

SL-1 Mini Project Report
on
“Pharmacy Management System”

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ABSTRACT

The project is an insight into the design and implementation of a Pharmacy Management System. The primary aim is to improve accuracy and enhance safety and efficiency in the pharmaceutical stores. With management being one of the most essential features of all forms providing sophistication to perform any kind of task in a particular form we intend to manage most pharmacy related activities in this system.

In this project we tried to develop a computerised and web based Pharmacy management system. The system helps the pharmacist to improve inventory management, view sales reports, print invoices, etc. It will manage all activities around the shop that increase productivity and maximize profit. This pharmacy management system is user friendly.

ACKNOWLEDGEMENT

We are overwhelmed in all humbleness and gratefulness to acknowledge our sincere gratitude to all those who have helped us put our ideas to perfection and have assigned tasks well above the level of simplicity and into something concrete and unique.

We wholeheartedly thank **Prof. Swapnil Mane** for having faith in us, and for motivating us to do better. With the help of his brilliant guidance and encouragement, we were able to complete our tasks correctly and were up to the mark in all assigned tasks. During the process, we got a chance to see the stronger side of our technical and non-technical aspects and strengthen concepts.

We are immensely grateful to our college and our HOD **Dr. A. M. Bagade** for providing us with the opportunity to work on this project and providing us with the necessary resources for it. We are thankful to all involved in this project as without their inspiration and valuable suggestions, it would not have been possible to develop the project within the prescribed time.

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CHAPTER 1

INTRODUCTION

1.1 Purpose

- To manage the details of medicines, suppliers, customers, inventory, pharmacy, sales etc.
- To provide prompt response to user requests for data.
- To build an application to reduce the manual work for managing the activities in the pharmacy.
- All data regarding the pharmacist and customers interaction is stored which can later be used to improve business strategy or it may also be needed during certification or inspection process.
- Provides convenient invoice generation features.
- The reports offer valuable insights into the operations in the pharmacy.

1.2 Scope

The user of this system is being able to manage all necessary activities of the pharmacy shop. The database management that has been provided in this system is of great advantage to reduce record errors associated with pharmacy shops.

The system is handling all the aspects of the inventory control function involving adding products, deleting products, modifying their properties etc in the database.

Pharmacy Management System covered the following areas:

- Suppliers management
- Stock management
- Customers management

- Sales management
- Reports management

1.3 Developer's Responsibilities: An Overview

- Researching, designing, implementing and managing software programs.
- Testing and evaluating the program(s)
- Identifying areas for modification in existing programs and subsequently developing these modifications
- Writing and implementing efficient code
- Determining operational practicality
- Deploying software tools, processes and metrics
- Maintaining and upgrading existing systems
- Developing a user-friendly interface.
- Working closely with other developers, UX designers, business and systems analysts

2.2 Schema Description

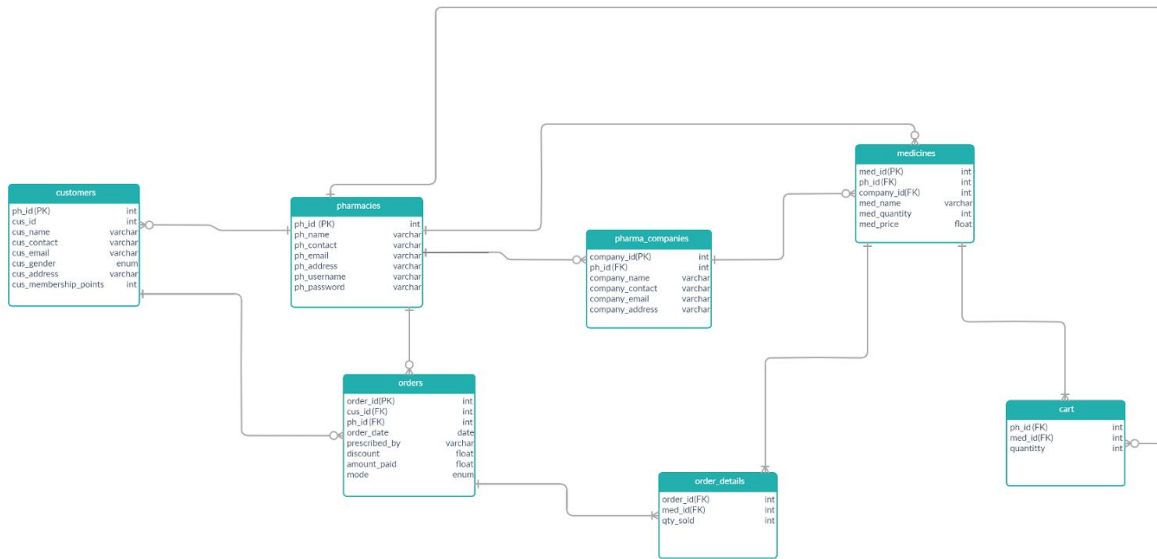


Fig 2.2 Database Schema.

2.3 Table Description

- Pharmacies (ph_id, ph_name, ph_contact, ph_email, ph_address, ph_username, ph_password)
- pharma_companies(ph_id, company_id, company_name, company_contact, company_email, company_address)
- medicines(ph_id, company_id, med_id, med_name, med_quantity, med_price)
- customers(ph_id, cus_id, cus_name, cus_contact, cus_email, cus_gender, cus_address, cus_membership_points)
- orders(ph_id, cus_id, order_id, order_date, prescribed_by, discount, amount_paid, mode)
- order_details(order_id, med_id, qty_sold)
- cart(ph_id, med_id, quantity)

2.4 Flow Chart

The following flowchart depicts the complete workflow of the system with various steps involved in the developed system.

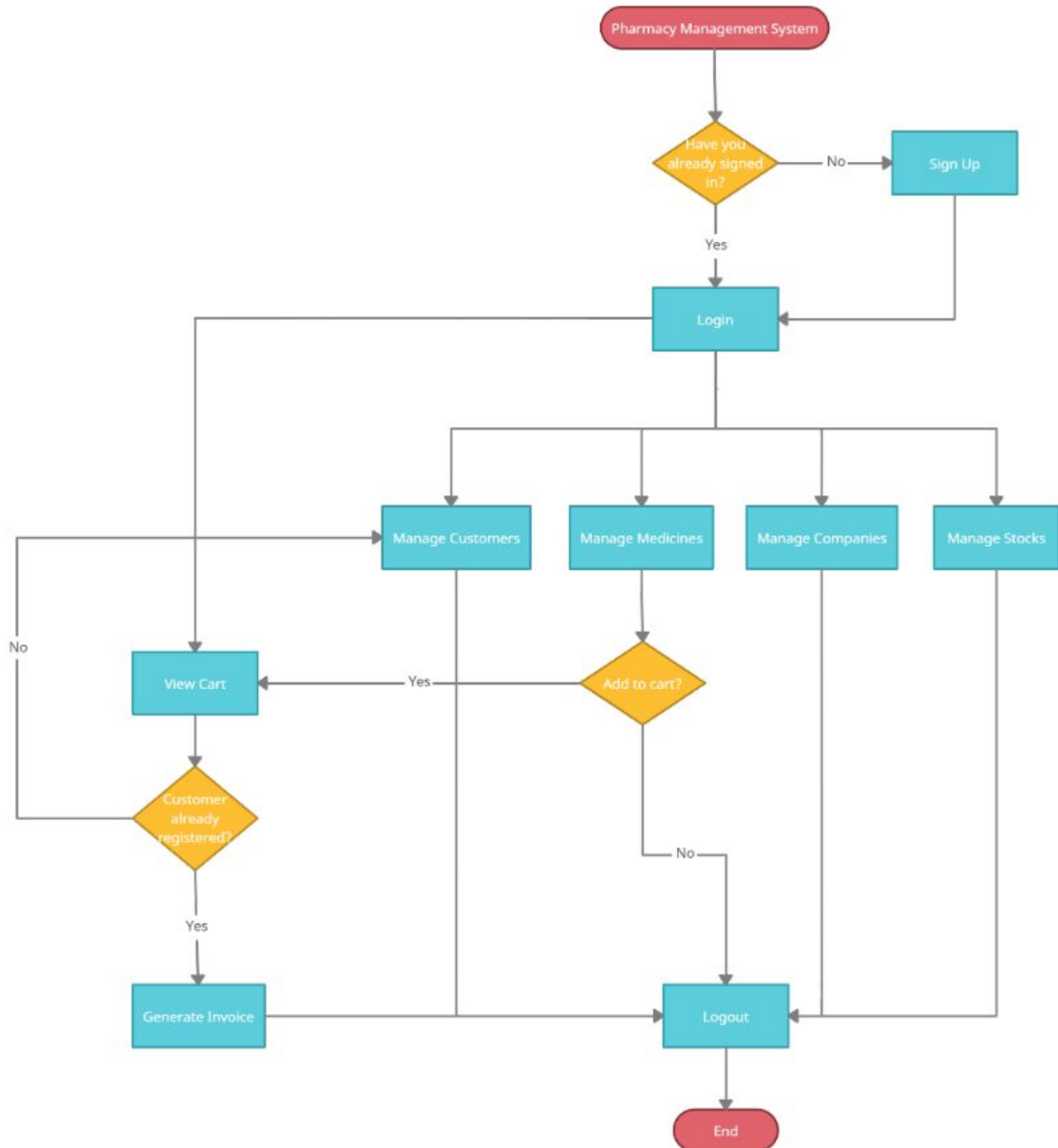


Fig 2.3 Flow Chart.

2.5 User Interface Design

- **Login Page:** The pharmacist must enter the correct username and password to enter into the system.

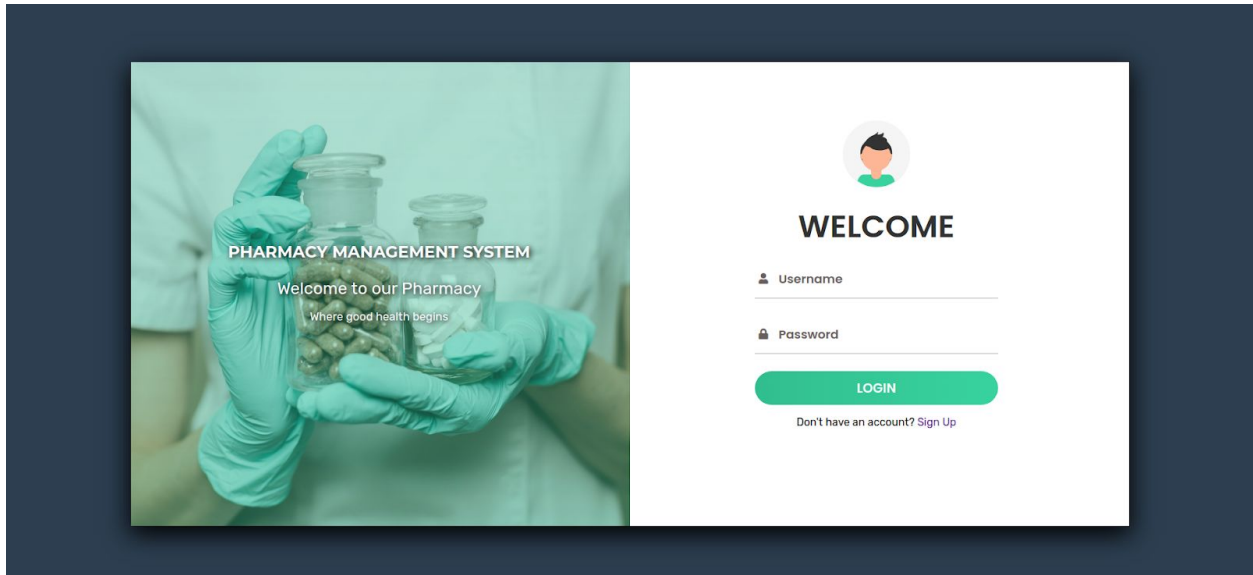


Fig 2.4 Login Page

- **Sign Up Page:** Pharmacies can sign up to avail the benefits of the pharmacy management system.

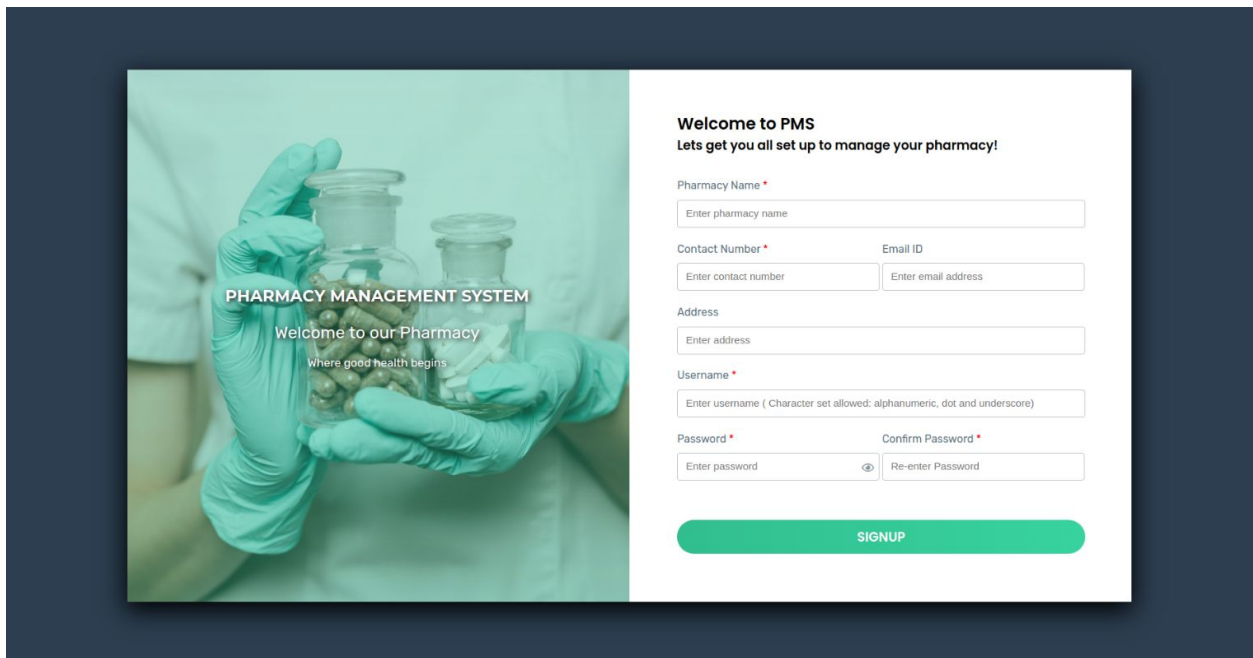


Fig 2.5 Sign Up Page

- **Dashboard:** Pharmacists can see all details in brief like total yesterday's sale, total today's sale, this month's sale and total sale.

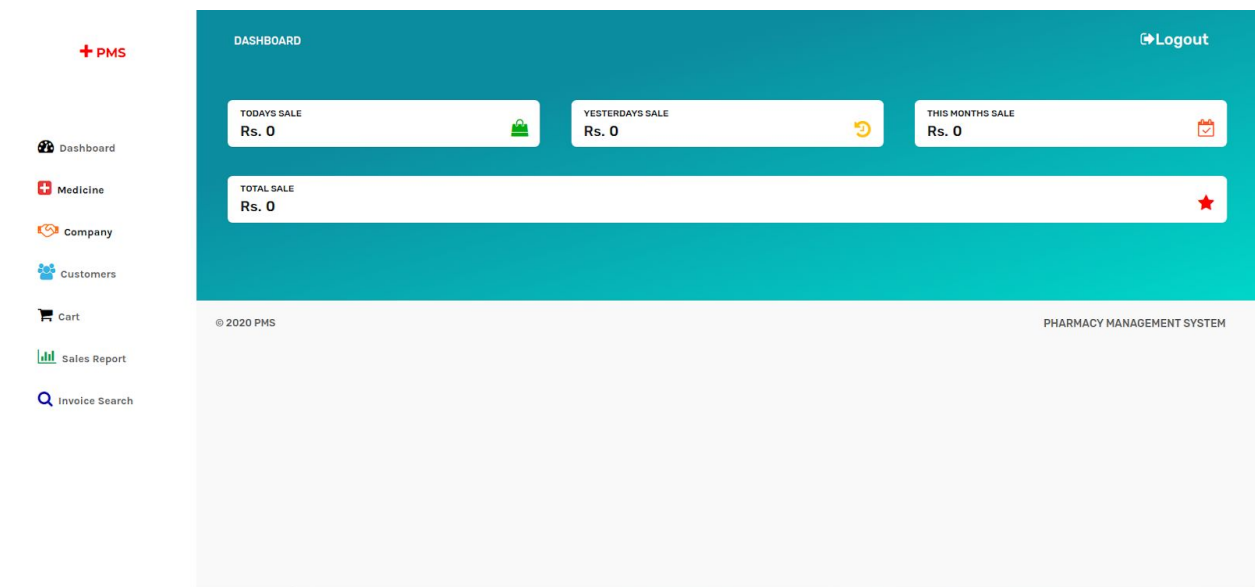


Fig 2.6 Dashboard Page

- **Add Medicine:** In this section, pharmacists can add medicines with details involving supplying company, name, quantity and price.

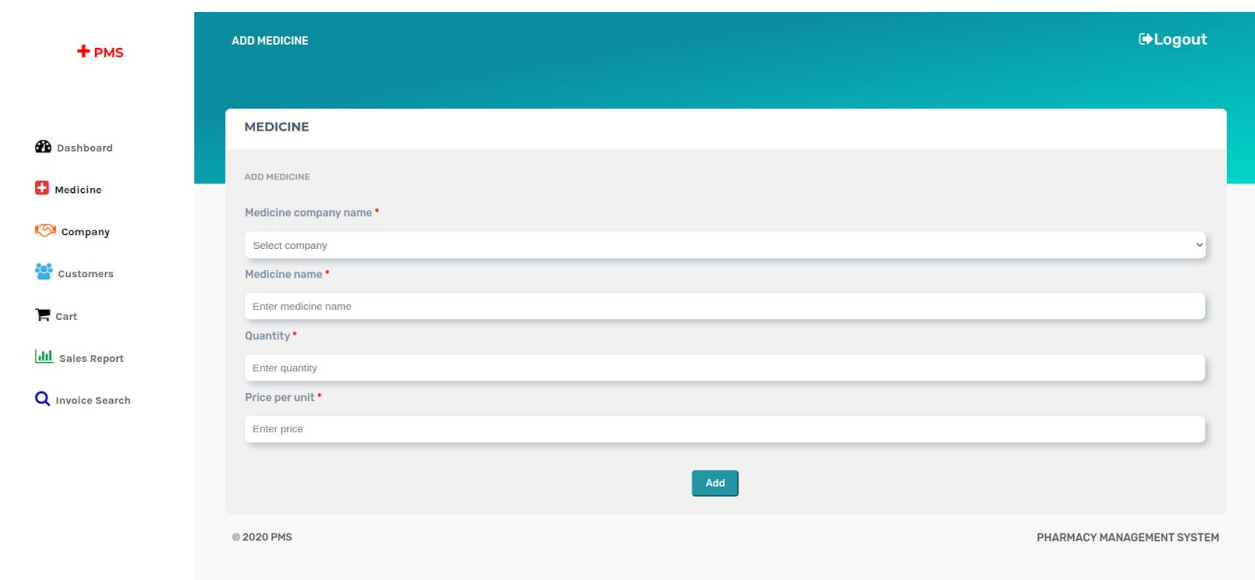


Fig 2.7 Insert Medicine Page

- **Manage Medicine:** In this section pharmacists can search medicines by name and add searched medicine to cart. They can also edit details of already existing medicines.

S.No	Medicine company	Medicine name	Quantity in stock	Price per unit	Buying quantity	Action
1	CIPLA	PARACETAMOL	35	100	<input type="text"/>	
2	CIPLA	ABACAVIR	80	90	<input type="text"/>	
3	JOHNSON & JOHNSON	CARBOPLATIN	32	150	<input type="text"/>	

Fig 2.8 Manage Medicine Page

- **Edit Medicine Details:** In this section pharmacists can edit medicine details like name, quantity to be added or removed and the price per unit.

MEDICINE

UPDATE MEDICINE

Medicine company name
CIPLA

Medicine name
PARACETAMOL

Quantity to add(+) or remove(-)
0

Price per unit
100

Update

Fig 2.9 Edit Medicine Details Page

- **Less in Stock:** Shows the medicines that are less in stock (below a limit) and need to be refilled in stock.

LESS IN STOCK

S.No	Company name	Medicine name	Quantity remaining	Action
1	CIPLA	PARACETAMOL	1	Edit
2	PURE MEDICALS	ACETAMINOPHEN	13	Edit

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Fig 2.10 Less in Stock Page

- **Add Company:** In this section, pharmacists can add companies with their details involving company name, contact number, email Id and address.

ADD COMPANY

PHARMACY COMPANY

ADD PHARMACY COMPANY

Company name *

Enter company name

Contact number *

Enter contact number

Email id

Enter email id

Address

Enter address

Add

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Fig 2.11 Insert Company Page

- **Manage Company:** In this section pharmacists can edit and view company details.

The screenshot displays the 'MANAGE COMPANY' interface. On the left is a sidebar with icons and labels for 'Dashboard', 'Medicine', 'Company', 'Customers', 'Cart', 'Sales Report', and 'Invoice Search'. The main header is teal with a '+ PMS' icon on the left and a 'Logout' button on the right. The main content area is titled 'PHARMACY COMPANY' and 'MANAGE PHARMACY COMPANY'. It contains a table with the following data:

S.No	Company name	Contact number	Email	Address	Action
1	CIPLA	7437747737	CIPLA@GMAIL.COM	2H, 13, BLOCK NO. 3, KARVE NAGAR, PUNE	Edit details
2	JOHNSON & JOHNSON	8327372732	JOHNSON123@GMAIL.COM	32, SECTOR 13, SHIVAJI NAGAR, PUNE	Edit details

At the bottom, there is a footer with '© 2020 PMS' on the left and 'PHARMACY MANAGEMENT SYSTEM' on the right.

Fig 2.12 Manage Company Page

- **Customers:** In this section pharmacists can view customer details(name, email, membership points etc.) and can also edit their details. Pharmacists can also view all the previous orders placed by a particular customer.

The screenshot displays the 'CUSTOMERS' interface. On the left is a sidebar with icons and labels for 'Dashboard', 'Medicine', 'Company', 'Customers', 'Cart', 'Sales Report', and 'Invoice Search'. The main header is teal with a '+ PMS' icon on the left and a 'Logout' button on the right. The main content area is titled 'CUSTOMERS' and 'CUSTOMER DETAILS'. It contains a table with the following data:

Name	Contact	Email	Gender	Membership points	Action
PRAVEEN SINHA	8374737277	PRAVEEN123@GMAIL.COM	MALE	35	View Orders

At the bottom, there is a footer with '© 2020 PMS' on the left and 'PHARMACY MANAGEMENT SYSTEM' on the right.

Fig 2.13 View Customers Page

- **Cart:** This section gives all the details about our cart, the items present in the cart. We can also search for items and remove items from the cart.

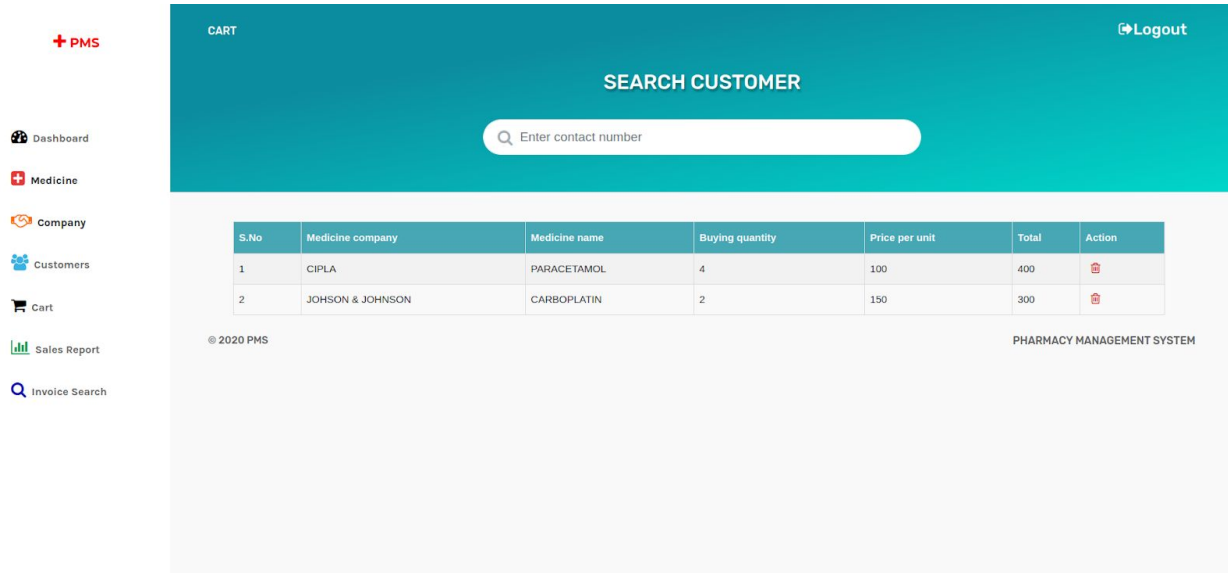


Fig 2.14 Cart Page

- **Cart Failure:** When a search with a non-existing customer is searched the cart failure page appears consisting of a form to add details of the new customer.

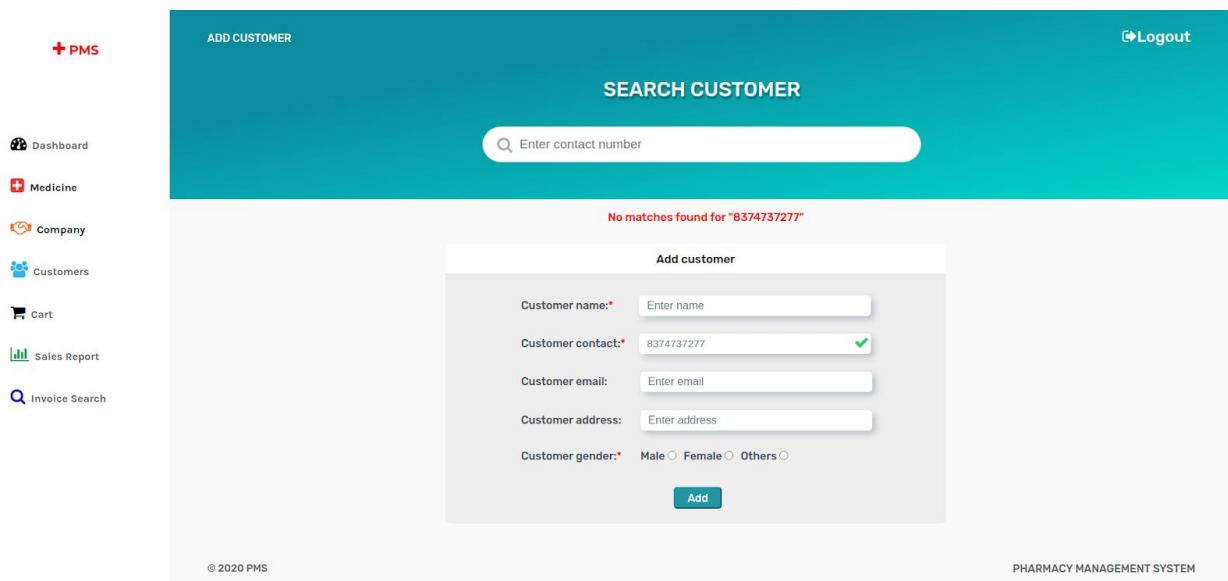


Fig 2.15 Cart Failure (Only for Non-registered Customers) Page

- **Cart Success:** When a search with an existing customer contact number is made or after a new customer is added the cart success page appears consisting of the cart details and inputs for “prescribed by” , “mode of payment” and “discount”.

SEARCH CUSTOMER

Enter contact number

Results for "8374737277"

Customer name: PRAVEEN SINHA
 Customer contact: 8374737277
 Customer email: PRAVEEN123@GMAIL.COM
 Customer address: 2H,21, BLOCK NO. 13, KATRAJ, PUNE
 Customer gender: MALE
 Membership points: 0
 Prescribed by:
 Mode of payment: Cash: ☐ Card: ☐

S.No	Medicine company	Medicine name	Buying quantity	Price per unit	Total	Action
1	CIPLA	PARACETAMOL	4	100	400	
2	JOHNSON & JOHNSON	CARBOPLATIN	2	150	300	
Grand total:					700	
Discount:					<input type="text" value="0"/>	
Net amount:					700	

Fig 2.16 Cart Success or Billing Page

- **Sales Report:** In this section pharmacists can view reports for all the sold medicines in a particular time span. The reports can be viewed in two categorical forms that are:
 - Customers - Shows the details of all purchases made by customers in the provided range.
 - Medicines - Shows the quantity of each medicine sold in the provided range.

SALES REPORT Logout

CUSTOMERS REPORT

#Report from 2020-12-13 to 2020-12-15

S.No	Invoice number	Customer name	Order date	Amount paid	Action
1	100000	MANISHA MALHOTRA	Sun Dec 13 2020 00:00:00 GMT+0530 (India Standard Time)	2700	View details
2	100001	RAHUL AGARWAL	Mon Dec 14 2020 00:00:00 GMT+0530 (India Standard Time)	330	View details

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Fig 2.19 (Customers) Records shown for entered range Page

- **Invoice Search:** In this section, pharmacists can search invoice through invoice number that is generated each time an order is placed and is unique to the order.

INVOICE SEARCH Logout

INVOICE SEARCH

Enter invoice number

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Fig 2.20 Invoice Search Page

- **Invoice data** : On successful search of invoice number all details corresponding to the particular invoice are visible and can be printed on request.

INVOICE Logout

Invoice #100000

Customer name:	PRAVEEN SINHA	Customer contact:	8374737277
Mode of payment:	CASH	Date:	Sat Dec 05 2020 00:00:00 GMT+0530 (India Standard Time)

S.No	Medicine name	Quantity	Price per unit	Total
1	PARACETAMOL	4	100	400
2	ABACAVIR	1	90	90
Grand total:				490
Discount:				0
Net amount:				490

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Fig 2.21 Invoice Data Page

CHAPTER 3

SYSTEM IMPLEMENTATION

3.1 Hardware and Software Platform Description

Hardware Platform Description

- 2 vCPUs
- 1 GB RAM
- 3 GB HDD

Software Platform Description

- Hosted via Ubuntu 20.04 LTS

3.2 Tools Used

Front-End:

- HTML
- CSS
- Bootstrap
- JavaScript

Templating Engine:

- EJS

Back-End:

- NodeJS
- ExpressJS
- JSON Web Tokens (JWT)

Database:

- MySQL Database

3.3 Future Work / Extension

Future Work:

- Sending a SMS/ Email after order confirmation.
- Barcode Verification
- POS integration.

Extension:

- Developing an application for android devices.

3.4 Conclusion

A pharmacy management system was developed with its objectives achieved. We researched, studied and implemented various languages and tools like HTML, CSS, Bootstrap, Javascript, NodeJS, ExpressJS and JWT towards our effort at developing the project. The developed system includes a database built with MySQL. The system manages and records the medicine issuing cycle of a pharmacy.

The purpose of using the database was to present different benefits such as reducing data redundancy, reducing updating errors, increasing consistency, great data integrity and improving data access for the pharmacist through a user-friendly system. The system provides easy invoice generation, viewing medicines less in stock, sale records over a duration etc.

Thus, we have successfully implemented an industry-grade Full Stack Web Development project, with an aim to help pharmacies manage their data more accurately and efficiently.

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