NetPayment	PreDue	Total_with_due	Tax	discount	PaidAmount	DueAmount	Note	Up_date	Status
156	273325	7902	33	0	0	0	0	0	33	0		0000-00-00	0
157	247788	7902	596.6	0	0	0	31.4	1010.6	0	0		0000-00-00	0
158	434140	7902	20	0	0	0	0	0	0	0		0000-00-00	0
159	51889	7902	429.85	0	0	0	22.15	2790	720.85	0		0000-00-00	0
160	312564	7902	326.6	0	0	0	28.4	500	240.6	0		0000-00-00	0
161	374846	7902	492	0	0	0	0	0	0	0		0000-00-00	0
162	162914	7902	38	0	0	0	0	0	38	0		0000-00-00	0
163	422723	7902	85	0	0	0	0	0	85	0		0000-00-00	0
164	3	7902	2787.3	0	0	0	146.7	4632.3	0	0		0000-00-00	0
165	3	7902	992.75	0	0	0	52.25	2837.75	0	0		0000-00-00	0
166	1	7902	1444	0	0	0	76	1566.2	0	0		0000-00-00	0
167	3	7902	38	0	0	0	0	0	0	0		0000-00-00	0
168	2	7902	39	0	0	0	0	39	0	0		0000-00-00	0
169	2	7902	180.32	0	0	0	15.68	12725.5	0	0		0000-00-00	0
170	2	7902	798	0	0	0	42	5000	8343.2	0		0000-00-00	0
171	2	7902	1615	12545.2	0	0	85	13000	1160.2	0		0000-00-00	0
172	2	7902	1687.2	12546.2	14232.4	0	88.8	10000	4232.4	0		0000-00-00	0
173	1	7902	855	122.2	977.2	0	45	1000	0	0		0000-00-00	0
174	0	7902	20	0	20	0	0	20	0	0		0000-00-00	0
175	0	7902	650	0	650	0	0	650	0	0		0000-00-00	0
176	0	7902	130	0	130	0	0	130	0	0		0000-00-00	0
177	0	7902	146	0	146	0	0	146	0	0		0000-00-00	0
178	0	7902	220	0	220	0	0	220	0	0		0000-00-00	0
179	0	7902	8	0	8	0	0	8	0	0		0000-00-00	0
180	3	7902	358.15	1845	2203.15	0	18.86	2203.15	0	0		0000-00-00	0

Figure 5.4: Database implementation of Invoice

ID	medicine_name	Item_code	generic_name	unit	box_size	strength	shelf	medicine_details	category	medicine_type	manufacturer	company_price	selling_price	image	lgts_bar_code	data_time	last
13	Napa extend	MAD0125	aaaaa	kl	11	100	20		11	11		120.25	125.005	0		2021-12-04	05.9
14	Histacine	7902	nas	mg	11	500	5	half	11	11	SK-f	125.254	125.005	0		2021-12-04	19.3
15	napa	7903	asfaadf	mg	11	300	15		11	11	SK-f	125.254	125.005	0		2021-12-05	10.2
17	Sinecod SR	MB1230	Butomirate citra INN	mg	10	50	7		Tablet	Heart disease	Square	125.51	5	0		2021-12-11	04.1
18	Fexo	FX152	NIA	mg	50	100	9		Tablet	Suspension	Square	5.8	5	0		2021-12-11	07.3
19	Tryptin	S12541		mg	100	10	13		Tablet	Heart disease	Square	2.7	3	0		2021-12-11	15.5
20	Almex	MB1231	Paracetamol	mg	10	400	8		Capsul	Suspension	Novo	33.48	50.13	0		2021-12-11	15.5
21	asaaaaa	.424										0	0	0		0000-00-00	00.9
22	bbbbbb	456								ointment		0	0	0		0000-00-00	00.9
23	cccc	867								Capsul		0	0	0		0000-00-00	00.9
24	ddddd	6585								synop		0	0	0		0000-00-00	00.9
25	ewwwwwfdfs	54254								synop		0	0	0		0000-00-00	00.9
26	sdfsdafsdaf	45324								Capsul		0	0	0		0000-00-00	00.9
27	tregrtgr	354								liquid		0	0	0		0000-00-00	00.9
28	ersdgrtr	445								cream		0	0	0		0000-00-00	00.9
29	sadflawerdsfa	1452								cream		0	0	0		0000-00-00	00.9
30	sadflawerdsfa	17452								synop		0	0	0		0000-00-00	00.9
31	tnesrdfs	25741								Capsul		0	0	0		0000-00-00	00.9
32	salwerfs	2751								Tablet		0	0	0		0000-00-00	00.9
33	sdsjgalk	57874								synop		0	0	0		0000-00-00	00.9
34	asflwerdsf	275								synop		0	0	0		0000-00-00	00.9
35	reclrdfs	7574								cream		0	0	0		0000-00-00	00.9
36	sdfakdsaf	24141								cream		0	0	0		0000-00-00	00.9

Figure 5.5: Database implementation of Medicine List



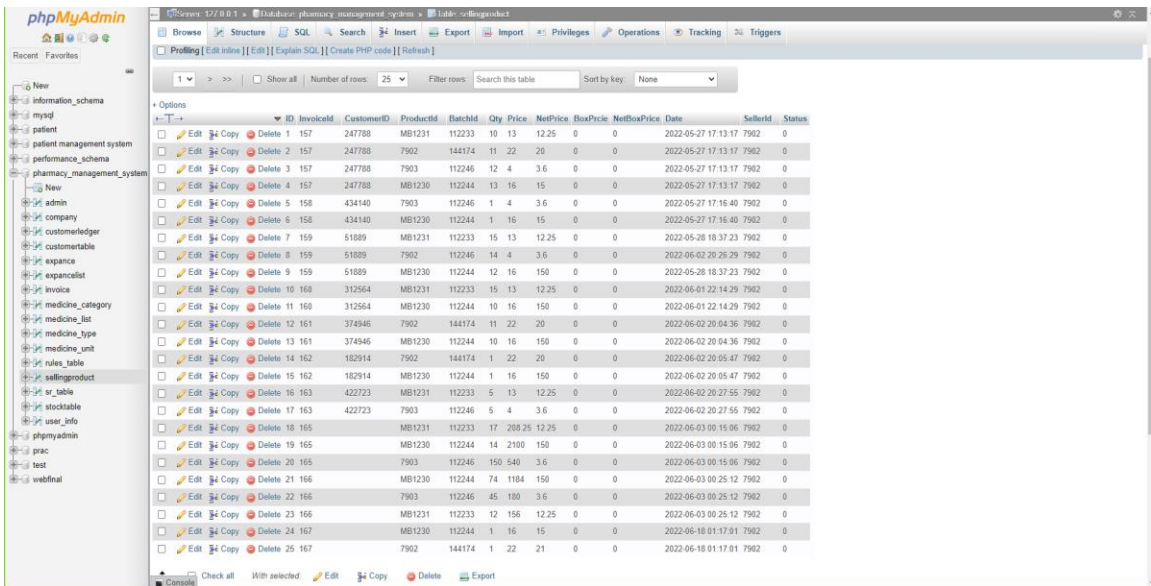


Figure 5.6: Database implementation of Selling Product

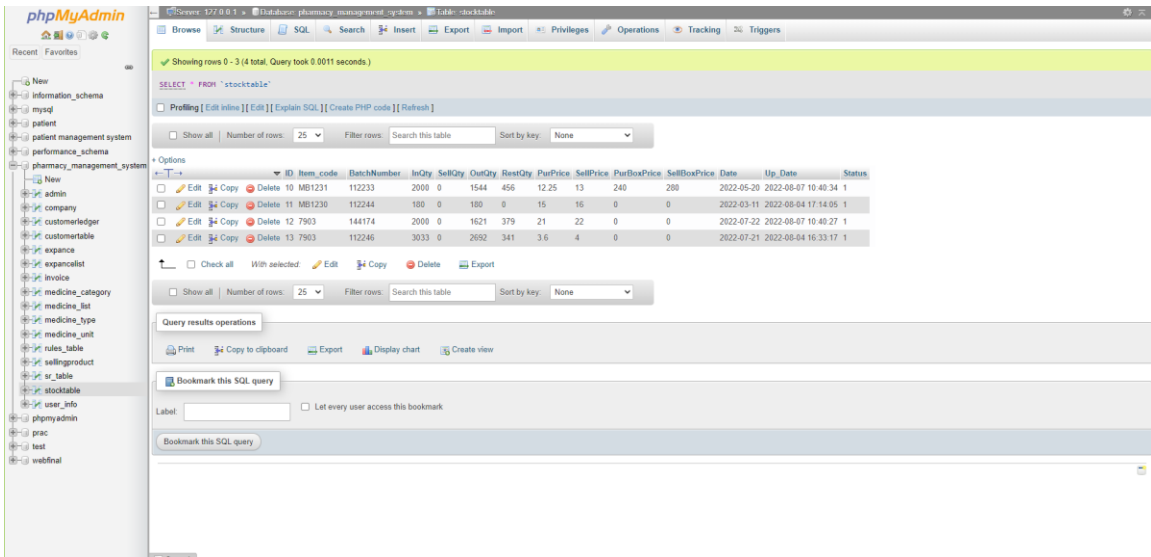


Figure 5.7: Database implementation of Stock Table

## 5.2 Implementation of Front-end Design

A difficult aspect was creating a user-friendly and efficient system. However, we have ensured that our system can be maintained by anyone with minimal knowledge. We worked hard to make our design as simple as possible. Below are some visual screenshots of some main parts of our system site.



Figure 5.8: Log-in Page

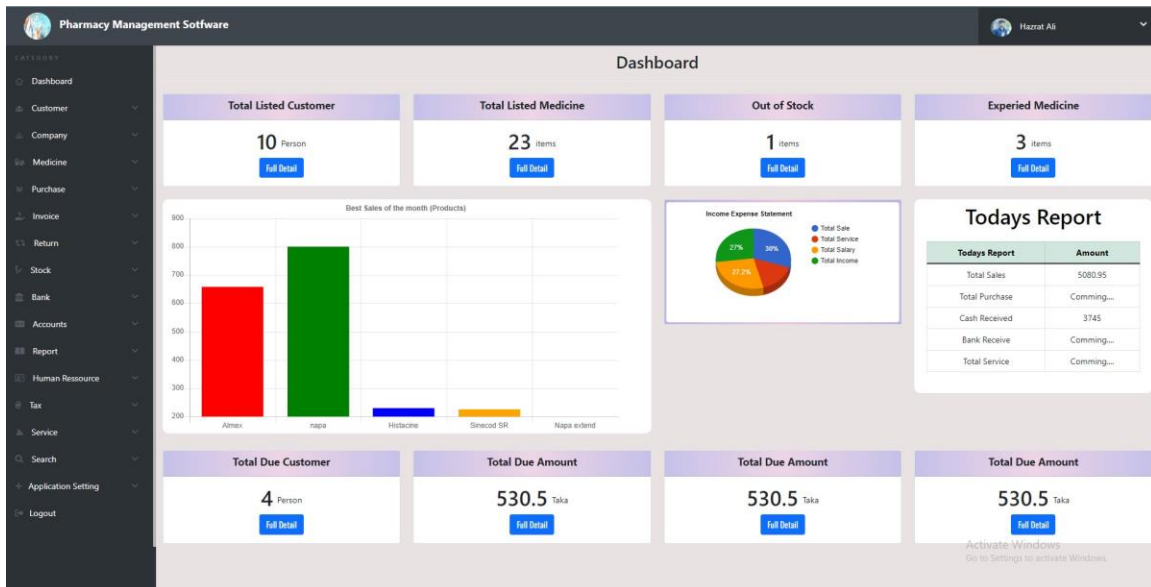


Figure 5.9: Dashboard

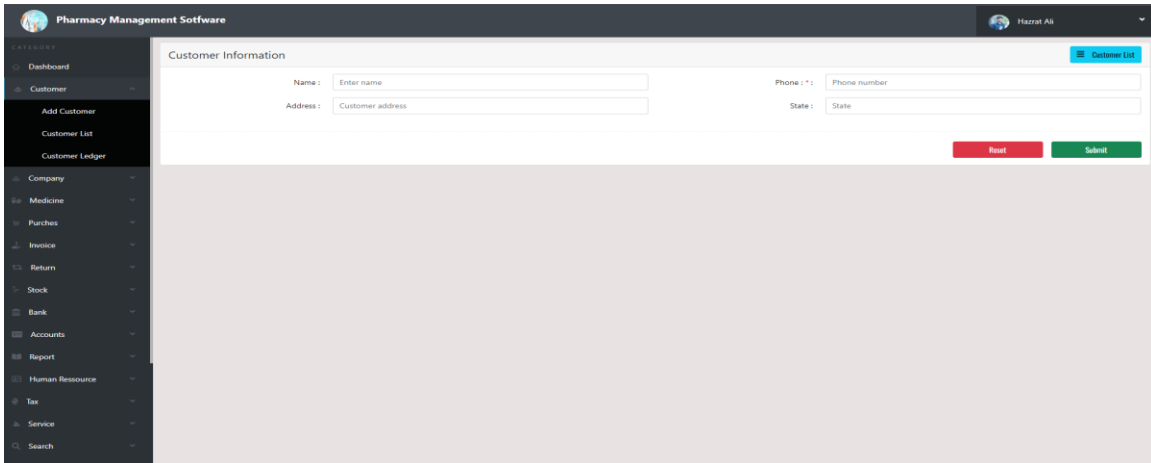


Figure 5.10: Add Customer

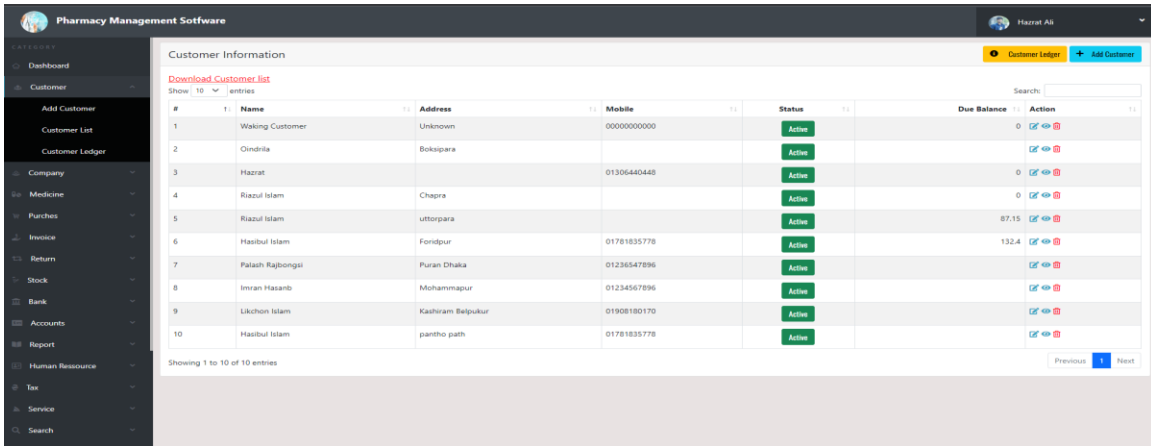


Figure 5.11: Customer List

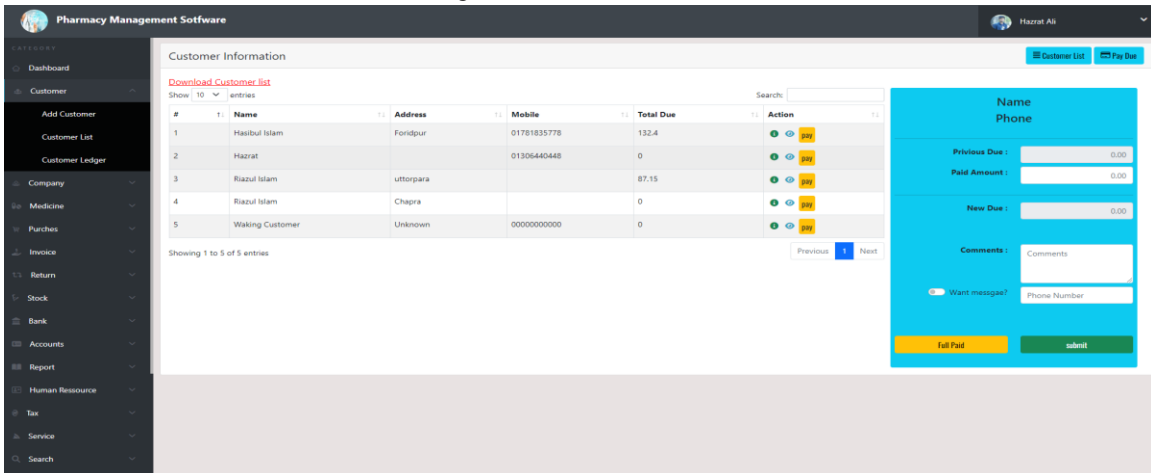


Figure 5.12: Customer Ledger

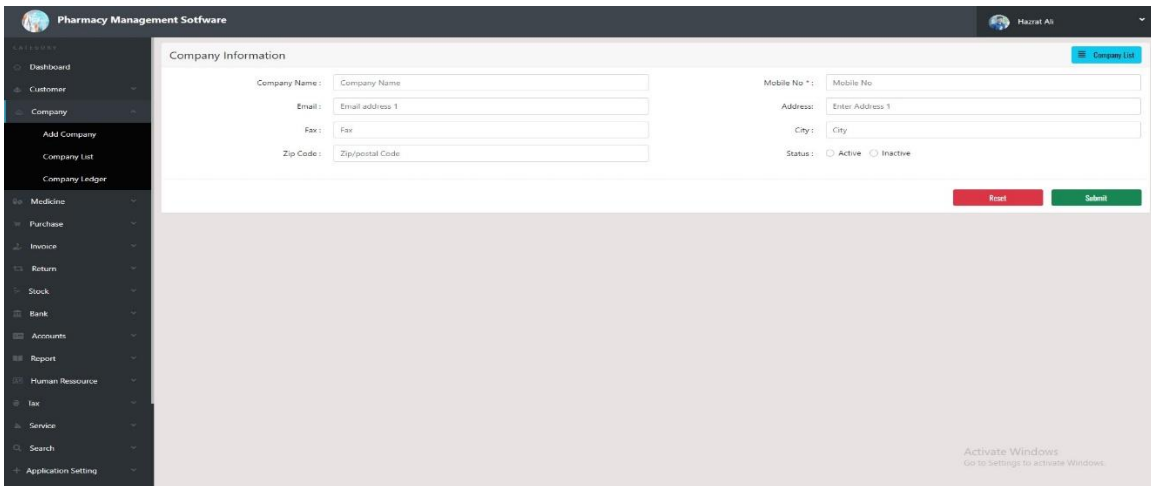


Figure 5.13: Add Company

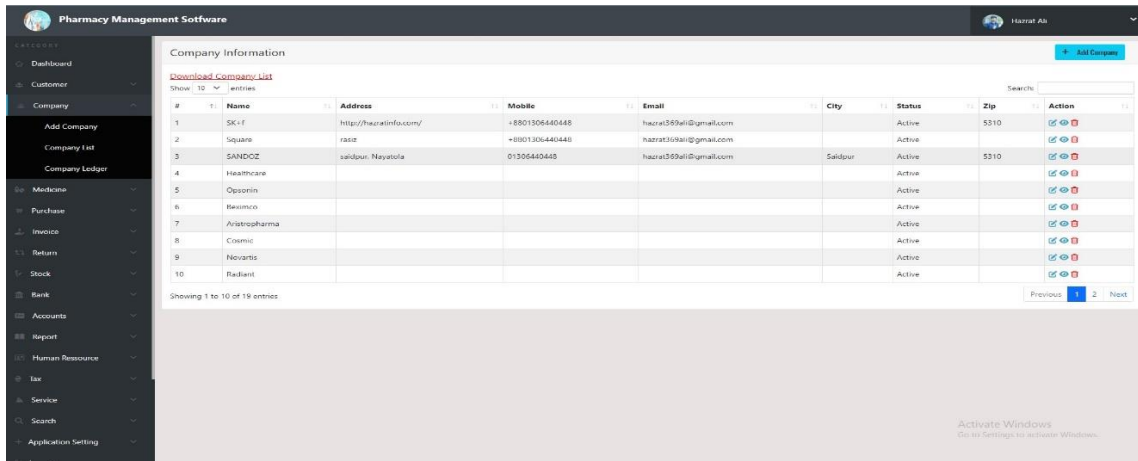


Figure 5.14: Company List

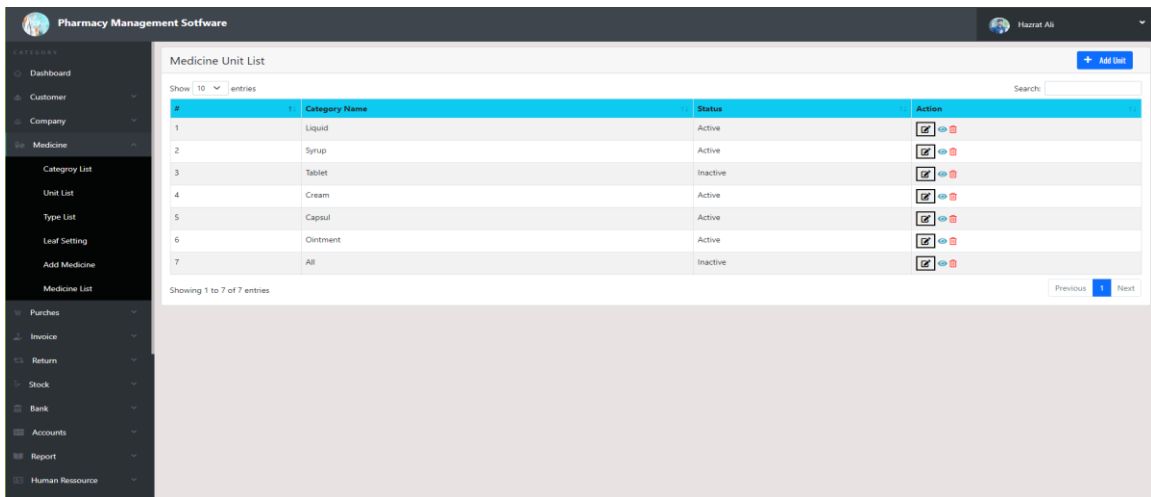


Figure 5.15: Category List

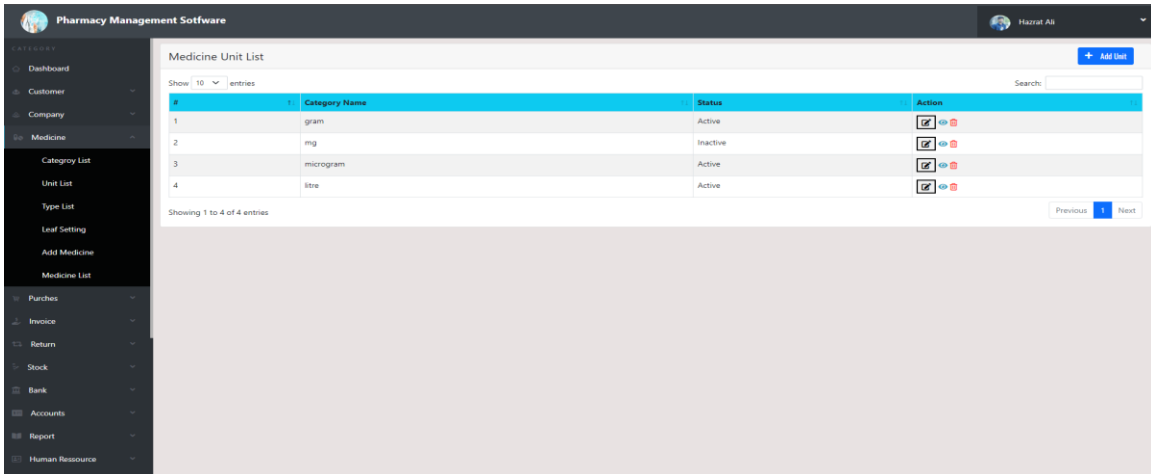


Figure 5.16: Medicine Unit List

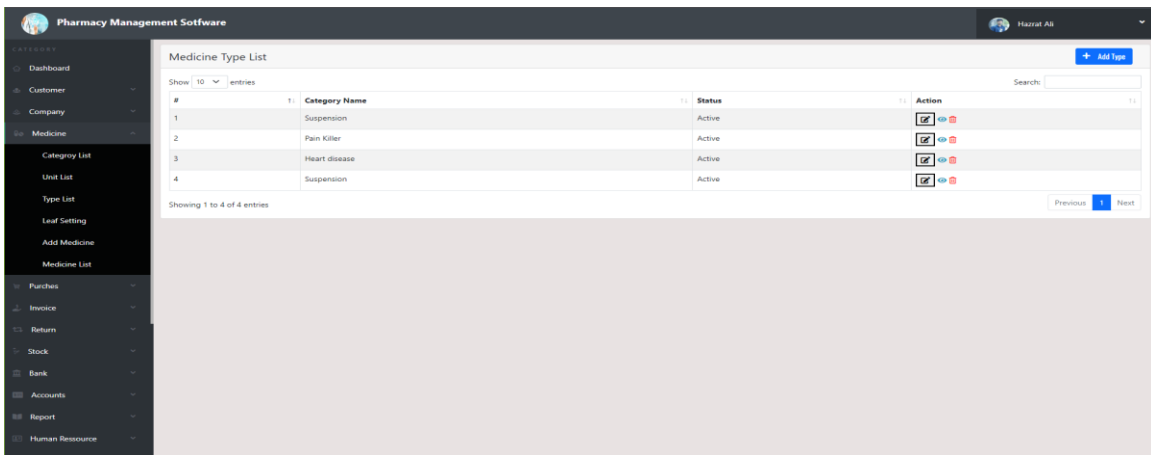


Figure 5.17: Medicine Type List

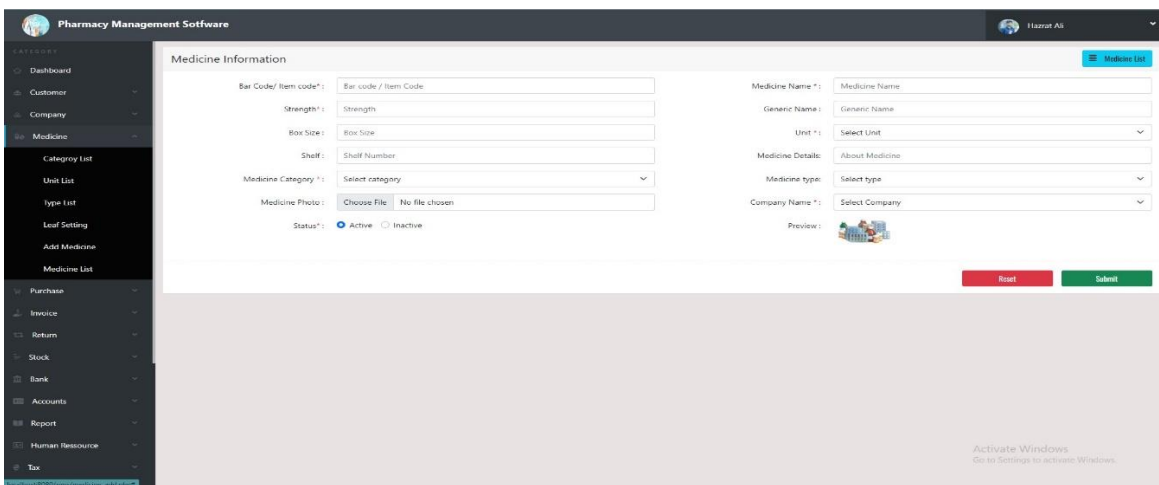


Figure 5.18: Add Medicine Information

Pharmacy Management Software

MEDICINE INFORMATION

Download Medicine List

Show 10 entries

#	Medicine Name	Generic Name	Category	Shelf	Price	Company Price	Strength	Company	Status	action
1	Napa extend	aaaaa	11	20	125.005	120.25	100kl	11	Active	<a href="#">edit</a> <a href="#">delete</a>
2	Histacine	nas	11	5	125.005	125.254	500mg	SK+f	Active	<a href="#">edit</a> <a href="#">delete</a>
3	napa	astasof	11	15	125.005	125.254	300mg	SK+f	Active	<a href="#">edit</a> <a href="#">delete</a>
4	Sinecod SR	Butomirate citrate INN	Tablet	7	5	125.51	50mg	Square	Active	<a href="#">edit</a> <a href="#">delete</a>
5	Fexo	N/A	Tablet	9	5	5.8	100mg	Square	Active	<a href="#">edit</a> <a href="#">delete</a>
6	Tryptin		Tablet	13	3	2.7	10mg	Square	Active	<a href="#">edit</a> <a href="#">delete</a>
7	Almex	Paracetamol	Capsul	8	50.13	33.48	400mg	Novo	Active	<a href="#">edit</a> <a href="#">delete</a>
8	aaaaaaa		ointment	0	0	0			Active	<a href="#">edit</a> <a href="#">delete</a>
9	bbbbbb		ointment	0	0	0			Active	<a href="#">edit</a> <a href="#">delete</a>
10	cccc		Capsul	0	0	0			Active	<a href="#">edit</a> <a href="#">delete</a>

Showing 1 to 10 of 23 entries

Figure 5.19: Medicine List

Pharmacy Management Software

Sells table

Search Medicine

Bar Code / Item Code

Walking Customer

Medicine Name	action	Name	Batch	Ex-Date	Quantity	price	Total	Action
A-Forte Soft Capsule	<a href="#">add</a>	Fexo	854796	2022-12-15	17	7	119	<a href="#">edit</a> <a href="#">delete</a>
Alcet	<a href="#">add</a>	Histacine	7654	2022-08-31	9	22	198	<a href="#">edit</a> <a href="#">delete</a>
Almex	<a href="#">add</a>	napa	112246	2022-12-21	6	4.5	27	<a href="#">edit</a> <a href="#">delete</a>
Fexo	<a href="#">add</a>	Napa extend	9675	2022-12-08	4	10	40	<a href="#">edit</a> <a href="#">delete</a>
Histacine	<a href="#">add</a>	Sinecod SR	112244	2022-09-11	4	16	64	<a href="#">edit</a> <a href="#">delete</a>
napa	<a href="#">add</a>	Tryptin	70542	2022-11-16	5	9	45	<a href="#">edit</a> <a href="#">delete</a>

Invoice Discount %: 5

Total Discount: 24.65

Total Vat: 0.00

Grand Total: 468.350

Previous Due: 0.00

Total: 468.35

Payable Amount 468.35 Paid Amount 468.35 Thank you For Full Paid

Figure 5.20: Sells Table

Pharmacy Management Software

Customer Information

Download Invoice List

Show 10 entries

#	Name	Address	Amount	PreDue	Total	Discount	Paid	Due	Date	Action
1	Hasibul Islam	Fondpur	359	0	341.05	17.95	300	41.05	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>
2	Hasibul Islam	Fondpur	182	41.05	223.05	0	223.05	0	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>
3	Hasibul Islam	Fondpur	130	0	130	0	100	30	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>
4	Hasibul Islam	Fondpur	940	30	932.4	37.6	500	432.4	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>
5	Hasibul Islam	Fondpur	830	32.4	820.9	41.5	500	320.9	2022-08-09	<a href="#">edit</a> <a href="#">delete</a>
6	Hazrat		39	0	0	0	39	0	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>
7	Hazrat		196	0	15.68	12725.5	0	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>	
8	Hazrat		840	0	42	5000	8343.2	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>	
9	Hazrat		1700	12545.2	0	85	13000	1160.2	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>
10	Hazrat		1776	12545.2	14232.4	88.8	10000	4232.4	2022-08-07	<a href="#">edit</a> <a href="#">delete</a>

Showing 1 to 10 of 25 entries

Individual Invoice Details  
Hasibul Islam  
Fondpur - 189

SN	Name	Batch	Qty	Price	Total
1	napa	112246	50	3.6	200
1	Sinecod SR	112244	30	15	480
1	Almex	112233	20	12.25	260
Total					940
Discount					37.6
Previous Due					30
Grand Total					932.4
Paid Amount					500
Due Amount					432.4

Figure 5.21: Invoice List

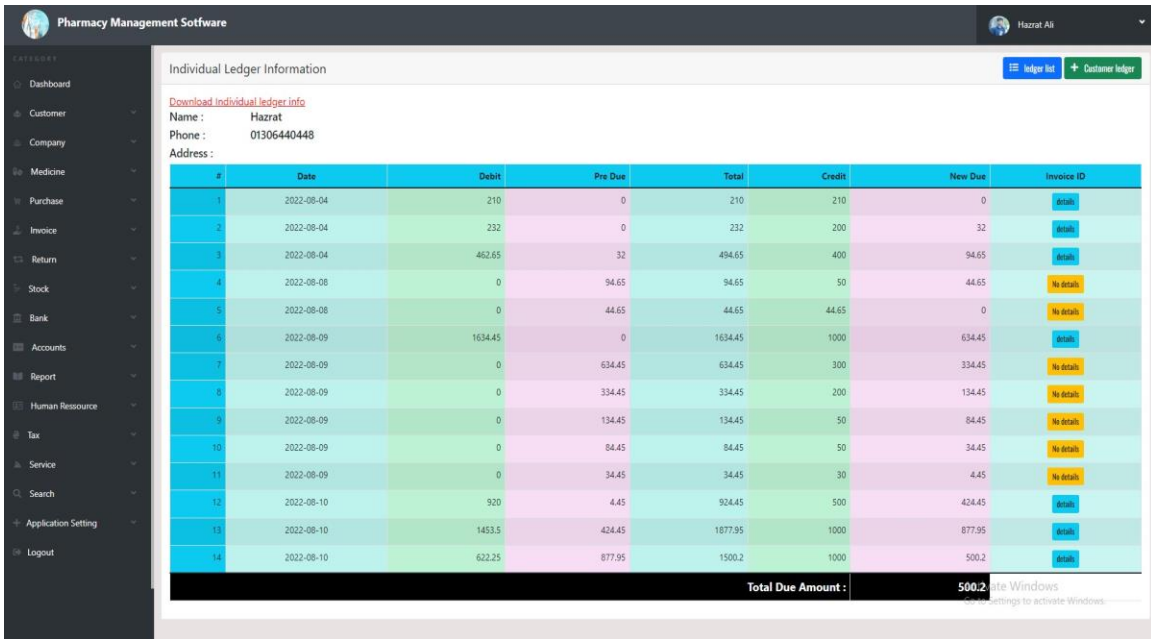


Figure 5.22: Individual Ledger details

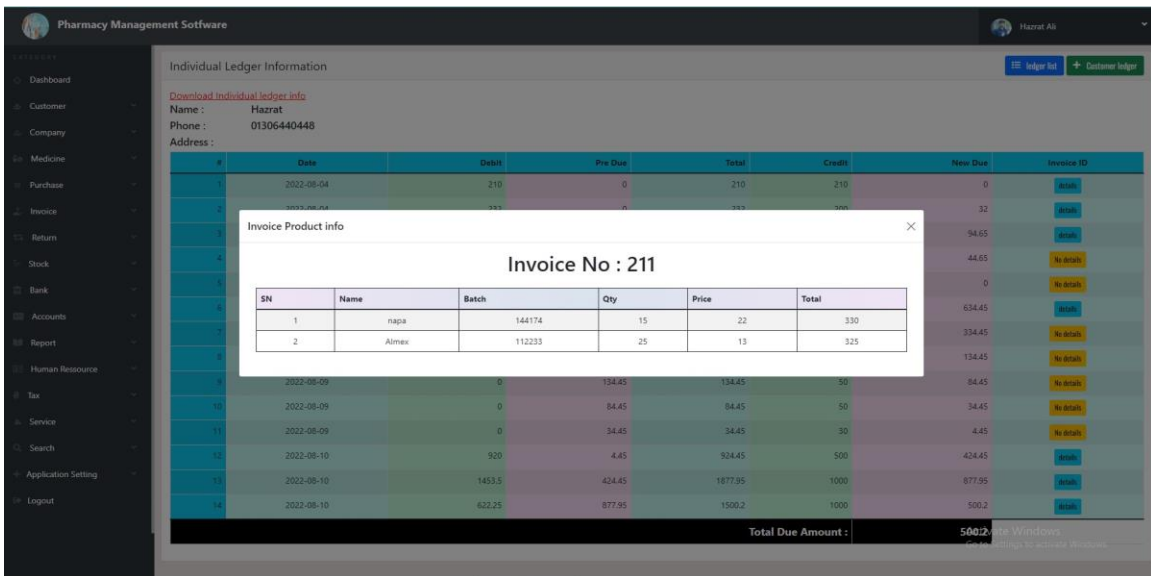


Figure 5.23: Individual Ledger details with invoice details

**Pharmacy Management Software** | Hazrat Ali

**User Information** + User List

User ID \* : 01306440448 Phone/Email \* : Phone number/email

Password \* : \*\*\*\* Confirm Password \* : Enter Password

Show Password

Position \* : Select Position Status :  Active  Inactive

Reset Submit

Activate Windows  
Go to Settings to activate Windows.

Figure 5.24: User Information

**Pharmacy Management Software** | Hazrat Ali

**Add User** + User List

Name : Enter name NID Number \* : Enter nid number

Father Name : Father Name User ID : User ID

Mother Name \* : Mother Name Phone 1 \* : Phone number 1

Email : Email address 1 Phone 2 \* : Phone number 2

Photo \* : Choose File No file chosen Address :

Status :  Active  Inactive

Reset Submit

Activate Windows  
Go to Settings to activate Windows.

Figure 5.25: Add User

**Pharmacy Management Software** | Hazrat Ali

**System User List** + Add User

[Download Company List](#)

Show 10 entries

#	Name	UserID	Phone 1	Phone 2	User Role	Status	Photo	Action
1	Hazrat Ali	AB7902	12121221	44454545	Updating	Active		
2	Omar Faruk	AB7903	12121221	44454545	Updating	Clear		
3	Hazrat Ali	7902	+8801306440448		Updating	Active		

Showing 1 to 3 of 3 entries Previous **1** Next

Activate Windows  
Go to Settings to activate Windows.

Figure 5.26: User List



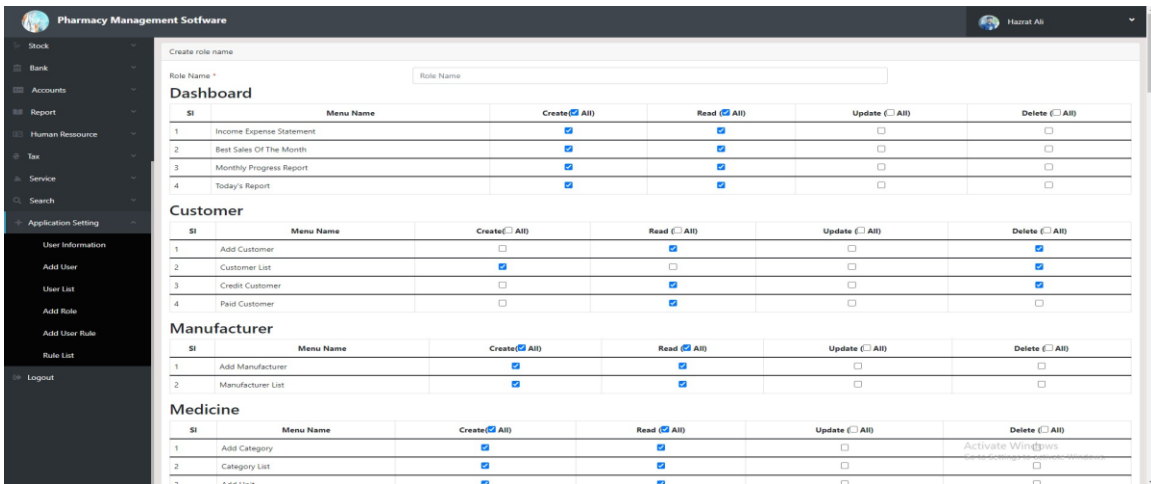


Figure 5.27: Add Role

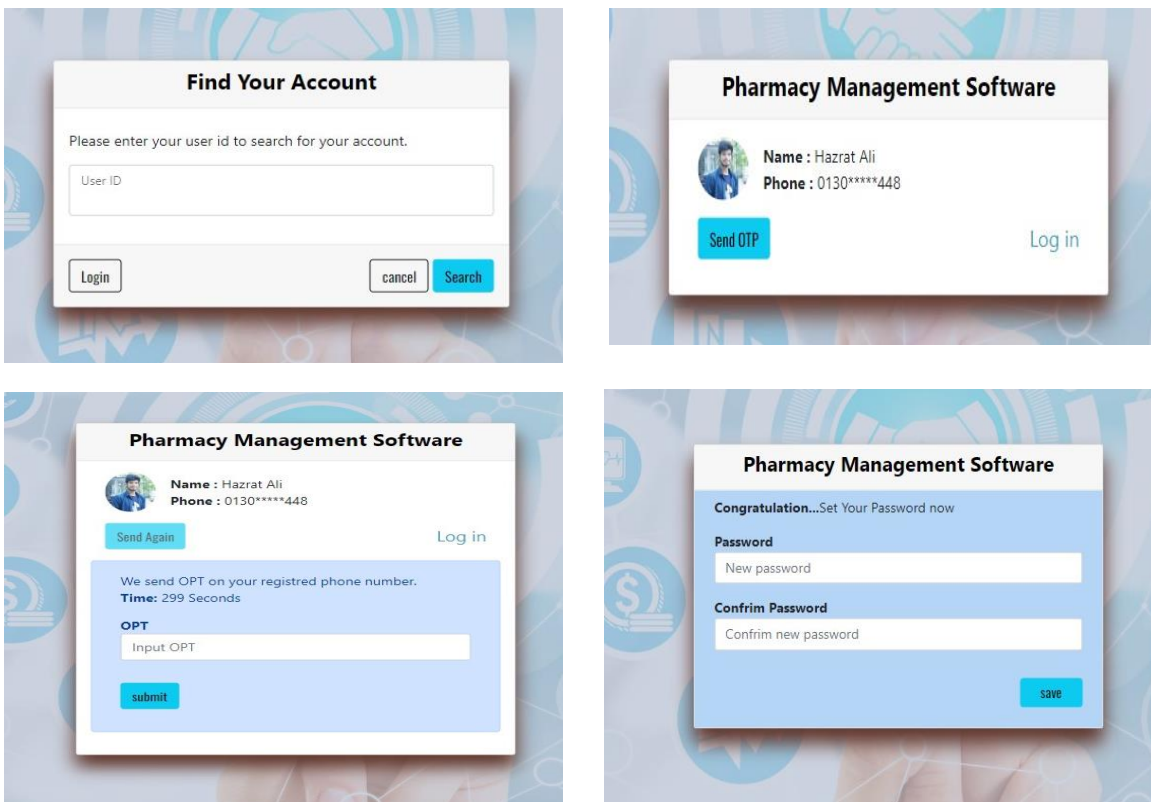


Figure 5.28: Password Reset Panel

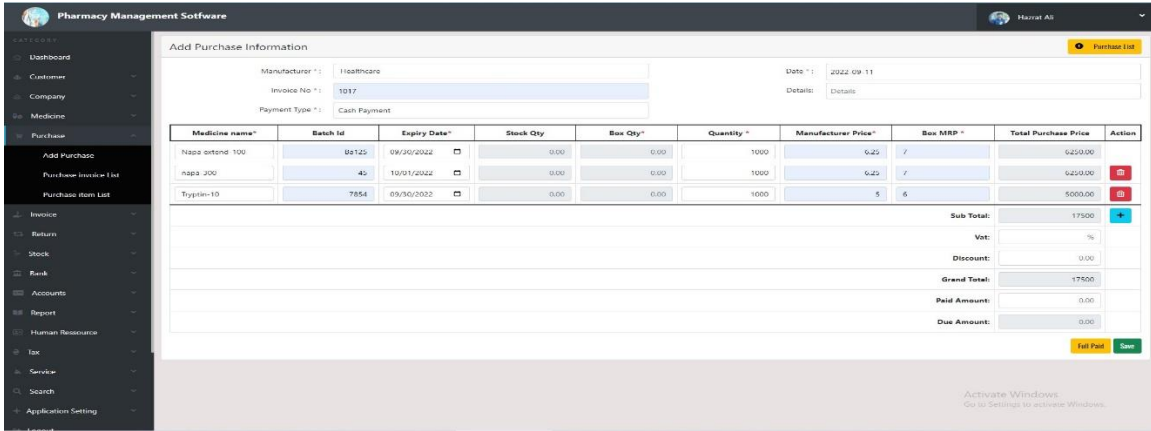


Figure 5.29: Add Purchase

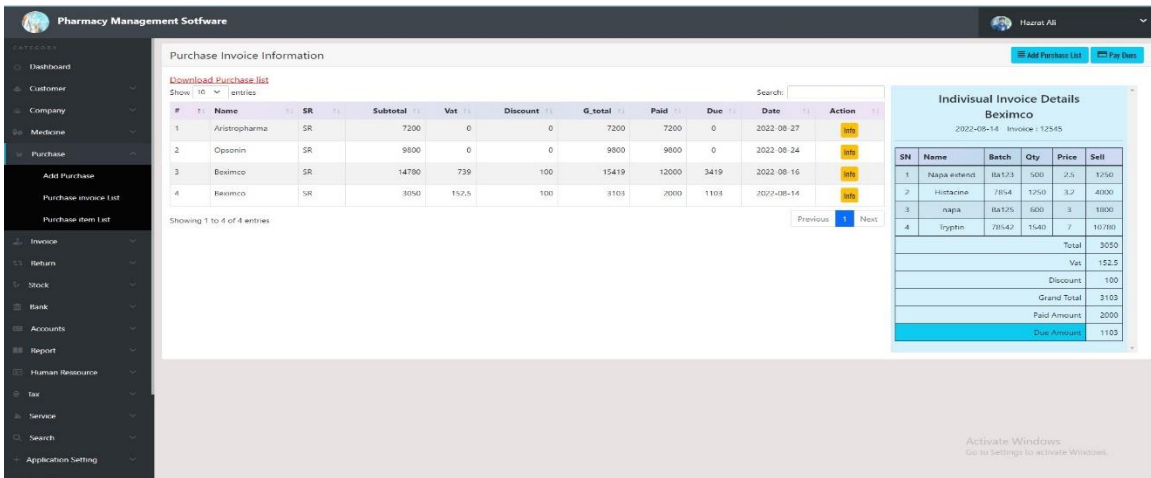


Figure 5.30: Purchase Invoice List

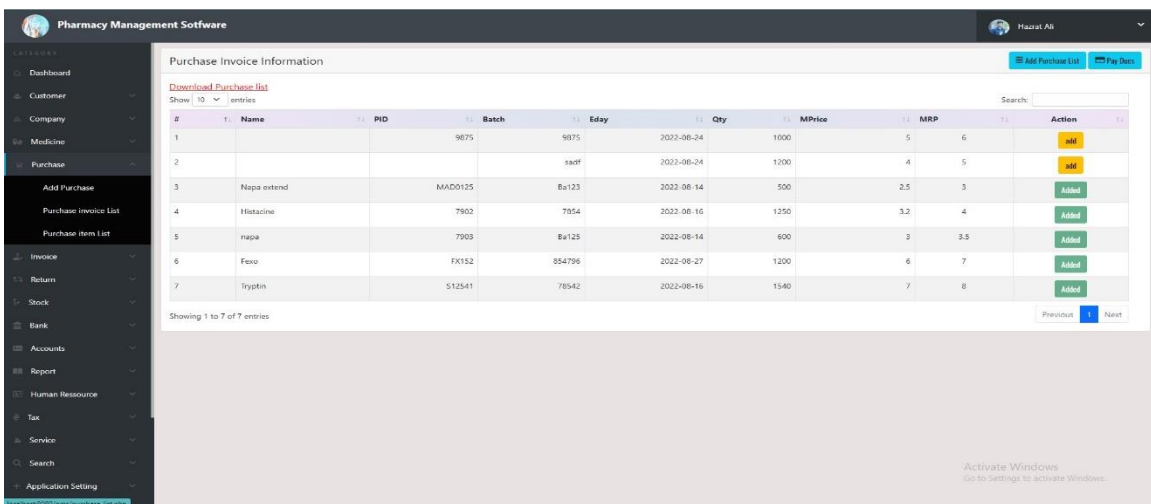


Figure 5.31: Purchase Medicine Adjust with Stock list

**Purchase Invoice Information**

Download Purchase list

#	Name	SR	Subtotal	Vat	Discount	G. total	Paid	Due	Date	Action
1	Aristopharma	SR	7200	0	0	7200	7200	0	2022-08-27	Info
2	Opiorin	SR	9800	0	0	9800	9800	0	2022-08-24	Info
3	Beximco	SR	14780	739	100	15419	12000	3419	2022-08-16	Info
4	Beximco	SR	3050	152.5	100	3103	2000	1103	2022-08-14	Info

Showing 1 to 4 of 4 entries

Previous 1 Next

**Individual Invoice Details**  
Beximco  
2022-08-14 Invoice: 12545

SN	Name	Batch	Qty	Price	Sell
1	Napa extend	Ba123	500	2.5	1250
2	Histacine	7854	1250	3.2	4000
3	napa	Ba125	600	3	1800
4	Tryptin	78542	1540	7	10780
Total					3050
Vat					152.5
Discount					100
Grand Total					3103
Paid Amount					2000
Due Amount					1103

Figure 5.32: Purchase Item List

**Available Stock Medicine Information**

Download Available Stock Medicine list

#	Name	Batch	InQty	OutQty	RestQty	Mprice	MRP	ExDate	Status	Action
1	Feno	024796	1200	0	1200	6	9	2022-12-19	Active	Info Sell Del
2	Tryptin	78542	1540	0	1540	7	9	2022-11-16	Active	Info Sell Del
3	Napa extend	9875	4500	1323	3145	9	10	2022-12-09	Active	Info Sell Del
4	napa	315646	3933	2697	941	3.6	4.5	2022-12-21	Active	Info Sell Del
5	sunved SR	112244	1900	100	1700	15	16	2022-09-11	Active	Info Sell Del

Showing 1 to 5 of 5 entries

Previous 1 Next

Figure 5.33: Available Stock

**Expired Medicine Information**

Download Expired Medicine list

#	Name	Batch	InQty	OutQty	RestQty	Mprice	MRP	ExDate	Status	Action
1	Almex	112233	2000	1902	98	12.25	14	2022-05-20	Expired	Info Sell Del
2	Histacine	7854	3250	1963	1287	21	22	2022-08-31	Expired	Info Sell Del
3	napa	Ba125	600	0	600	3	4	2022-08-14	Expired	Info Sell Del

Showing 1 to 3 of 3 entries

Previous 1 Next

**Update Information**

#	Name	Batch	InQty	OutQty	RestQty	Mprice	MRP	ExDate	Status	Action
1	Almex	112233	2000	1902	98	12.25	14	2022-05-20	Expired	Info Sell Del
2	Histacine	7854	3250	1963	1287	21	22	2022-08-31	Expired	Info Sell Del
3	napa	Ba125	600	0	600	3	4	2022-08-14	Expired	Info Sell Del

Figure 5.34: Expired Medicine List

The screenshot displays the 'Stock Medicine Information' interface. It features a table with the following data:

#	Name	Batch	InQty	OutQty	RestQty	Mprice	MRP	ExDate	Status	Action
1	Fexo	054796	1200	0	1200	6	7	2022-12-15	Active	edit del
2	napa	08125	600	0	600	3	4	2022-09-14	Deactive	edit del
3	Trypsin	78542	1540	0	1540	7	9	2022-11-16	Active	edit del
4	Fexo	05492	2000	0	2000	5.6	6	2022-10-29	Deactive	edit del
5	Napa wilernd	9875	4500	1352	3148	9	10	2022-12-08	Active	edit del
6	napa	112246	3033	2692	341	3.6	4.5	2022-12-21	Active	edit del
7	Histaone	7024	3220	1963	1207	21	22	2022-09-21	Active	edit del
8	Sinecod SR	112244	1900	180	1720	15	16	2022-09-11	Active	edit del
9	Almex	112233	2000	1902	98	12.25	14	2022-09-20	Deactive	edit del

Figure 5.35: All Stock Medicine List

### 5.3 Testing Implementation

The primary goal of testing is to identify flaws in the web-based application. Testing will provide us with a solution to the problem or bugs that we will encounter during testing, allowing our system to be bug-free and users to use it efficiently. Below is a description of the testing process.

#### Process:

**Login:** Security functions will be provided by the system via user id or email, password matching, and the role they are assigned. Only those with the necessary permissions can gain access to the information.

**Customer Ledger:** We double-checked the customer ledger's payment ledger and the notification system. We sent some payment ledger SMS to the customer to test the notification system's functionality.

**Expectation Handling:** We have implemented expectation handling to prevent run-time errors that occur when accessing or using the system, allowing users to use the system without errors.

## 5.4 Test Results and Reports

Table 5.1: Login System test result

Serial No	Test Case	Input	Expected Outcome	Actual Outcome	Result
1	blank info login check	blank data	Can't be log in	Can't be log in	Passed
2	user id check	input wrong user id	Can't be log in	Can't be log in	Passed
3	password check	input wrong password	Can't be log in	Can't be log in	Passed
4	Position check	input wrong position	Can't be log in	Can't be log in	Passed

Table 5.2: Customer Ledger

Serial No	Test Case	Input	Expected Outcome	Actual Outcome	Result
1	Payment check	Given payment	Show the amount given by the customer	Show the amount given by the customer	Passed
2	Due check	Given payment	Show the previous due of the customer	Show the previous due of the customer	Passed
3	Notification	Click submit button	Customer will get the SMS	Customer has got the SMS	Passed

## **CHAPTER 6**

### **IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY**

#### **6.1 Impact on Society**

We can see from the current state of our society that pharmacy shops are still using the old analog system to manage their pharmacies. This wastes a significant amount of their valuable time and money. As a result, we developed a system to assist them in managing their pharmacies and making their jobs easier. They will also be able to provide better service to their customers. As a result, their sales will increase, and their customers will be pleased with their service.

#### **6.2 Impact on Environment**

We do not believe that our system has any effect on the environment. Because our system is web-based, we don't need to use any additional hardware to construct it. We will simply use computers to run our system, which is already available in almost every pharmacy for creating customer bills. As a result, our system is completely safe for our environment.

#### **6.3 Sustainability Plan**

We are developing a web-based pharmacy management system to provide our pharmacies with a digital solution to help them manage their pharmacies more efficiently. It is a popular system around the world, but there are very few projects in our country. We are attempting to develop a system that is distinct from theirs. We can modify our system slightly to add more features or to remove some features as needed, and this modification is simple. Because our system is completely distinct from other systems available in our country, it is extremely sustainable. We intend to modify our system on a daily basis in order to provide our users with a smooth, efficient, and bug-free system.

## **CHAPTER 7**

### **CONCLUSION AND FUTURE SCOPE**

#### **7.1 Discussion and Conclusion**

##### **7.1.1 Discussion**

Pharmacies are an essential part of our daily lives. Whenever we become ill, we must visit a pharmacy to obtain our prescribed medication. During Covid-19, we felt a strong need for pharmacies. Pharmacies in other countries use a variety of software to manage their operations. In our country, however, we still use the old analog system, which is time-consuming. If we can introduce our pharmacies to our developed application and persuade them to use this digital user-friendly system rather than an analog system, we will see a significant improvement in our pharmacy system. We are willing, however, to provide them with a user-friendly, efficient, and smooth system.

##### **7.1.2 Conclusion**

A pharmacy system is an application or software that is used to manage all of a pharmacy's data. These software assists pharmacies in managing their inventory, customer data, medication details, employee information, invoices, and many other aspects. This system also alerts users about expired medicines in the stock. It is a complete shop management solution for pharmacies. The primary goal of this system is to efficiently and easily manage pharmacy data.

## **7.2 Scope for Further Developments**

Our created system is distinct from others. Other systems are desktop applications that customers must purchase for one or more PCs. However, because our system is a web-based application, users can access it from any internet-enabled device using web browsers. Many new features are being added to our application. We have many features planned for the future. There will always be opportunities to customize our application to the needs of our customers. We also intend to create a desktop application so that users can operate the system using both a web browser and a desktop application. We are also working on a feature that will allow users to use the system while not connected to the internet. Our system is currently a single vendor application, but it will be converted to a multi-vendor application in the future. We are also working to improve the usability and smoothness of our system. We also intend to add a feature in which users can enter a disease name and the system will recommend all medicines related to the disease. Finally, we hope that our system will provide a comprehensive and simple solution for pharmacies.



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