PHARMACY MANAGEMENT SYSTEM

PROJECT REPORT SUBMITTED TO MAHATMA GANDHI UNIVERSITY, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER APPLICATIONS

BY

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Register Number:210021087316

DEPT. OF COMPUTER SCIENCE

B.V.M HOLY CROSS COLLEGE

CHERPUNKAL, KOTTAYAM 686 584

March 2024

Department of Computer Science

BVM HOLY CROSS COLLEGE

CERTIFICATE

Certified that the report entitled "**PHARMACY MANAGEMENT SYSTEM**" is the bonafide Record of the main project work done by **Mr.TOGIN DENNIS(210021087316**) under our guidance and supervision and is submitted in partial fulfillment of the Bachelor degree in Computer Applications, awarded by Mahatma Gandhi University, Kerala

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Submitted for Project Evaluation on ------/-----/------

External Examiner

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Date:16-03-2024

CERTIFICATE

This is to certify that Mr.TOGIN DENNIS (Reg. No: 210021087316) Bachelors of Computer Applications student of College:Bishop Vayalil Memorial Holy Cross College, Cherpunkal Kottayam, affiliated to Mahatma Gandhi University has completed the Project titled "PHARMACY MANAGEMENT SYSTEM" in our company.

This software is developed using Python and Django

For TECHLANCE

DECLARATION

I here by declare that the project work entitled PHARMACY MANAGEMENT SYSTEM submitted in partial fulfillment of the requirements for the award of the Bachelor of degree in Computer Applications from BVM Holy Cross College, Cherpunkal, is record of bonafide workdone under the guidance of _ — _ _ _ _ _ _ _(_ — _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ — _ _ _ _ _ _ _ _ _ _ _) and Ms.DEEPA GEORGE (Internal Project Guide, Asst.Professor,Computer Science Department).

Place: (Signature)

Date: TOGIN DENNIS

210021087316

ACKNOWLEDGMENT

It gives us immense pleasure to express heartful thanks to all those who helped us in the successful completion of this project works. It has been said that gratitude is the memory of heart. Words are boundless to express our sincere thanks to our most respected principal, Rev.Fr. Baby SebastianThonikuzhy, whose advice was really an encouragement for us. We are very much thankful to Mr. Binu M.B(Head of Department, Computer Science), for his proper guidance, encouragement and timely suggestions throughout our project work. We also express our special thanks to Ms.Deepa George Assistant Professor (Department of Computer Science) and to all teachers in the Department of Computer Science, who has helped us in the completion of this project. And also, we wish to express our deep sense of gratitudeto our parents and friends for the support and co-operation they rendered to us in making this work ease. And I express our sincere thanks to all who have helped us to complete our projec

ABSTRACT

In the realm of modern healthcare, the efficient management of pharmacy operations plays a pivotal role in ensuring quality patient care. This abstract introduces a proposed Pharmacy Management System designed to revolutionize the way pharmacies handle inventory, medication dispensing, and record-keeping.

The system's foundation lies in its computer-based design, which promises simplified maintenance, enhanced accessibility, and heightened efficiency compared to conventional paper-based methods. At its core, the system prioritizes the seamless management of drug inventory, offering real-time insights into medication availability. By alerting physicians about impending shortages, it empowers proactive reordering to prevent interruptions in patient treatment plans.

Crucially, the system provides accurate and detailed information regarding medication usage and dosages, facilitating safer practices for pharmacists and nurses. Through stringent user authentication mechanisms, including ID and password verification, it ensures the security and confidentiality of patient records and sensitive data.

Robust record-keeping capabilities are integrated into the system, allowing for meticulous tracking of transactions, prescriptions, and dispensing activities. This not only ensures compliance with regulatory standards but also enables comprehensive auditing and analysis for continuous improvement.

The user interface is designed with usability in mind, featuring intuitive navigation and customizable dashboards to optimize user experience. Potential integration with Electronic Health Records (EHR) or Hospital Information Systems (HIS) further enhances interoperability and data exchange across healthcare platforms.

To support successful implementation and adoption, comprehensive training and ongoing support for users are emphasized, ensuring proficiency in system utilization and providing assistance when needed.

In summary, the proposed Pharmacy Management System offers a holistic solution to streamline pharmacy operations, bolster efficiency, and elevate the standard of patient care. Through its innovative features and user-centric design, it promises to revolutionize pharmacy management practices, setting a new benchmark for excellence in healthcare administration.

CONTENT

1. INTRODUCTION

1.1 Project Overview

The Pharmacy Management System project is a transformative endeavor poised to revolutionize the landscape of medical store operations. Leveraging the power of Python programming, this system introduces a paradigm shift by automating a multitude of critical tasks that include inventory management, transaction recording, and customer interaction processes. Through its robust features and functionalities, it endeavors to enhance the efficiency, accuracy, and overall effectiveness in the management of medicine supplies and other essential medical inventory.

At its essence, the Pharmacy Management System is designed to serve as a catalyst for modernizing medical store operations. Its primary objective lies in the seamless digitization and management of inventory, transactions, and customer interactions. By transitioning from manual processes to automated systems, the project aims to usher in a new era of efficiency and precision in medical store management.

The adoption of the Pharmacy Management System promises a plethora of benefits for medical store operators. These include but are not limited to improved efficiency, enhanced accuracy, superior customer service, and substantial cost savings. By harnessing the capabilities of technology, the system seeks to optimize resource allocation and maximize operational efficacy.

At its core, the Pharmacy Management System represents a technological solution tailored to address the intricate nuances of pharmaceutical management. By organizing and managing the drug usage process within pharmacies, it endeavors to mitigate errors, enhance efficiency, and augment overall pharmacy management practices.

1.2 Organization Profile

ABOUT US

Techlance is one of the leading IT company in Kottayam,we dedicated to empowering businesses and individuals alike with cutting-edge IT solutions designed to ignite growth, boost productivity, and leave a meaningful imprint in

the digital landscape. Our commitment lies in becoming your reliable ally, delivering bespoke services crafted to match your distinct requirements and propel your journey towards success. Explore further to discover how Teachlance can elevate your endeavors in the digital realm.

Fostering Innovation & Creativity:

At Teachlance, we embrace the forefront of technological innovation and infuse creativity into every project we undertake. Our pioneering solutions are crafted to keep you ahead in today's ever-evolving business landscape.

Why Choose Us:

Expertise:

Punctual Delivery:

Recognizing the paramount importance of time in business, we are committed to delivering projects promptly, without compromising on quality. Timely completion is ingrained in our ethos.

Our Range of Services:

Web Development:

Elevate your online presence with our captivating and functional websites, leaving a lasting impression on your visitors.

Mobile App Development:

Stay seamlessly connected with your customers on the move with our tailored mobile applications designed for both Android and iOS platforms.

Software Solutions:

Optimize your operations and enhance efficiency with our customized software solutions, precisely tailored to meet your unique business needs.

Digital Marketing:

Expand your outreach and captivate your target audience with our performance-driven digital marketing strategies, driving tangible results.

IT Consulting:

Tap into our wealth of expertise to make informed IT decisions that seamlessly align with your overarching business objectives.

we offers consistent and reliable services for 3 years. We are offering digital marketing, mobile marketing, web development, training, Logo, Internship ,Jobs and campaign services for customers.

2.SYSTEM CONFIGURATION

2.1 Hardware Specification

- Processor : AMD Ryzen 5
- RAM : 24GB
- Hard disk : 256 GB
- Keyboard : 108 key
- Mouse : Optical

2.2 Software Specification

- Operating System : Windows 11
- Front - End : Python Django
- Back - End : Sqlite3
- Browser : Firefox

PYTHON

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.

DJANGO

Django is a web development framework for Python which offers standard methods for fast and effective website development. The primary goal of this high-level web framework is to create complex database-driven websites. It helps you to build and maintain quality web applications.

3.SYSTEM ANALYSIS

3.1Preliminary Investigation

System analysis involves the process of collecting and interpreting information, diagnosing issues, and utilizing this information to enhance the system. A system is comprised of components that collaborate to achieve a specific purpose. The primary objective of system analysis is to pinpoint shortcomings in the current system, conduct a feasibility study, identify hardware, software, and database requirements, and establish a system definition that serves as the basis for subsequent activities.

Within system analysis, there is an exploration of potential modifications to the existing system. This analysis aims to gain insight into the current system and its required functionalities. Ultimately, the outcome of system analysis is a comprehensive system description and a set of requirements for the development of a new system.

3.2Existing System

Currently, the medical works are based on the manual process, and each work is maintained in the paper. The details of purchasing drugs, audits, sell reports maintained on the paper while anyone can enter into the system and can make changes in these reports, so it is not a safe method to keep the information on the paper. The pharmacist faces problem in searching the products from the self as it is not an easy method to remember about the place of each medicine. There no Pharmacy Management System which can alert the pharmacist about the end of the drugs

3.3 Proposed System

The design of the pharmacy management system is based on the computer which will simplify the maintenance of the information, accessible and efficient. The Pharmacy Management System will provide the information about the end of the drugs in the medical so that the physician can know the expired drugs . The pharmacist and nurses will get more accurate results at the time sell, about the details of the use of medicines and the dosages so that the system will become more reliable to use than the present system. The records of each work will be secure as to access the information the user must have to provide the ID and password in the system

Advantages

- Cost and Time efficient
- Portable

3.4 Feasibility Analysis

After the problem is clearly understood and solutions are proposed, the nextstep is to conduct the feasibility study, which is the part of system analysis.

An analysis and evaluation of a proposed project to determine if it,

1.Is technically feasible

2.Is feasible within the estimated cost

3.Will be profitable

Feasibility studies are almost always conducted where large sums are at stake. It is also called feasibility analysis. Feasibility analysis is designed to determine whether or not, the given project environment, a project will be successful. A feasibility analysis may be conducted for a project with an emphasis on financial viability, environmental integrity, cultural acceptability, or political practicability. This analysis is performed to choose the system that meets the performance requirements at least cost. The most essential tasks performed by a feasibility analysis are identification and description of candidate systems, the evaluation ofcandidate systems and the selection of best candidate systems. The best system means the system that meets performance requirements at least cost. There are various types of feasibility to be determined.

Technical Feasibility
Economic Feasibility
Operational Feasibility

3.5 Advantages of Proposed System

1.Efficiency: Efficiency in a pharmacy management system refers to the platform's ability to streamline and optimize the various processes involved in add and manage medicines, prescribe, and manage patient.

2.Accuracy: Accuracy in a pharmacy management system refers to the platform's ability to provide correct and relevant information to admin,pharmasist,pharmasist clerk,patient,doctor

3.Accessibility: Accessibility in a pharmacy management system refers to ensuring that the platform is usable and navigable by individuals with disabilities, as well as those who may face other barriers to accessing digital content.

4.Consistency: Consistency in a pharmacy management system refers to maintaininguniformity and reliability across various aspects of the platform.

5.Tracking and Monitoring: Tracking and monitoring in a pharmacy management system involve the systematic collection and analysis of various data points related to user activities, madicine listings, applications, and overall platform performance..

6.Data Analysis: Data analysis in a pharmacy management system involves the collection, processing, and interpretation of various data points related to new medicines, prescriptions, admin and patient interactions within the platform.

7.Cost Savings: Reduces the need for physical paperwork and manualhandling, leading to potential cost savings.

8.Security: Security in a pharmacy management system is of paramount importance to protect sensitive user data, maintain trust among users, and prevent unauthorized accessor malicious activities.

9.Integration: Can integrate with other systems, enhancing interoperabilityand overall organizational efficiency.

3.6 Requirement Specification

Software Requirement Specification (SRS) is the requirements document that provides the technical specification for the design and development of the software. This document enhances the system's quality of formalizing communication between the system developer and the user and provides the proper information for accurate documentation. A description of each function required to solve the problem is presented in the functional description. The behavioral description section of the specification examines the operation of the software as a consequence of external events and internally generated control characteristics. Validation criteria is perhaps the most important and ironically most often neglected section of the SRS Specification of validation criteria acts as an implicit review of all other requirements.

The proposed system has the following requirements:

- The system must have the capability to store information about newly added products.
- The system should support the dispensing of medications to patients.
- The system should facilitate the processing of electronic prescriptions received from healthcare providers.

- The system should track the inventory of medications and other pharmacy products.
- System needs to maintain quantity record.
- System needs to update and delete the record.
- The system should adhere to security best practices to protect patient data and sensitive information.

4.SYSTEM DESIGN

4.1 Introduction

System design is the process of defining the architecture, components, modules, interface and data for a system to satisfy specified requirements. It is a solution to an approach compared to system analysis which is translates these “what is” orientation. System requirements into way of making them operational. The design phase focuses on detailed implementation of the system recommended in the feasibility study. Planning of system or to replace or complement an existing system. But before this, planning should be done. It must be thoroughly understood about the old system and determine how computers can make its operations more effective. The importance of system design is the quality.Design is the place where quality is fostered in the software development. Design representation of software provides us with that can be accessed for quality. System design is a transaction from a user-oriented documents to a programmer or database personal.it is creative in both art and technology.

4.2 System Flowchart

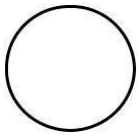
The classical system flowchart approach to describing and documenting a system will be presented. These system flowcharts are also used in the structured approach that is, form the general to detailed, of the system development life cycle. Because they have been used to describe system for many years, they are still common in many businesses.

Basic Flow chart Symbols:

Process

Input-Output

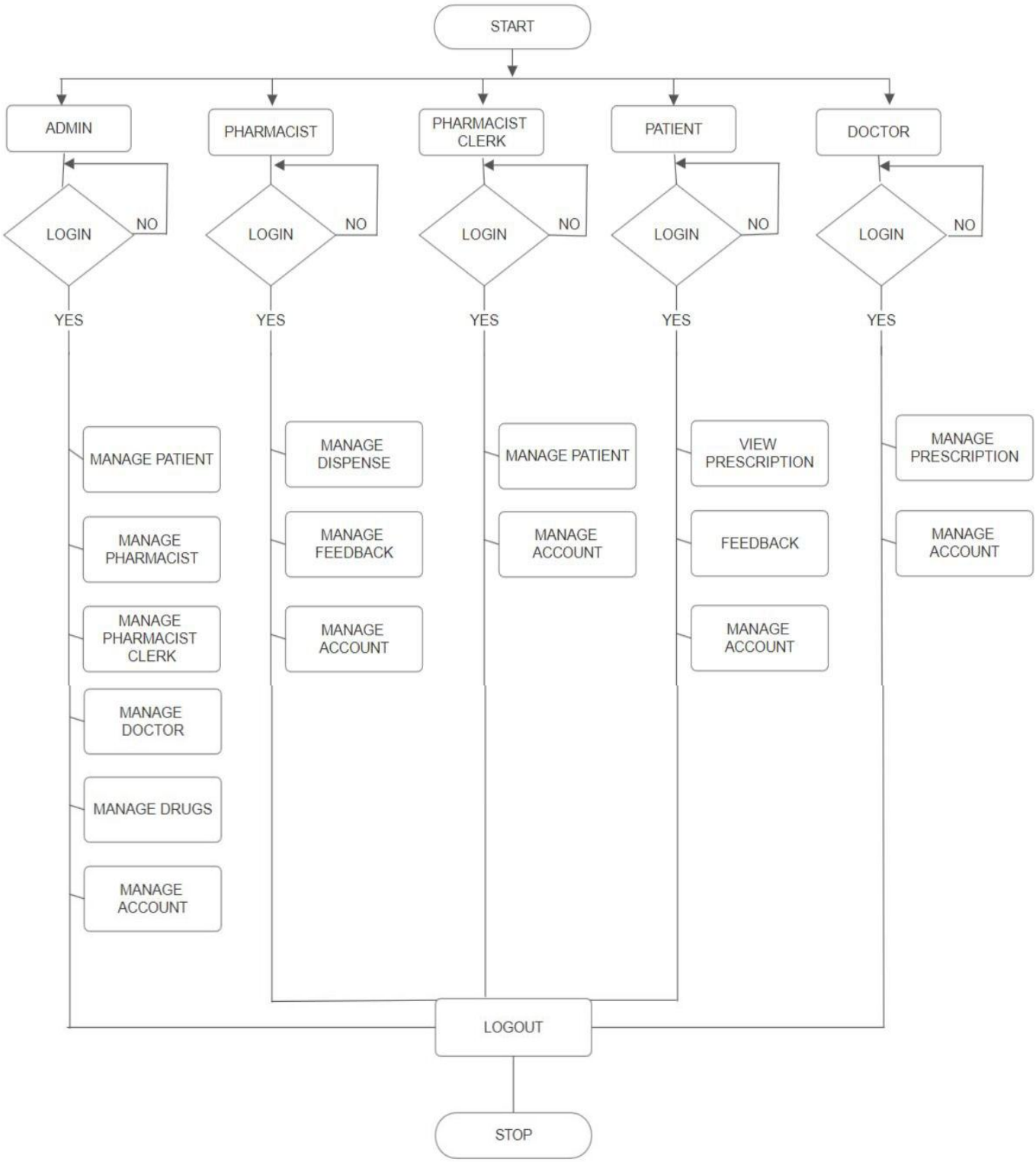
Connector



Off page connector

Data Flow

FLOW CHART


START
ADMIN
PHARMACIST
PHARMACIST CLERK
PATIENT
DOCTOR
LOGIN
NO
YES
MANAGE PATIENT
MANAGE PHARMACIST
MANAGE PHARMACIST CLERK
MANAGE DOCTOR
MANAGE DRUGS
MANAGE ACCOUNT
MANAGE DISPENSE
MANAGE FEEDBACK
MANAGE ACCOUNT
MANAGE PATIENT
MANAGE ACCOUNT
VIEW PRESCRIPTION
FEEDBACK
MANAGE ACCOUNT
MANAGE PRESCRIPTION
MANAGE ACCOUNT
LOGOUT
STOP

4.3 Database Design

The most important aspect of building an application is the design of tables or the database schema. The data stored in the tables must be organized in some manner,which is meaningful. The overall objective in the process of table design has been to treat data as an organizational, resource and as an integratedwhole. The organization of data in a database aim to achieve three major objectives, which are given below:

- Data integration
- Data abstraction
- Data independence

Several degrees of normalization have to be applied during the process of table design. The major aim of the process of normalization is to reduce data redundancyand prevent losing data integrity. Data integrity has to be converted at all levels. Pure normalization can access problem related to storage and retrieval of data. During the process of normalization, dependencies can be identified which cause serious problems during deletion and updating. Normalizing also hope in simplifying the structure of table. The theme behind a database is to handle information as an integrated whole thus making access to information easy,quick, inexpensive and flexible for users.The entire package depends on how the data are maintained in the system. Each table has been designed with a perfect vision. Minor tables have been treated which through takes much space facilitates the process of querying fast and accurate.

PRIMARY KEY

The key which is to identify records. Also uniquely notify the not null constraints.

FOREIGN KEY

The key which references the primary key, is the data inserted in the primary key column of the table.

NORMALIZATION

Normalization is the process of efficiently organizing data in a database. There are two goals of the normalization process: eliminating redundant data (for example,storing the same data in more than one table) and ensuring data dependencies make sense (only storing related data in a table). Both of these are worthy goals as they reduce the amount of space a database consumes and ensure that data is logically stored.

First normal form (1NF) sets the very basic rules for an organized database:

- Eliminate duplicate columns from the same table.
- Create separate tables for each group of related data and identify each row

With a unique column or set of columns (the primary key).

Second normal form (2NF) further addresses the concept of removing duplicate data:

- Meet all the requirements of the first normal form.
- Remove subsets of data that apply to multiple rows of a table and place them

in the separate tables.

Third normal form (3NF) goes one large step further:

- Meet all the requirements of the second normal form.
- Remove columns that are not dependent upon the primary key.

Database Name: pharmacy

Files in relational database are called Tables. Columns of tables represent data and rows represent the records in conventional technology. The table design is shown below:

Table 1: Pharamacy-adminhod

Field Name	Data Type	Width	Description
id	integer	15	id
Emp_no	var char	100	Admin number
gender	var char	100	gender
mobile	var char	10	Mobile no
address	var char	300	address
profile_pic	datetime	100	Profile picture
created_at	datetime	100	Created time
updated_at	datetime	100	Updated time
date_employed	datetime	100	Employed time
admin_id	bigint	20	Admin id

Primary key:admin_id

Table 2:pharmacy_category

Field Name	Data Type	Width	Description
id	integer	15	id
name	var char	50	name

Table 3:pharmacy_customuser

Foreign key:username

Field Name	Data Type	Width	Description
id	integer	15	id
password	var char	150	password
last_login	datetime	100	Last login time
is_superuser	bool	10	Superuser
username	var char	150	username
first_name	var char	150	First name
last_name	var char	150	last name
email	var char	250	email
is_staff	bool	10	staff
is_online	bool	10	Online or not
date_joined	datetime	100	Join date
user_type	var char	10	User type

Table 4:pharmacy_customuser_groups

Foreign key:customuser_id,group_id

Field Name	Data Type	Width	Description
id	integer	15	id
customuser_id	Big int	20	Custom user id
group_id	integer	20	Group id

Table 5:pharmacy_customuser_user_permissions

Foreign key:customuser_id,permission_id

Field Name	Data Type	Width	Description
id	integer	15	id
customuser_id	Big int	20	Custom user id
Permission_id	integer	20	Permission id

Table 6:pharmacy_dispense

Foreign key:drud_id_id,patient_id_id

Field Name	Data Type	Width	Description
id	integer	15	id
dispense_quantity	integer	20	Dispense total no
taken	var char	300	medicine number
stock_ref_no	Var char	300	Stock ref no

instructions	text	300	instructions
dispense_at	integer	20	Dispeense time
drug_id_id	bigint	20	Drug id
Patient_id_id	bigint	20	Patient id

Table 7:pharmacy_doctor

Foreign key:admin_id

Field Name	Data Type	Width	Description
id	integer	15	id
emp_no	varchar	100	Emp no
age	integer	300	age
gender	Varchar	100	gender
mobile	Varchar	10	Mobile no
address	varchar	300	address
profile_pic	varchar	100	Profile pic
created_at	datetime	100	Created time
updated_at	datetime	100	Updated time
admin_id	bigint	20	Admin id

Table 8:pharmacy_patientfeedback

Foreign key:admin_id_id,pharmacist_id_id

Field Name	Data Type	Width	Description
id	integer	15	id
feedback	text	200	feedback
feedback_replay	text	200	Feedback replay
created_at	datetime	100	Created time
updated_at	datetime	100	Updated time
admin_id_id	bigint	20	Admin id
pharmacist_id_id	bigint	20	Pharmacist id

Table 9:pharmacy_patients

Foreign key:admin_id

Field Name	Data Type	Width	Description
id	integer	15	id
reg_no	varchar	30	Registor number
gender	Varchar	7	gender
first_name	var char	20	First name
last_name	var char	20	last name

dob	datetime	100	Date of birth
Phone_number	Varchar	10	Phone number
profile_pic	varchar	100	Profile pic
age	integer	20	age
address	varchar	300	address
date_admitted	datetime	100	Admitted date
last_updated	datetime	100	Last updated time
admin_id	bigint	20	Admin id

Table 10:pharmacy_pharmacist

Foreign key:admin_id

Field Name	**Data Type**	**Width**	**Description**
id	integer	15	id
emp_no	varchar	100	Emp no
age	integer	20	age
gender	Varchar	100	gender
mobile	Varchar	10	Mobile no
address	varchar	300	address
profile_pic	varchar	100	Profile pic

created_at	datetime	100	Created time
updated_at	datetime	100	Updated time
admin_id	bigint	100	Admin id

Table 11:pharmacy_pharmacyclerk

Foreign key:admin_id

Field Name	Data Type	Width	Description
id	integer	15	id
emp_no	varchar	100	Emp no
gender	Varchar	100	gender
mobile	Varchar	10	Mobile no
address	varchar	300	address
profile_pic	varchar	100	Profile pic
age	integer	20	age
created_at	datetime	100	Created time
updated_at	datetime	100	Updated time
admin_id	bigint	100	Admin id

Table 12:pharmacy_prescription

Foreign key:permission_id,patient_id_id

Field Name	Data Type	Width	Description
id	integer	15	id
description	varchar	200	descriptioon
permission_id	integer	20	Permission id
date_prescribed	datetime	20	Priscribed date
patient_id_id	bigint	20	Patient id

Table 13:pharmacy_stock

Foreign key:drug_name,category_id

Field Name	Data Type	Width	Description
id	integer	15	id
drug_imprint	varchar	6	Drug imprint
drug_name	varchar	50	Drug name
drug_color	varchar	50	Drug color
drug_shape	varchar	50	Drug shape
quantity	integer	20	quantity
receive_quantity	integer	20	Received quantity
reorder_level	integer	20	reorderlevel
manufacture	varchar	50	Manufacture name

last_updated	datetime	100	Last updated
timestamp	datetime	100	time
drug_strength	varchar	10	Drug strength
valid_from	datetime	100	Valid from
valid_to	datetime	100	Valid to
drug_description	text	200	Drug description
drug_pic	varchar	100	Drug picture
category_id	bigint	20	Category id

4.4 DATA FLOW DIAGRAM

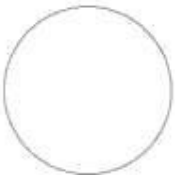
A Data Flow Diagram (DFD) is a graphical representation of the "flow" of data through an information system. A data flow diagram can also be used for the visualization of data processing. Data Flow Diagram is a common practice for a designer to draw a context-level Data Flow Diagram first which shows the interaction between the system and outside entities. A Data Flow Diagram is a network that describes the flow of data and processes that change, or transform, data throughout the system. This network is constructed by using a set of symbols that do not imply a physical implementation. It is a graphical tool for structured analysis of the system requirements. DFD models a system by using external entities from which data flows to a process, which transforms the data and creates, output data- flows which go to other processes or external entities or files. Data in files may also flow to processes as inputs. There are various symbols used in a DFD. Bubbles represent the processes. Named arrows indicate the data flow.External entities are represented by rectangles and are outside the system such as venders or customers with whom the system interacts. They either supply orconsume data are called sinks.Data are stored in a data store by a process in the system. Each component in a DFD is labelled with a descriptive name, Process names are further identified with a number. The Data Flow Diagram shows the logical flow of a system and defines the boundaries of the system. For a candidate system, it describes the inputs(source), allin a format that meet the user's requirements. The main merit of DFD is that it can provide an overview of system requirements, what data a system would process, what transformations of data are done, what files are used, and where the results flow.

In the normal convention a DFD has four major symbols:

It represents data source or destination

It represents the data store

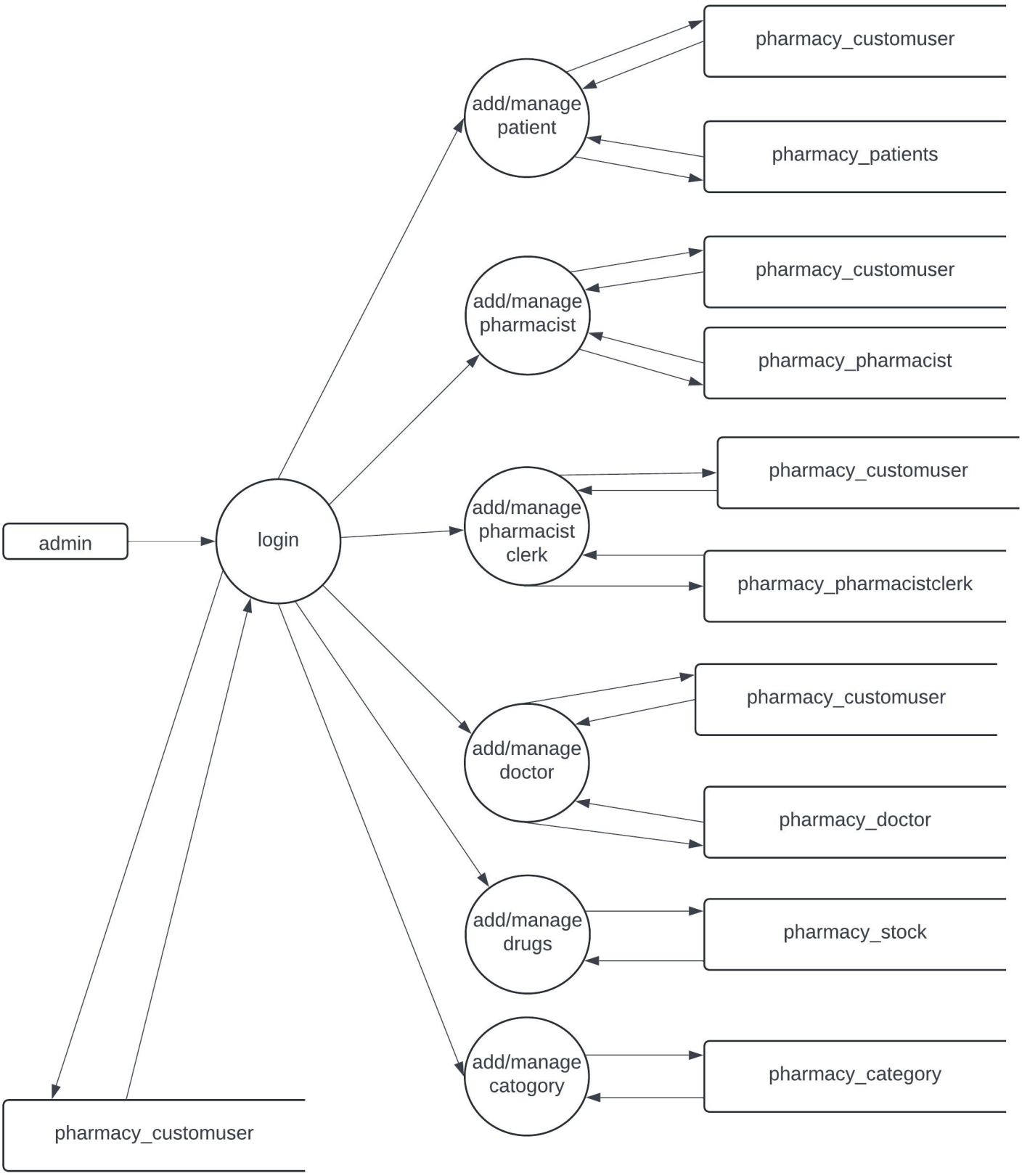
It represents the data flow



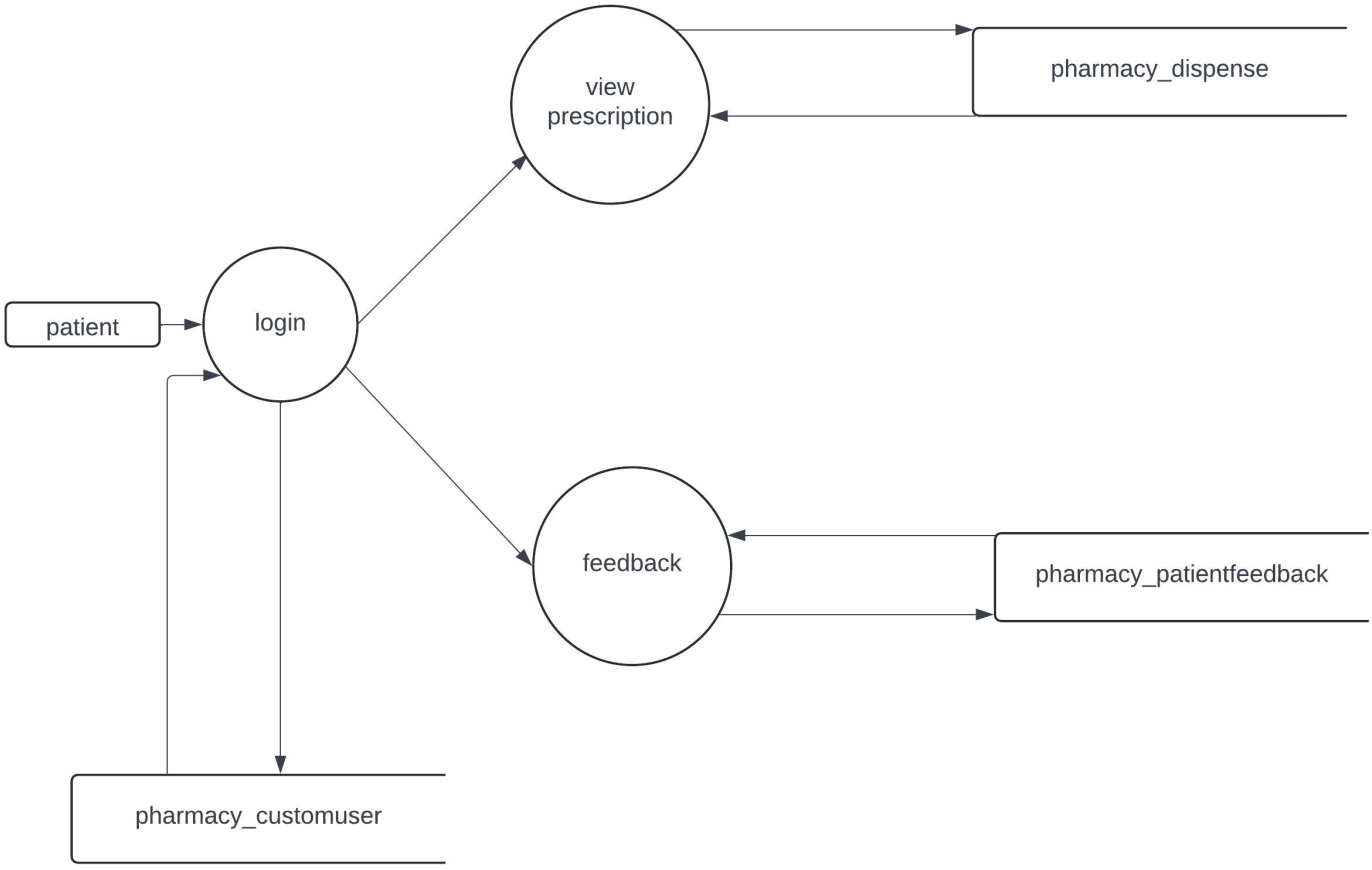
It represents a process

CONTEXT DIAGRAM

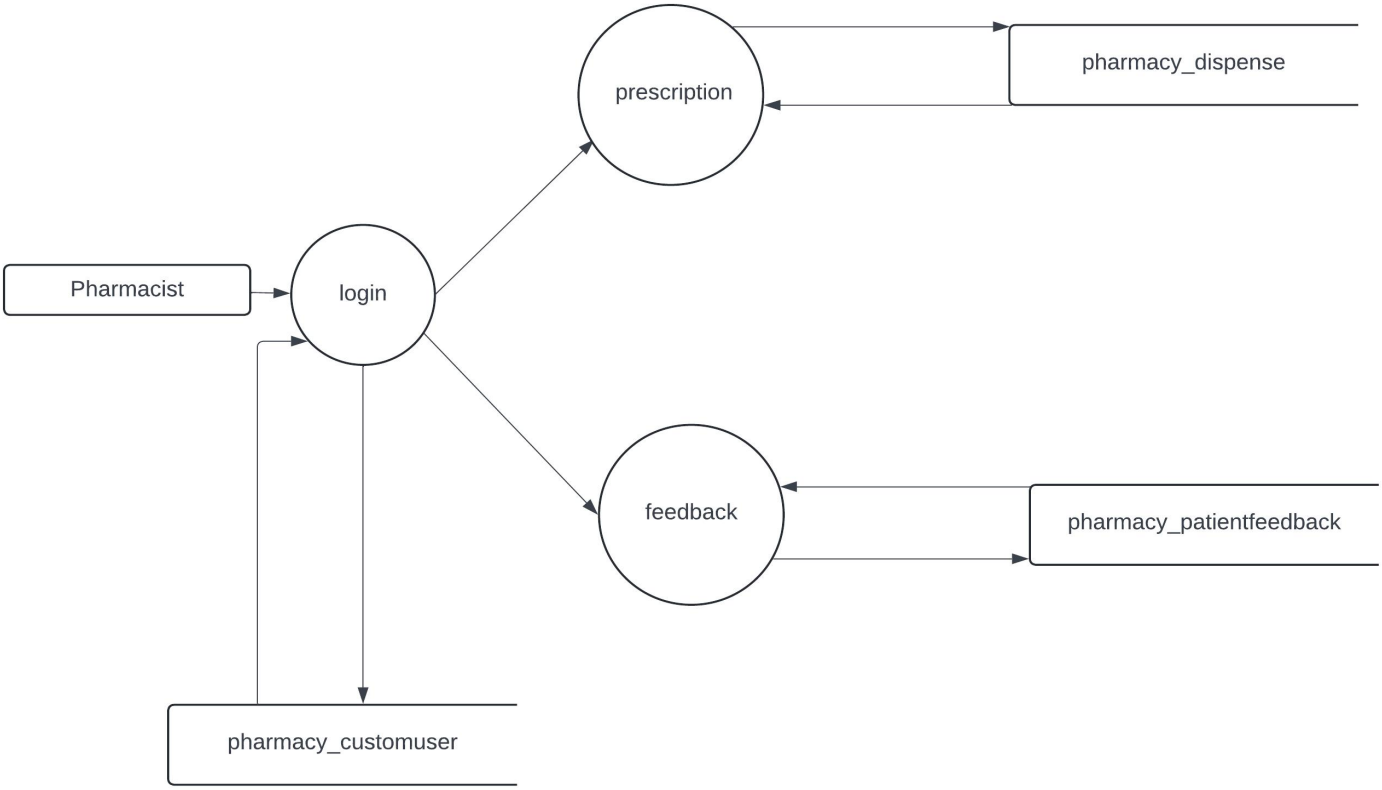
LEVEL 1:ADMIN



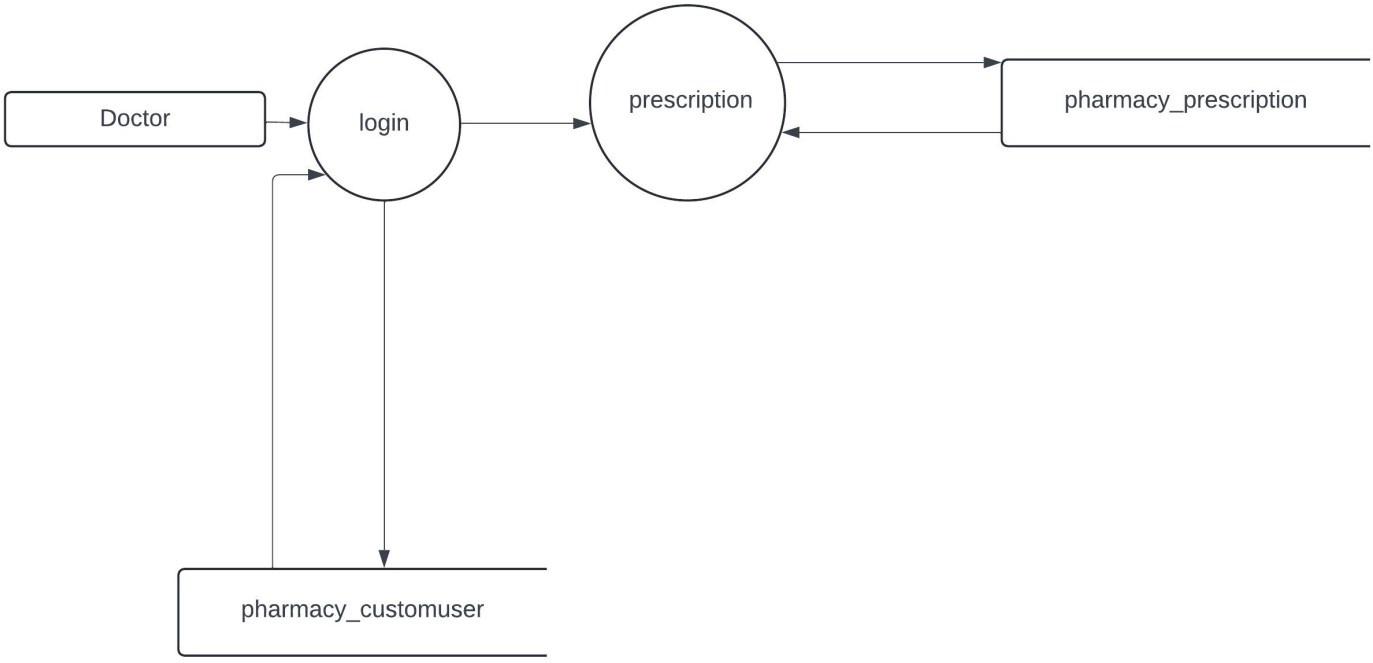
LEVEL 1:PATIENT



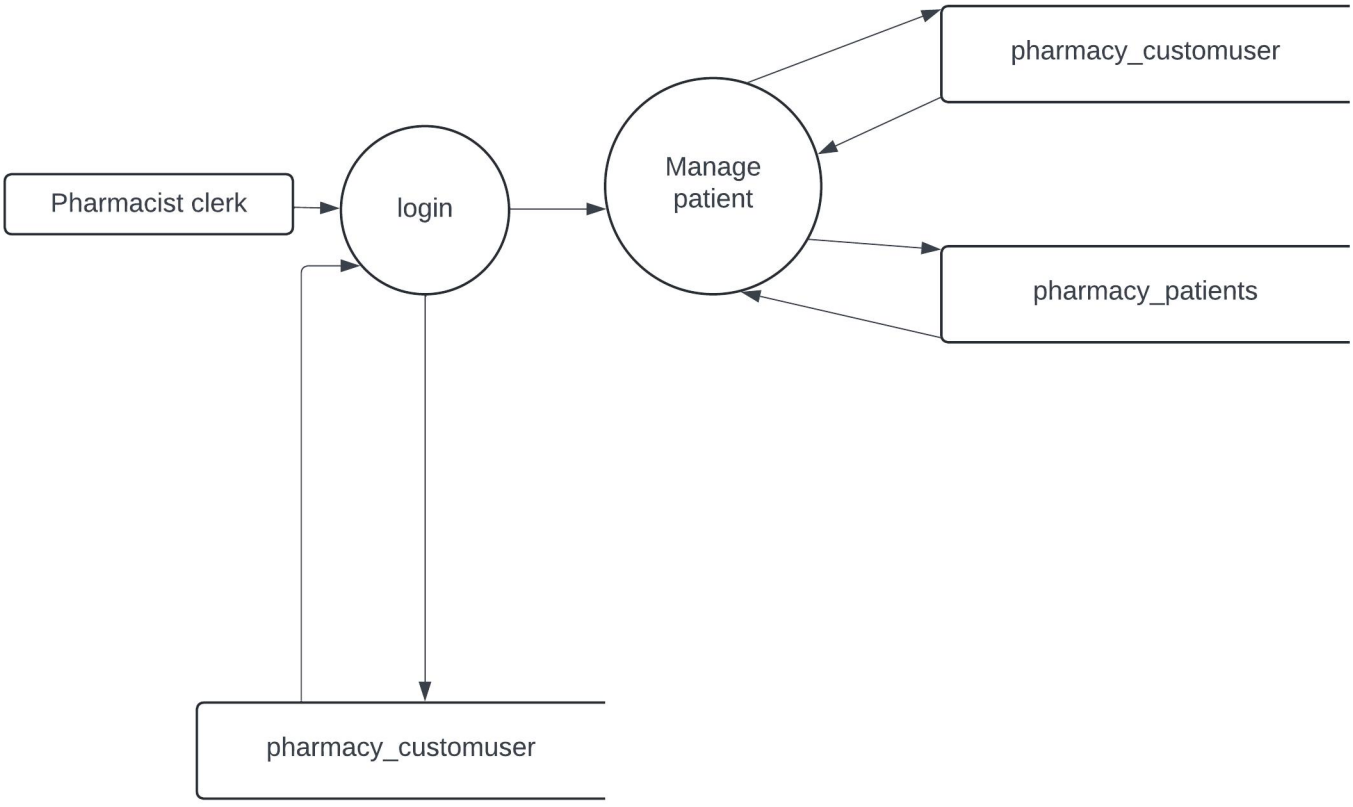
Level 1:PHARMACIST



Level 1:DOCTOR



Level 1:PHARMACIST CLERK



4.5 Input Design

ADMIN SIDE

Login Page

The page where system admin will submit their system credential to access and manage the system data.

Home Page

The page where the admin user will be redirected by default after logging into the pharmacy management system admin side. This page displays the details of pharmacist

Patient page

The page where the patient list in the system are listed and this the page where add ,edit delete the patient.

Pharmacist Page

The page where all pharmacist are listed and admin can edit,add,delete the pharmacist

Doctor Page

The page where all doctor are listed and admin can edit,add,delete the doctor

Pharmacistclerk Page

The page where all pharmacistclerk are listed and admin can edit,add,delete the pharmacistclerk

Drugs Page

The page where all drugs are listed and admin can edit,add,delete the drugs

PATIENT SIDE

Home Page

The default page where the user will be redirected when browsing the websiteand after logging in.

Login page

The page where the user submits their system credential in order to access and manage the other feature or functionalities of the system.

Prescription Page

The page where all prescriptions are listed

Feedback Page

The page which the user can chat with pharmacist.

DOCTOR SIDE

Home Page

The default page where the user will be redirected when browsing the website and after logging in

Login page

The page where the user submits their system credential in order to access and manage the other feature or functionalities of the system.

Prescription Page

The page where all prescriptions are listed and doctor can add new prescription

PHARMACIST SIDE

Home Page

The default page where the user will be redirected when browsing the websiteand after logging in.

Login page

The page where the user submits their system credential in order to access and manage the other feature or functionalities of the system.

Patient page

To display p a t i e n t details and pharmacist can manage dispense

Feedback Page

The page which the pharmacist can chat with patient.

PHARMACISTCLERK SIDE

Home Page

The default page where the user will be redirected when browsing the website and after logging in.

Login page

The page where the user submits their system credential in order to access and manage the other feature or functionalities of the system.

Patient page

To display p a t i e n t details and pharmacist can manage it

4.6 Output Design

ADMIN SIDE

Home Page

The page where the admin user will be redirected by default after logging into the pharmacy management system system admin side. This page displays the summary of the pharmacy

Patient page

To display p a t i e n t details and admin can add and edit patients

Pharmacist Page

The page where all pharmacists are listed and can be managed by the admin.

Doctor Page

The page where all doctor are listed and can be managed by the admin.

Pharmacist clerk Page

The page where all pharmacist clerks are listed and can be managed by the admin.

Drugs Page

The page where all drugs are listed and can be managed by the admin

PATIENT SIDE

Home Page

The default page where the user will be redirected when browsing the website and after logging in user can explore the features.

Prescription Page

The page where all prescriptions are listed

Feedback Page

The page which the user can chat with pharmacist.

DOCTOR SIDE

Home Page

The default page where the user will be redirected when browsing the websiteand after logging in.

Login page

The page where the user submits their system credential in order to access and manage the other feature or functionalities of the system.

Prescription Page

The page where all prescriptions are listed and doctor can add new prescription

PHARMACIST SIDE

Home Page

The default page where the user will be redirected when browsing the websiteand after logging in.

Login page

The page where the user submits their system credential in order to access and manage the other feature or functionalities of the system.

Patient page

To display p a t i e n t details and pharmacist can manage dispense

Feedback Page

The page which the pharmacist can chat with patient.

PHARMACISTCLERK SIDE

Home Page

The default page where the user will be redirected when browsing the websiteand after logging in.

Login page

The page where the user submits their system credential in order to access and manage the other feature or functionalities of the system.

Patient page

To display p a t i e n t details and pharmacist can manage it

5.SYSTEM DEVELOPMENT

5.1 INTRODUCTION

Developing an pharmacy management System involves a systematic approach to address user needs and technical requirements. The following high-level overview outlines the key steps in the system development process:

1. **Requirements Gathering**: Define the requirements for pharmacy management System based on user needs, available data, and technical constraints., Determine input and output designs, algorithms, and technologies to be utilized.
2. **Data Collection and Preparation**: Collect and pre-process the data required for the pharmacy management system, including user grievances, system feedback, and relevant user details.
3. Ensure data consistency and relevance for effective grievance resolution.
4. Continuously evaluate pharmacy management System performance using user feedback and metrics. Optimize the system by refining algorithms, improving data quality, and enhancing the user interface based on received feedback.

The pharmacy management System development process is iterative and ongoing, allowing for the incorporation of new data and feedback to enhance system performance. Stakeholder and user involvement is crucial to ensure the system meets their expectations.

5.2. Menu Level Description

5.2 Menu Level Description

The Menu Level Description for the pharmacy management includes the following hierarchy:

1. **Admin Menu**

Homepage:

Main landing page for admin to access various system features, including login and about the system .

Patient page:

The page contains the patient details the admin can manage it

pharmacist page:

The page where all pharmacist details can view and also make changes and add new pharmacists.

Doctor page:

The page where all doctor details can view and also make changes and add new doctors.

pharmacistclerk page:

The page where all pharmacistclerk details can view and also make changes and add new pharmacistclerks.

Drugs page:

The page where all drugs details can view and also make changes and add new drugs.

2. **Patient Menu**

Home Page

The default page where the user will be redirected when browsing the website and after logging in user can explore the features.

Prescription Page

The page where prescription list is being shown

Feedback Page

The page which the patient can chat with pharmacist.

3. Pharmacist Menu

Home Page

The default page where the user will be redirected when browsing the website and after logging in user can explore the features.

Patient page

To display patient details and pharmacist can manage dispense

Feedback Page

The page which the pharmacist can chat with patient.

4. DoctorMenu

Home Page

The default page where the user will be redirected when browsing the website and after logging in user can explore the features.

Prescription Page

The page where all prescriptions are listed and doctor can add new prescription

5. Pharmacist clerk Menu

Home Page

The default page where the user will be redirected when browsing the website and after logging in user can explore the features.

Patient page

To display p a t i e n t details and pharmacist can manage it

5.3 Process Specification

1. Administrative Functions:

Step 1 : Patient

Admin can add, delete,edit the patient

Step 2 : Pharmacist

Admin can add, delete,edit the pharmacist

Step 3 : Doctor

Admin can add, delete,edit the doctor

Step 4 : Pharmacist clerk

Admin can add, delete,edit the Pharmacist clerk

Step 5 : Drugs

Admin can add, delete,edit the drugs

2.Patient Functions:

Step 1 : Prescription

All listed prescription can view.

Step 2 : Feedback

The patient can chat with pharmacist.

3.Pharmacist Functions

Step 1: manage drugs

The pharmacist can view and manage the drugs

Step 2: manage patients

The pharmacist can view and dispense the patients

Step 3: Feedback

The pharmacist can chat with patients

4.Doctor Functions

Step 1: manage prescriptions

The doctor can view and manage the prescription

5.Pharmacist clerk Functions

Step 1: manage patients

The Pharmacist clerk can view and manage the patients

6.SYSTEM TESTING

6.1 Testing Method

Software Testing is the process of executing software in a controlled manner, in order to answer the question - Does the software behave as specified? Software testing is often used in association with the term's verification and validation. Validation is the checking or testing of items, includes software, for conformance and consistency with an associated specification. Software testing is just one kind of verification, which also uses techniques such as reviews, analysis, inspections, and walk-throughs.

There are several testing methods that can be used to test a system, including the following:

1. Unit testing: This method tests each individual unit or component of the system to ensure that it functions as expected. This can be done using automated testing tools or manual testing.

2. Integration testing: This method tests how the different components of the system work together. It ensures that the different components can communicate with each other and function as a cohesive system

3. System testing: This method tests the entire system as a whole to ensure that it meets the requirements and specifications. It includes functional testing, performance testing, security testing, and usability testing.

4. Acceptance testing: This method tests whether the system meets the requirements and expectations of the end-users. It ensures that the system is acceptable for release to production.

5. Regression testing: This method tests the system after changes or updates have been made to ensure that the system still functions as expected and that the changes or updates have not introduced new issues.

6. Performance testing: This method tests the system's ability to handle large amounts of data, users, and transactions. It includes load testing, stress testing, and endurance testing.

7. Security testing: This method tests the system's ability to protect against unauthorized access, data breaches, and other security risks. It includes vulnerability scanning, penetration testing, and security audits.

8. Usability testing: This method tests the system's ease of use, user interface design, and user experience. It includes user testing, user surveys, and heuristic evaluation.

These testing methods can be used in combination with each other to thoroughly test a system and ensure that it meets the requirements and expectations of the end-users.

6.2 Test Plan Activities

A test plan outlines the testing activities that will be performed to ensure that a system meets its requirements and specifications. The following are common activities included in a test plan:

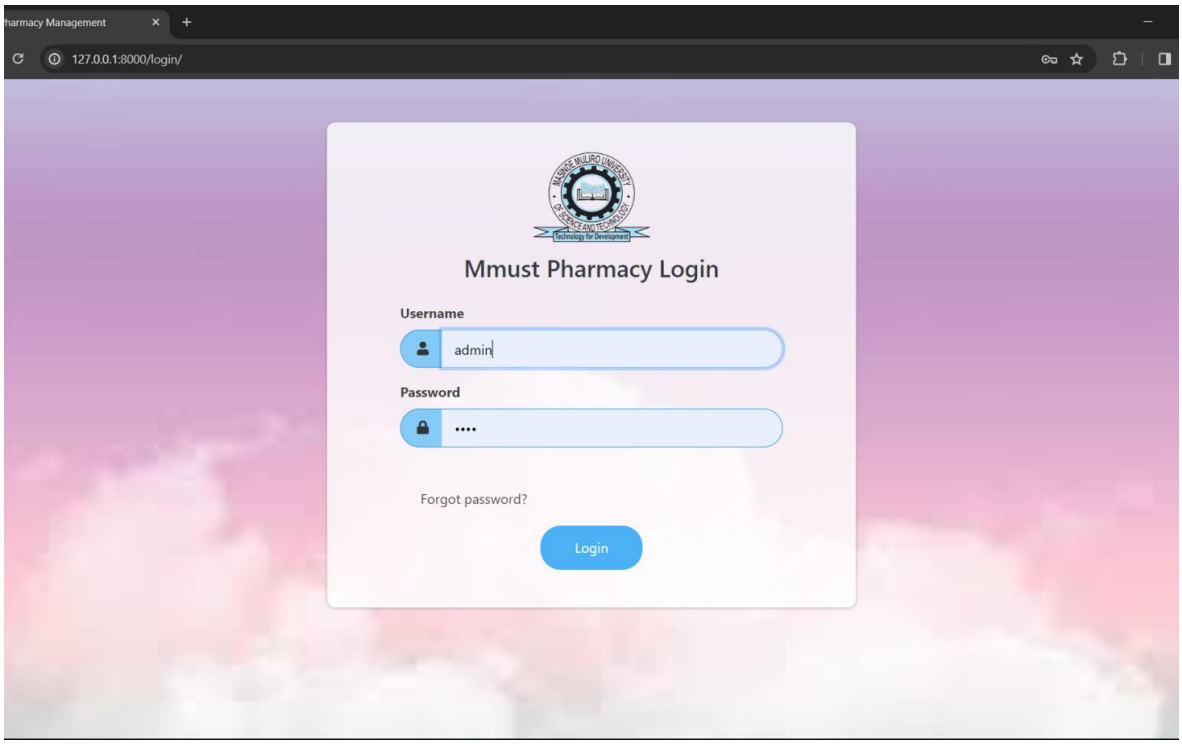
1. **Identify the testing objectives and scope**: This activity defines what will be tested, how it will be tested, and the expected outcomes.
2. **Define the testing approach**: This activity outlines the testing approach, such as manual testing, automated testing, or a combination of both.
3. **Identify the testing environment**: This activity identifies the hardware and software environments required to perform the testing.

4. **Identify the testing tools and resources**: This activity identifies the testing tools and resources needed to perform the testing, such as testing software, test data, and testing equipment.
5. **Define the testing schedule and milestones**: This activity defines the testing schedule and milestones, including the start and end dates of the testing activities.
6. **Define the test cases and scenarios**: This activity defines the test cases and scenarios that will be used to test the system.
7. **Develop the testing scripts**: This activity develops the scripts and procedures that will be used to execute the test cases and scenarios.
8. **Perform the testing**: This activity performs the testing, including functional testing, integration testing, system testing, acceptance testing, performance testing, security testing, and usability testing.
9. **Record the testing results**: This activity records the results of the testing, including any defects or issues that are identified.
10. **Analyze the testing results**: This activity analyses the testing results to identify any patterns or trends, such as recurring defects or issues.
11. **Report the testing results**: This activity reports the testing results to stakeholders, including project managers, developers, and end-users
12. **Review and refine the testing approach**: This activity reviews and refines the testing approach based on the results of the testing and any feedback from stakeholders.

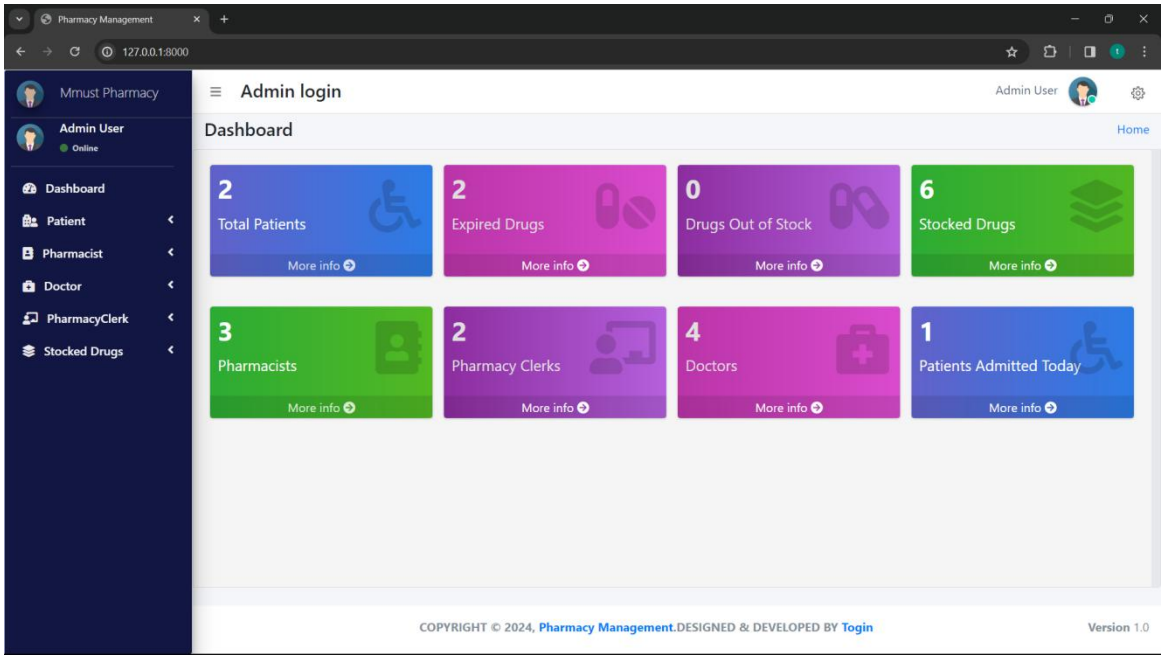
These activities help to ensure that the testing is comprehensive, effective, and meets the objectives of the test plan.

6.3 SCREEN LAYOUTS

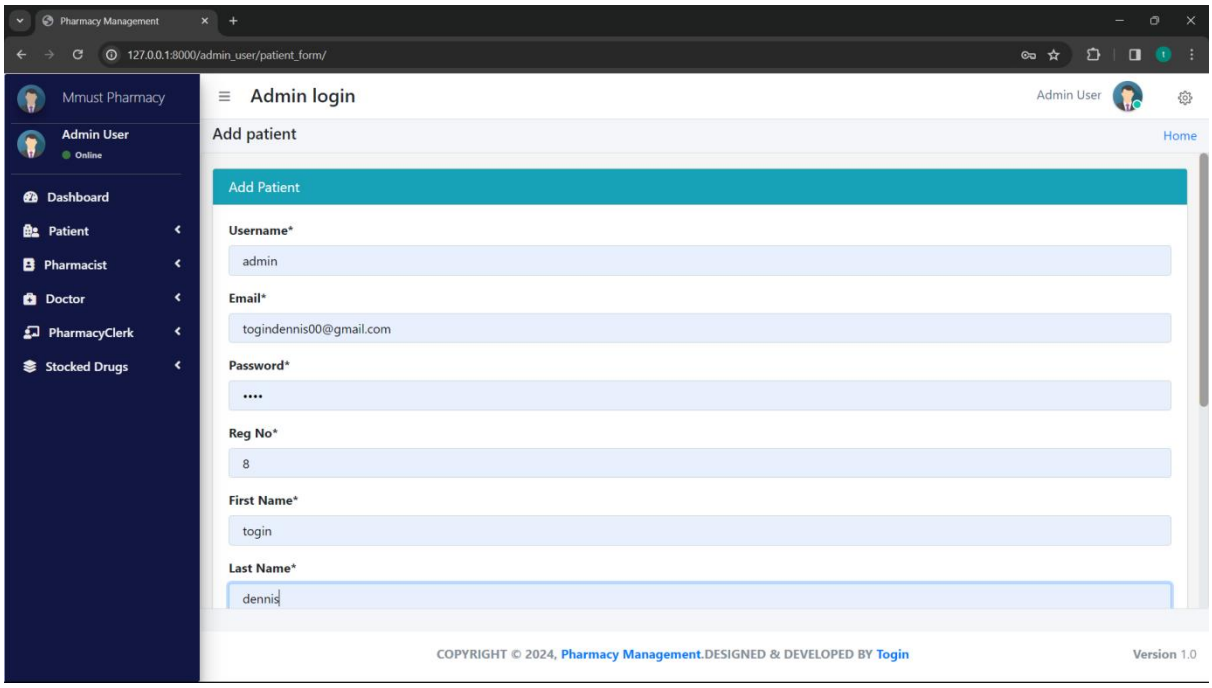
1. login page



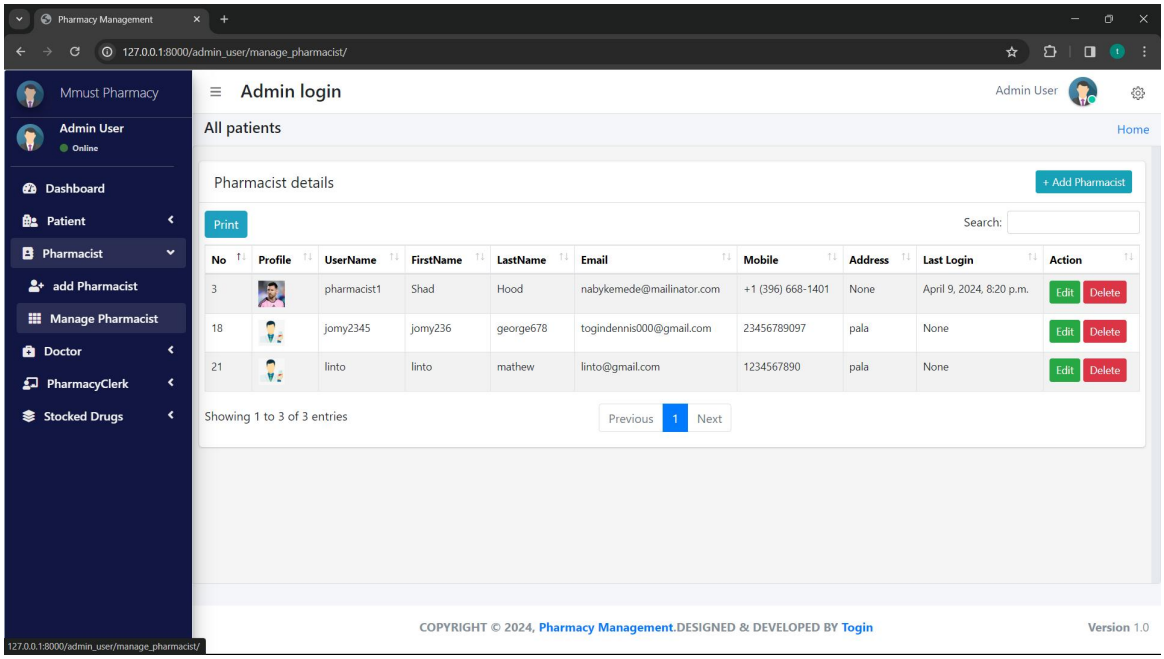
2. Admin home page



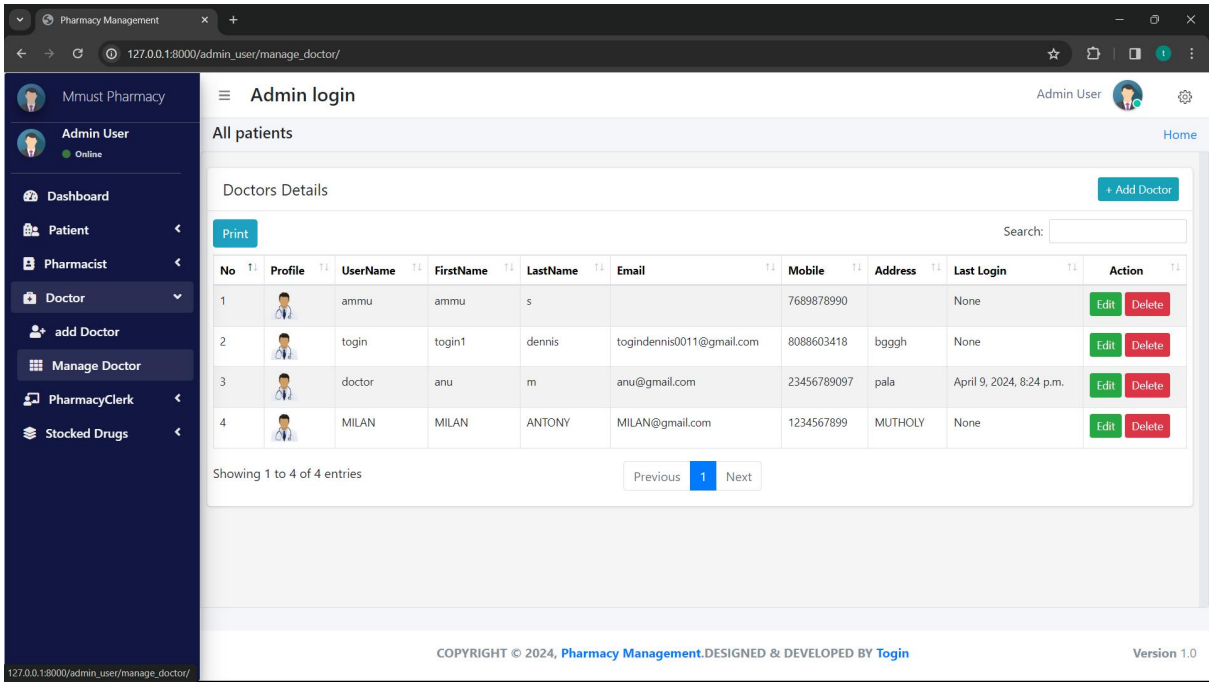
3. Add patient



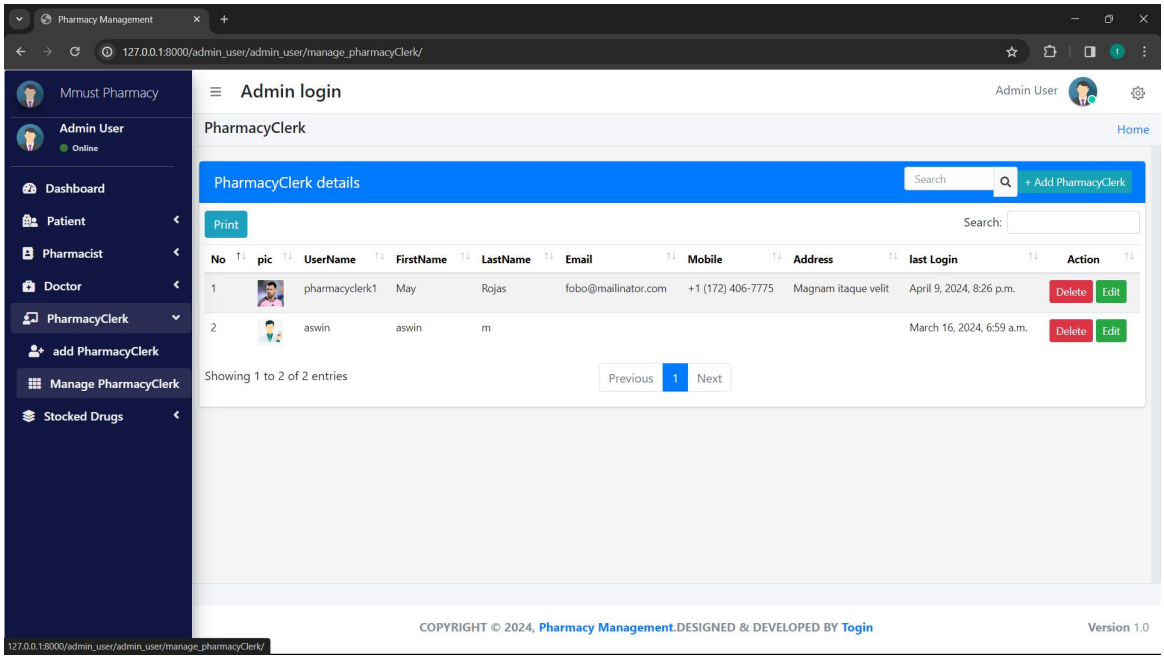
4. Manage pharmacist



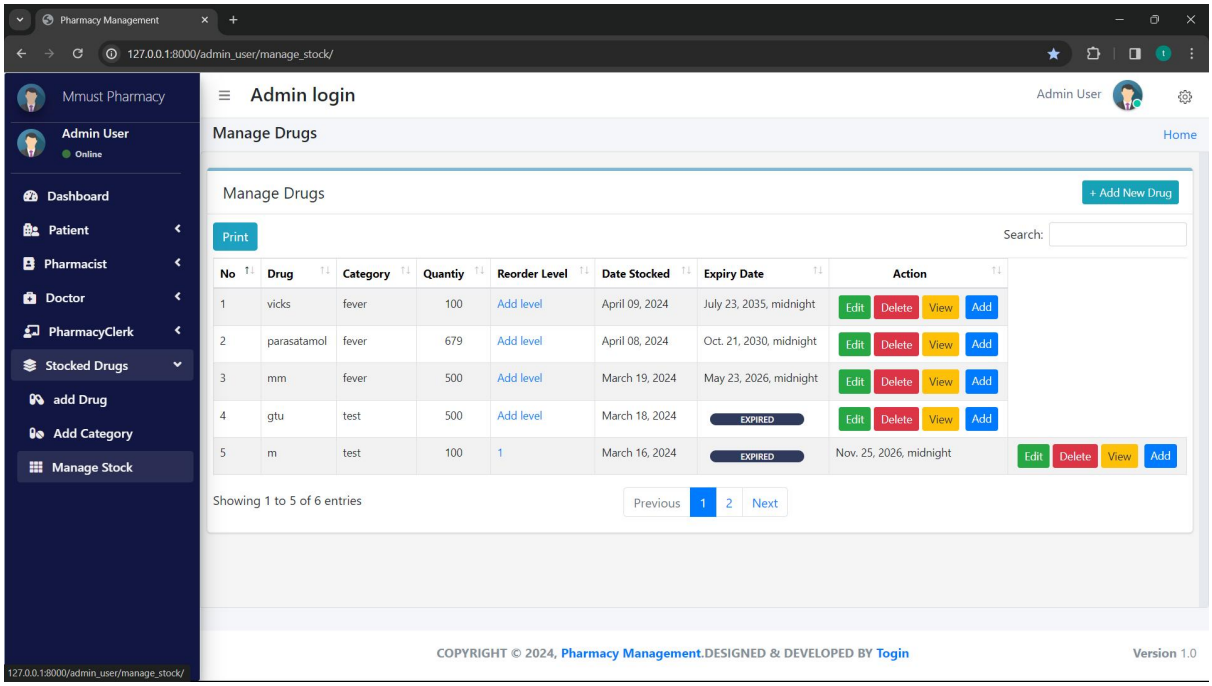
5. Manage doctor



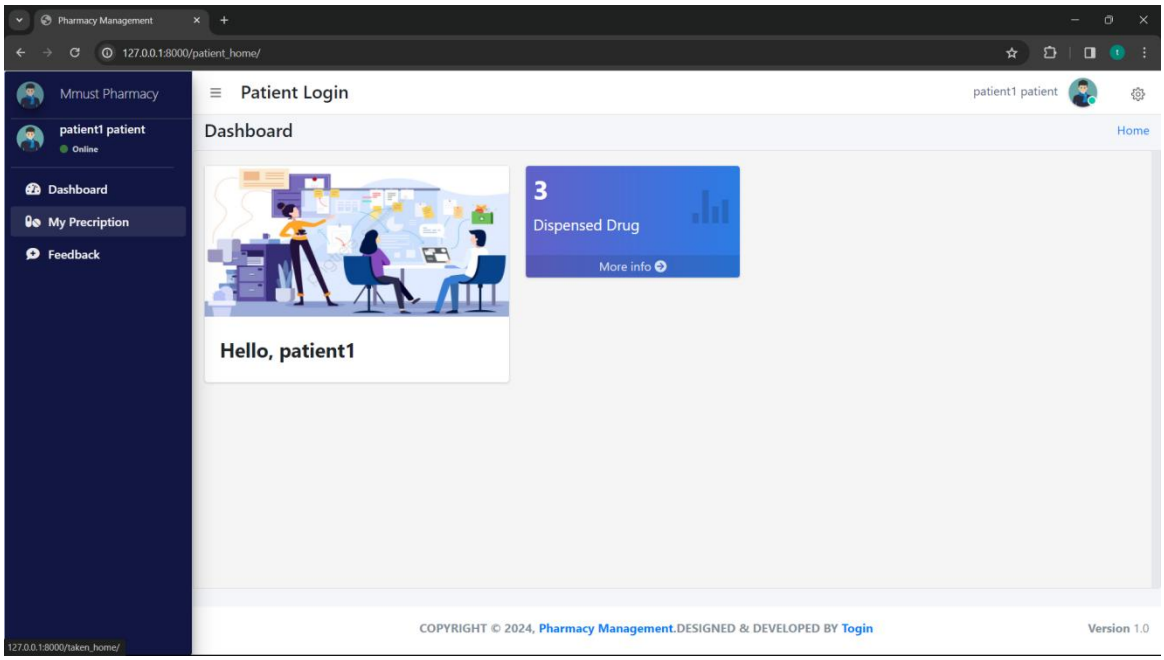
6. Manage pharmacy clerk



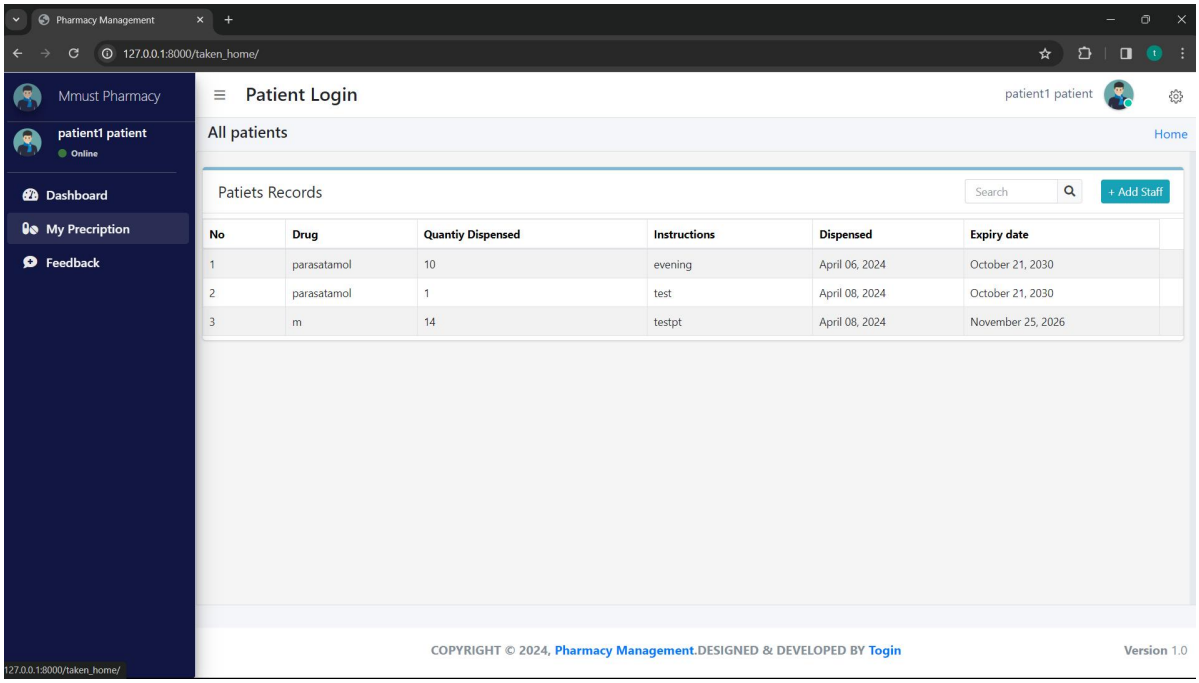
7. Manage drugs



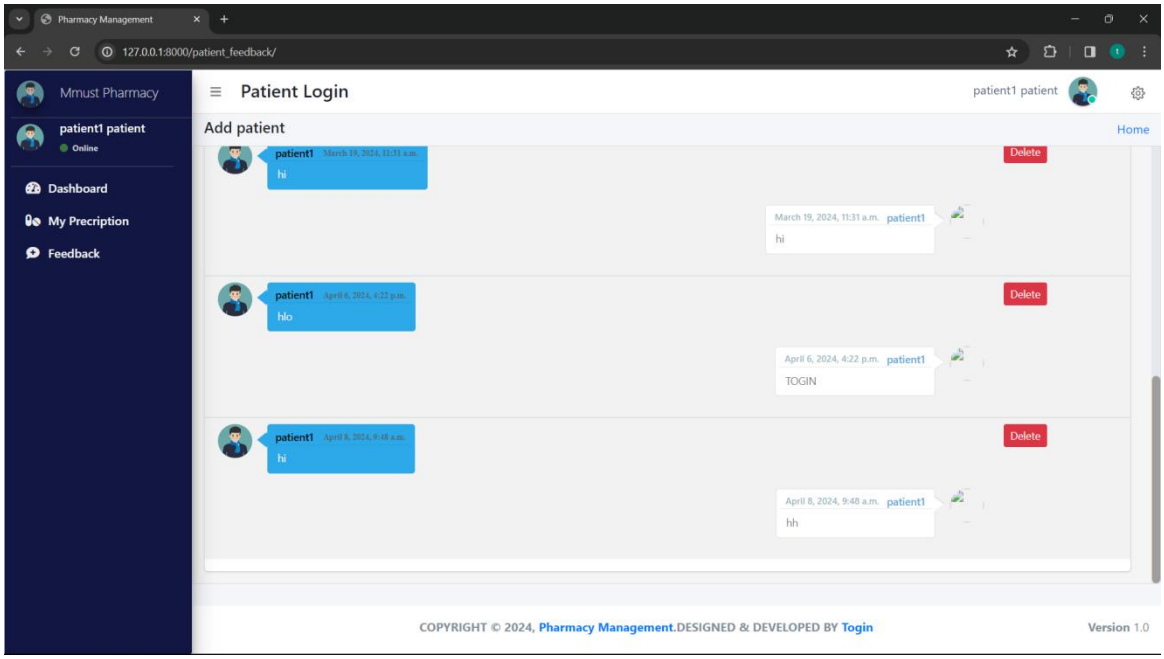
8. Patient homepage



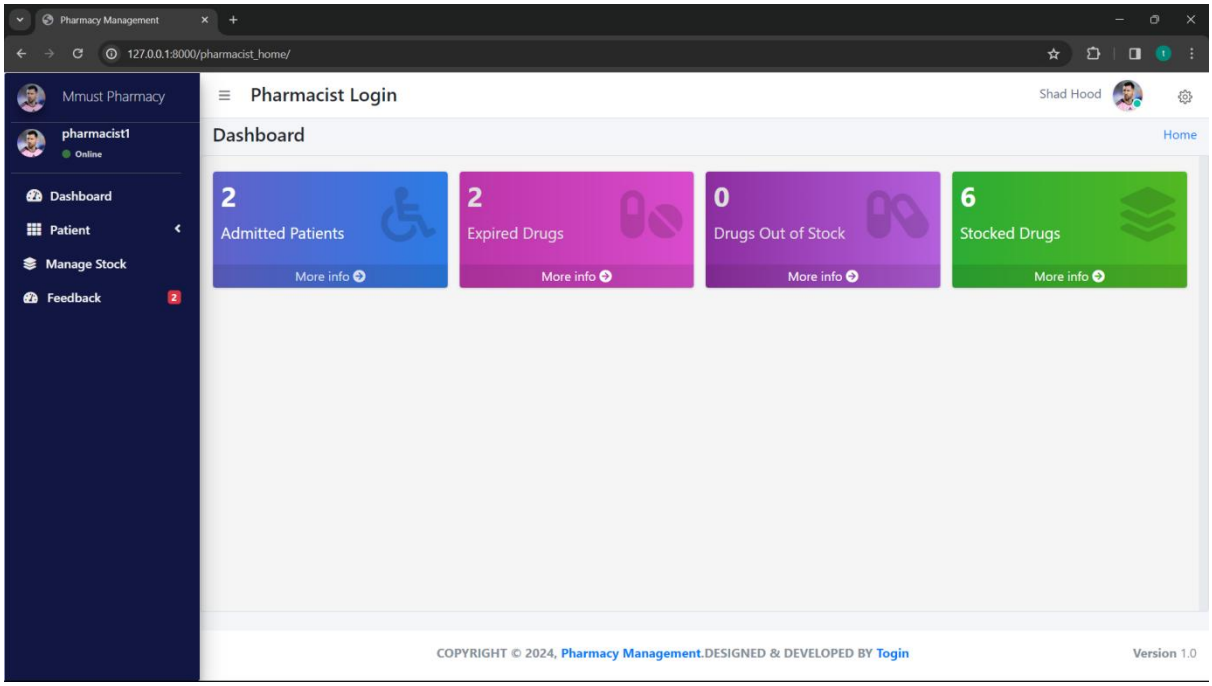
9. My prescription page



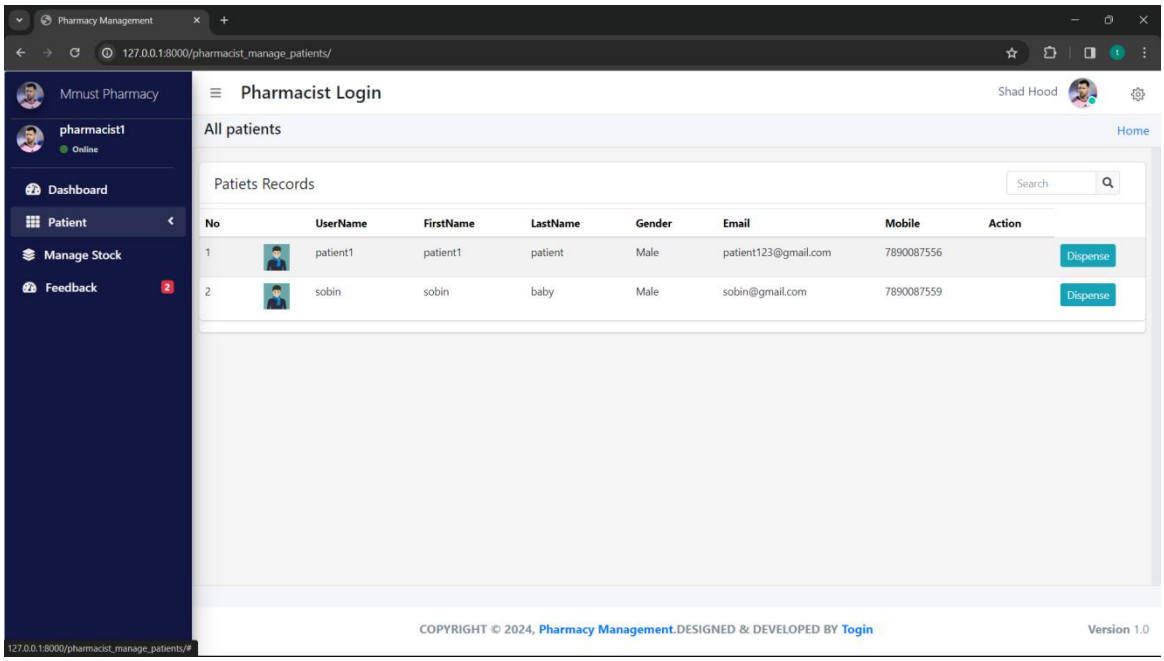
10. feedback page



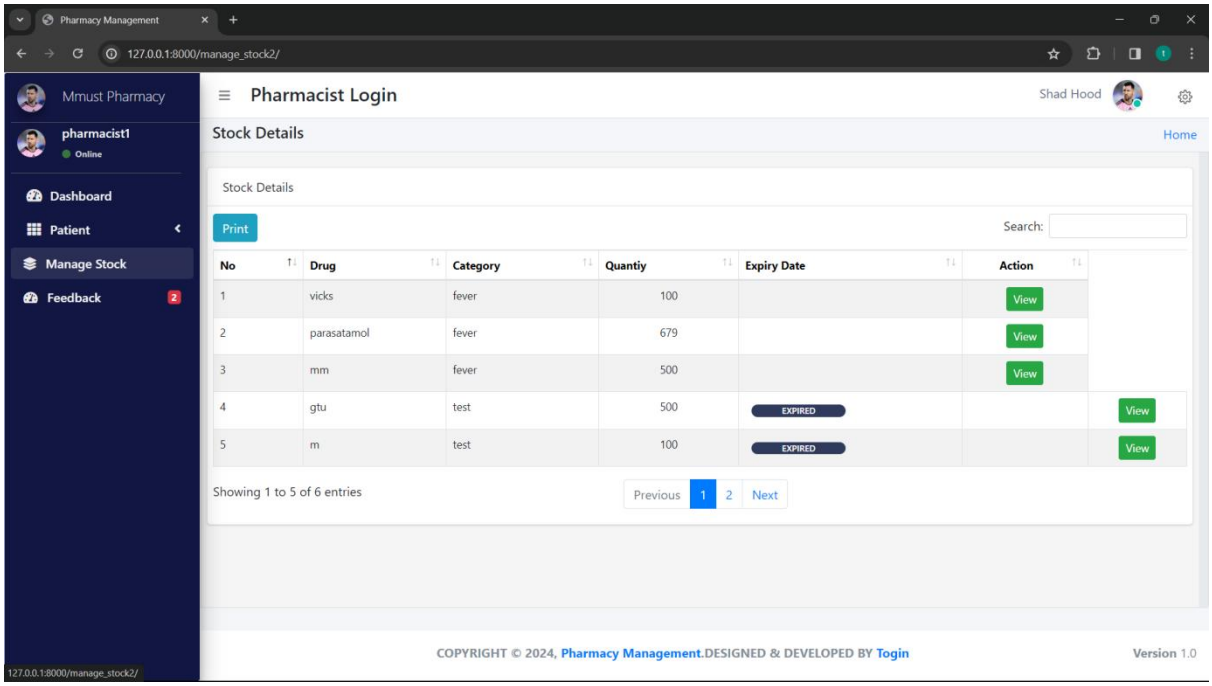
11. Pharmacist home page



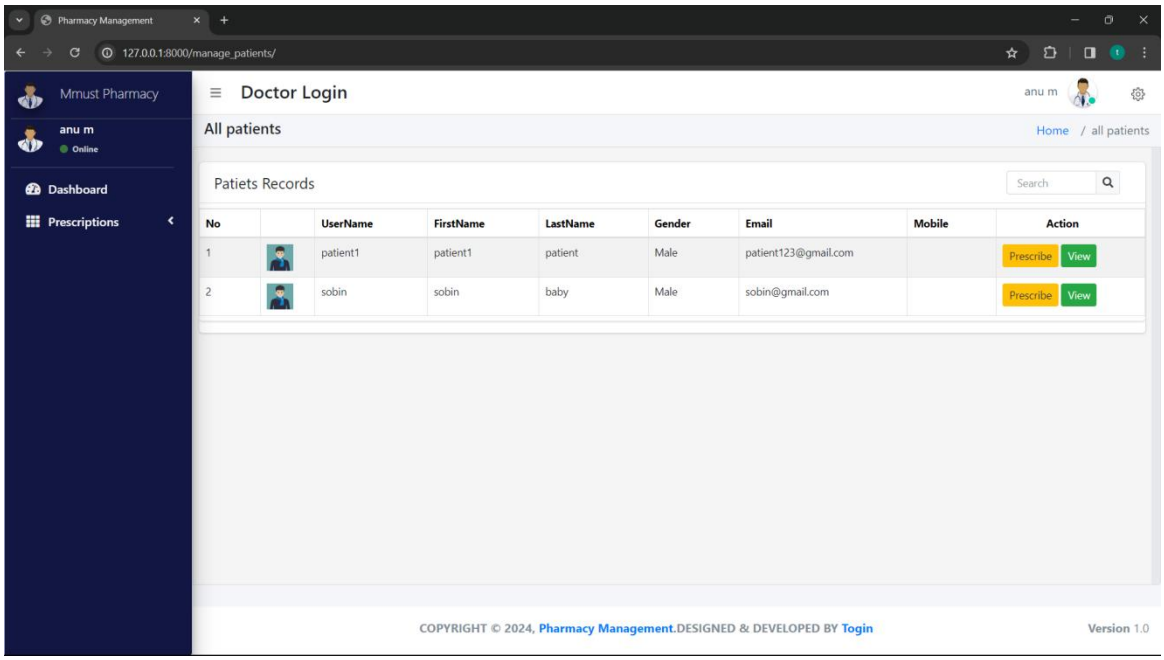
12. Dispense page



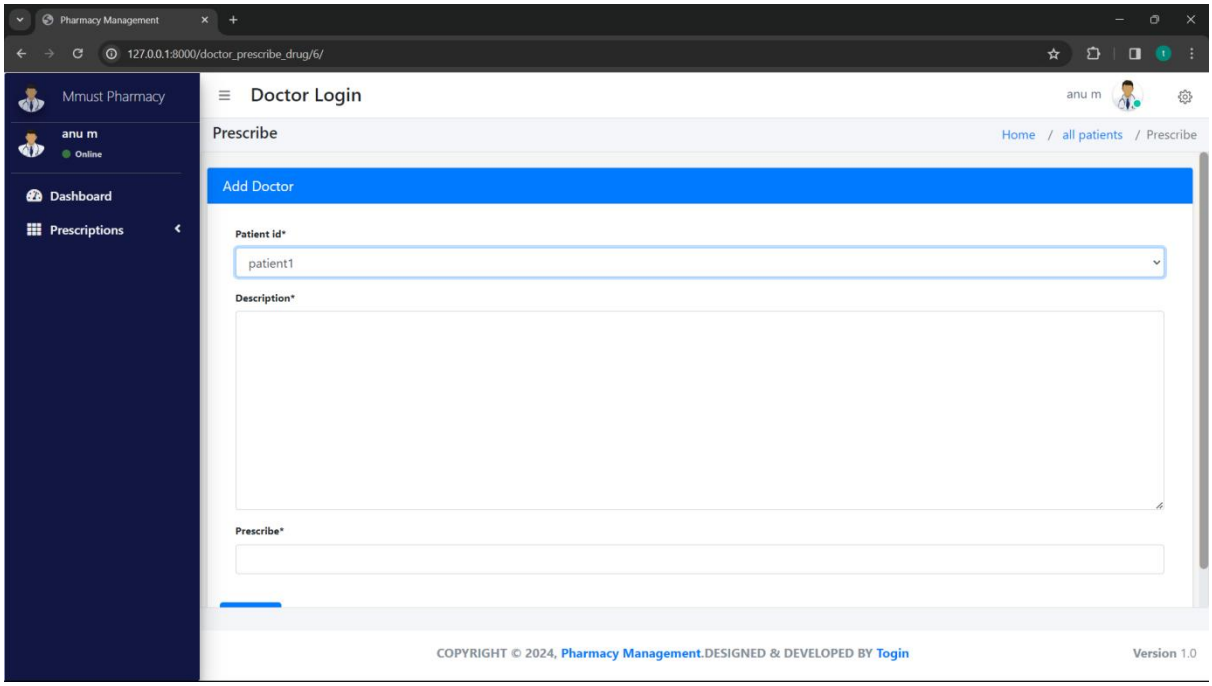
13. Manage drugs page



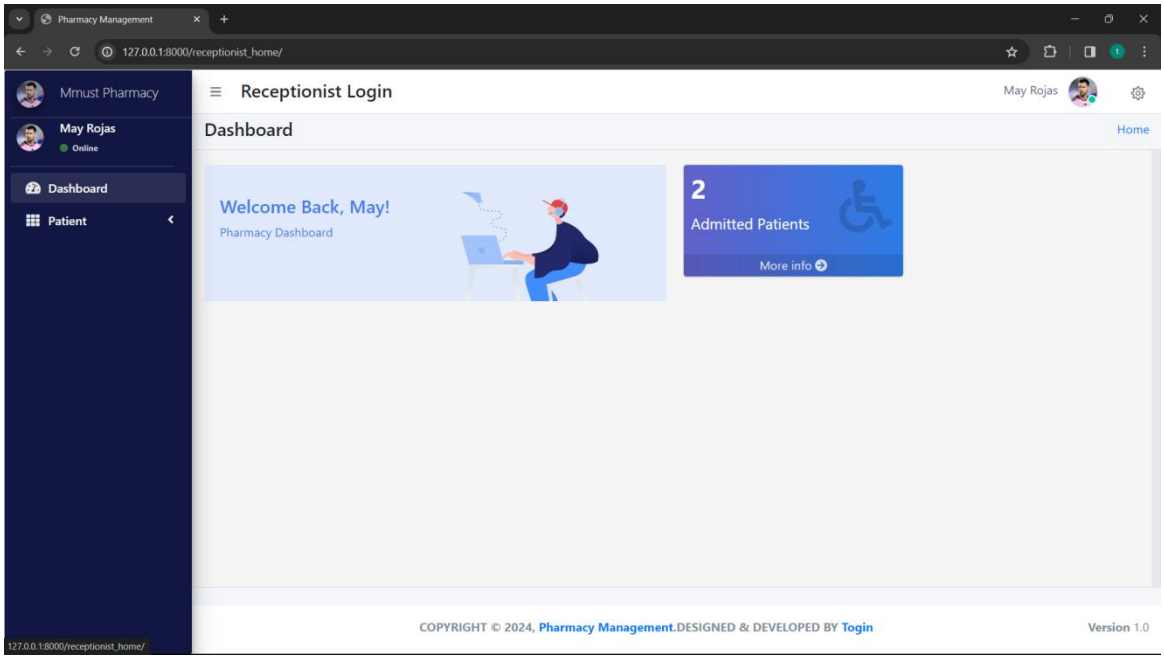
14. Doctor prescription page



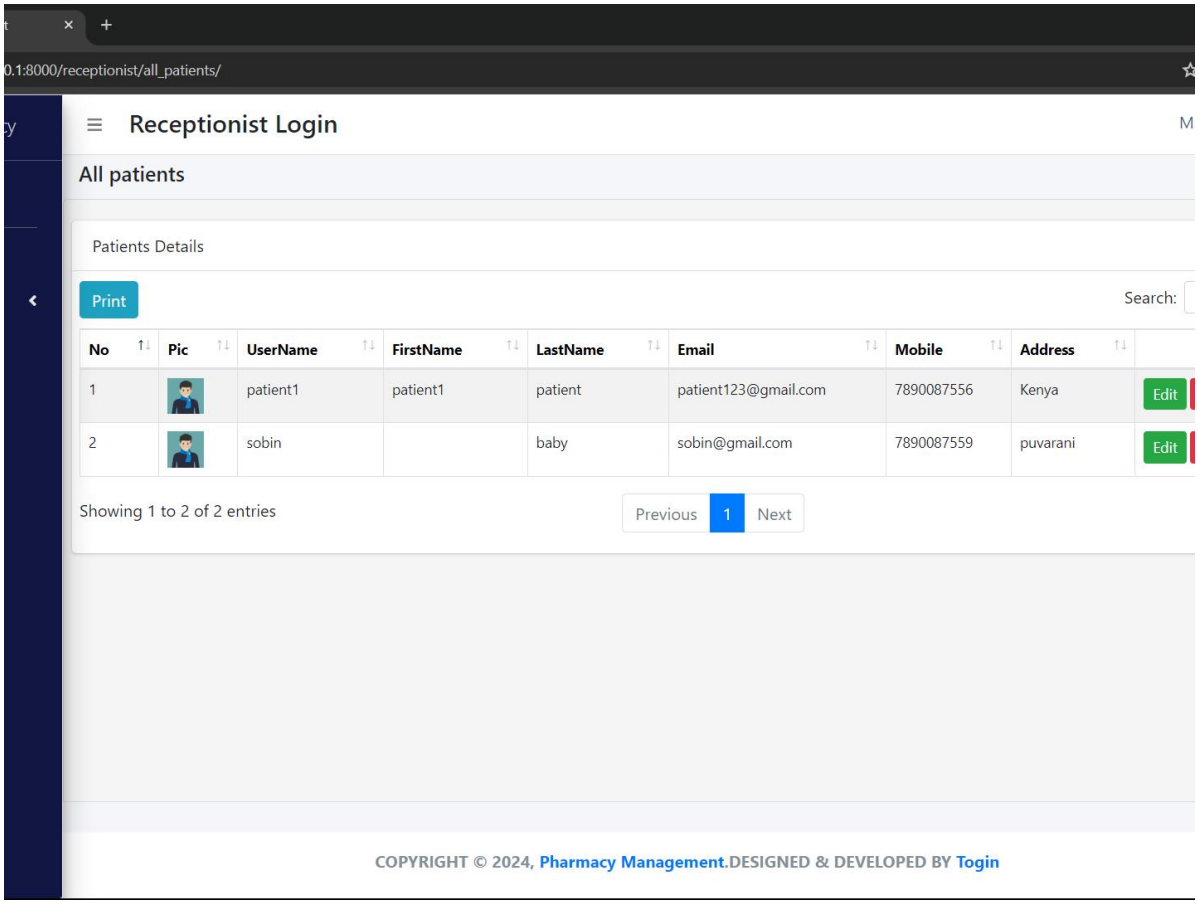
15. Doctor prescribe page



16. Pharmacist home page



17. Pharmacist -manage patient



7. SYSTEM IMPLEMENTATION

System implementation is the process of taking a software system from the design phase to a fully functional and operational state. The following are common activities involved in system implementation:

1. Installation: This activity involves installing the software system on the hardware environment where it will be used.

2. Configuration: This activity involves configuring the software system tomeetthe specific requirements of the organization or end-users.

3. Data Migration: This activity involves transferring data from the old systemto the new system.

4. Testing: This activity involves testing the software system to ensure that it functions as expected and meets the requirements and specifications

5. Training: This activity involves training end-users and administrators on howto use the new system.

6. Documentation: This activity involves creating documentation for the new system, including user manuals, technical documentation, and support materials.

7. Deployment: This activity involves deploying the new system in the productionenvironment.

8. Maintenance: This activity involves ongoing maintenance and support of the system to ensure that it continues to function properly.

9. Monitoring: This activity involves monitoring the system to identify and resolve any issues that arise.

10.Upgrades: This activity involves upgrading the system to new versions or releases as they become available.

11.Support: This activity involves providing ongoing support to end-users and administrators to address any issues that arise and ensure the system is functioning as intended

Successful system implementation requires careful planning, effective project management, and collaboration among all stakeholders. It is critical to ensure that the system meets the requirements and specifications, is reliable and secure,and is easy to use and maintain

8.CONCLUSION AND SCOPE FORFUTURE ENHANCEMENT

CONCLUSION

In conclusion, the Pharmacy Management System proposed in this abstract represents a transformative leap forward in modern healthcare administration. By leveraging computer-based design, robust inventory management, stringent security measures, and user-friendly interfaces, this system promises to revolutionize how pharmacies handle operations, ultimately enhancing patient care outcomes.

With its real-time insights into medication availability, meticulous record-keeping capabilities, and potential integration with existing healthcare platforms, the system offers a comprehensive solution to streamline processes, mitigate risks, and ensure compliance with regulatory standards.

Furthermore, the emphasis on comprehensive training and ongoing support underscores a commitment to facilitating successful implementation and user adoption, maximizing the system's potential impact on healthcare delivery.

In essence, the proposed Pharmacy Management System stands poised to set a new standard of excellence in pharmacy operations, empowering healthcare professionals to deliver safer, more efficient, and higher-quality care to patients.

FUTURE ENHANCEMENTS

It is not possible to develop a system that makes all the requirements of the user. User requirements keep changing as the system is being used. Some of the future enhancements that can be done to this system are:

As the technology emerges, it is possible to upgrade the system and can be adaptableto desired environment. Because it is based on object-oriented design,

any further changes can be easily adaptable. The future generation relies more on digital

networking tools to use online pharmacy management systems. Easy accessibility to digital tools and techniques can help establish better connections which makes the pharmacy management remain on the competitive edge.

- Based on the future security issues, security can be improved using emerging technologies.
- Chat option can be added.
- Online payment page can be added
- Online treatment can be added
- Sub admin module can be added

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