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Pharmacyst (Pharmaceutical Product Buying & Selling Application)

Bhavesh Bhusare[1], Rohan Lohar[2], Nikhil Shelke[3], Dinesh Jagtap[4], Dipali Khairnir[5]

[1,2,3,4]FStudent, Dept of Computer Engineering, Dr D. Y. Patil College of Engineering, Maharashtra, India

[5] Professor, Dept. Of Computer Engineering, Dr D. Y. Patil College of Engineering, Maharashtra, India

Abstract: Pharmacyst (Pharmaceutical Product Buying & Selling Application), as the name implies, is a application with a that will assist you in purchasing pharmaceutical products online. Getting out of flats or houses is no longer practicable or safe, so to purchase products available in medical stores, we have built a application that allows you to do so while sitting at home or wherever you are. This application contains all of the products that can be found in medical stores. It has one feature that allows you to buy drugs by simply inputting symptoms. You can buy the things at a lower cost by taking advantage of reductions at the regular price. Your purchases will be delivered to your home for free.

Keywords: Pharmacy, Chatbot

1.INTRODUCTION

The web application for online drug purchase is quickly becoming a widely acknowledged and used business model. More and more companies are putting up applications with features that allow customers to purchase medicines online. It is fair to argue that online purchasing is growing more common. Medicine apps, often known as medicine delivery apps, have revolutionized the healthcare business. Rapidly evolving innovation is improving the human world in a positive way. We cannot overlook the importance of medicine and other medical items; whether a child, a teenager, or an elderly person, everyone requires medical aid at some point. Consumers may skip long lines by downloading a pharmaceutical delivery app or going on the application, which allows them to acquire their medicines on time and at their doorway. The online app simplifies the users' lives and assists with online pharmaceutical transactions. This web application aims to alleviate the problems that the current system has, while simultaneously providing low-cost ownership. Furthermore, this system is tailored to meet the specific needs of all users in terms of completing operations in a timely and efficient manner. After the doctor has reviewed the prescription, only the customer will be able to place an order; additionally, all drugs must be confirmed and certified by a registered pharmacist prior to delivery. It offers a data storage facility as well as easy and interactive data retrieval, such as prescription order history for future usages, such as when a customer requires a monthly refill of some prescriptions. With an effective user interface design, it is user-friendly, dependable, and secure. It differs from other pharmaceutical delivery apps in that it includes a bot that will assist the user in finding the medicine he requires. This is the web application's most important feature.

1.1 Motivation

- During the Covid-19 crisis, the country was placed on complete lockdown, and citizens were not permitted to leave their homes, making it difficult to purchase medical and personal health care supplies. Medical stores were often located distant from homes in many locations. Ordinary people had a lot of troubles in these situations, and it was rather difficult to arrange medical supplies during an emergency.:
- There is a significant surge in e-commerce platforms, firms are shifting towards online reselling of products and even buyers are happy buying them without even stepping out of their houses. Why can't medicines be delivered online within an hour of being ordered? Groceries and dairy items are delivered within an hour of being ordered, so why not medicines?

1.2 Problem Definition

There are many medicine delivery applications over the playstore, which are less interactive and less user-friendly. The present system does not have filtration with which they can get the medicine without consulting a doctor.

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1.3 Methodology to solve the problem

- The present systems are less interactive and less user-friendly so to overcome that we are going to provide a great User Interface (UI) with a chatbot to order the medicines which will be more interactive and more user-friendly.
- Our system will provide better filtration using that customer can get the medicine by just entering symptoms.

2. LITERATURE SURVEY

2.1 Online research

- The kingdoms e-pharmacy practices will serve as a stepping stone for the development of online pharmacy. According to P. Kumari and R. Nandal. This research study looks at the numerous tools and approaches that may be utilized to create a application. We also go over the steps involved in creating a application, with an emphasis on the Xampp tool, localhost. The following section compares several web application development frameworks. We also go into web application life cycle models and framework development. The results of numerous review articles are also given in this report for a better knowledge of the challenges that consumers may confront. This article discusses the technology utilized in this development, PHP, and the functionality of Xampp as a result, including screenshots. It is believed that it would serve as a valuable guide for the procedure.
- According to the Council on Credentialing in Pharmacy's Resource Paper, N. P. Albanese, PharmD, Clinical Assistant Professor at the University of Buffalo's School of Pharmacy and Pharmaceutical Sciences, and Michael J. Rouse, Pharm, MPS, Assistant Executive Director, International and Professional Affairs, Accreditation Council for Pharmacy Education, collaborated on this document. This document summarizes the present condition of pharmacy practice in terms of professional duties and responsibilities, patient populations served, the complexity of patient services given, and different facets of growing pharmacy practice. The document focuses on pharmacists' patient care services; it does not include all of a pharmacist's responsibilities, such as administration and general management. This is a descriptive analysis study.

3. REQUIREMENT SPECIFICATIONS

3.1 Software requirements

A. Tools

The tools which we have used for creating this project and the browsers which have been used to get the output of our project are as follows:

Code editors	● Notepad++ ● Visual studio code (VS code)
Output software (Browser)	● Google chrome ● Mozilla Firefox
Server software	● WAMP or XAMPP (Window Apache MySQL & PHP)

Table 3.1: Tools

B. Front-end technologies:

The technologies which are used to create the Front-End (the interface is seen by the user) of this project are as follows:

Client-side technology (Browser side)	Layout language	● HTML ● HTML5
	Designing language	● CSS ● CSS3
	Designing framework	● Bootstrap
	Browse Scripting language	● JavaScript (ES6) ● jQuery
Server-side languages	PHP8 (Hypertext preprocessor)	

Table 3.2: Front-end technologies

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3.2 Hardware requirements:

Cloud server with configuration as below:
1. Intel i5 8th Gen/ AMD Ryzen 5 or above processor.
2. Min. 8 Gb RAM memory
3. Min. 256 Gb SSD
4. 24/7 Internet Connectivity
5. Continuous power supply

4. SYSTEM DESIGN

4.1 System Breakdown (Execution Flow):

The goal of this system breakdown is to break down the entire system into various components so that we can create the entire system more easily. It will assist us in getting from the beginning with a system's main function to the intermediate levels down to the level of simple functions. Instead of writing everything down, the Flow Chart below can help you understand the system better.

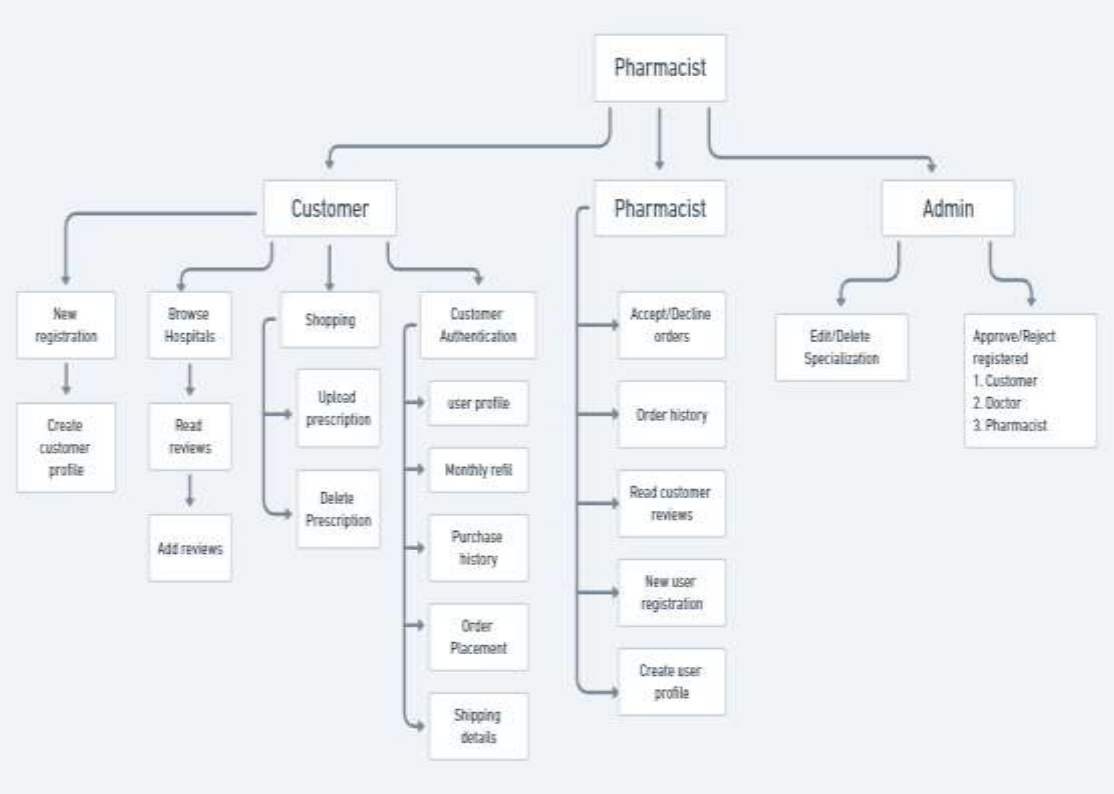

Fig 4.1: System flow chart

4.2 Interface Breakdown:

This system has three different level interfaces: one for the user or client, one for the pharmacist, and one for the administrator. The operation of each interface is described in detail below.

A. Customer (User):

When enrolling, customers must give identification evidence in order to verify their age. The system will provide him with the user ID and password. He'll submit the prescription and place an order for the medications.

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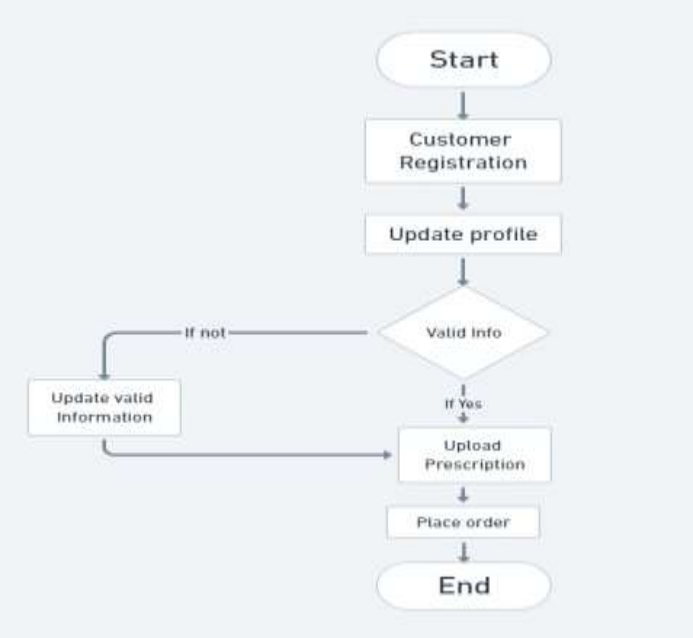

Fig 4.2: Customer Flowchart

B. Pharmacyst:

A list of the drugs offered in his medical shop will be uploaded by the pharmacist. He will get the prescription as well as the delivery address for the medications. During registration, he must show proof of his identity as well as the license for his medical shop.

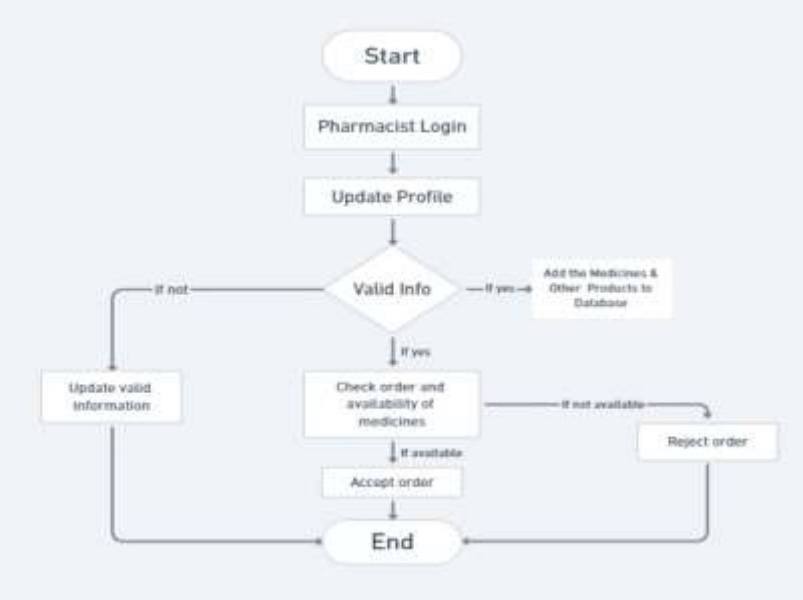

Fig 4.3: Pharmacist Flowchart

C. Admin:

Admin is one of the most crucial aspects of the system, since it has complete control over it. He needed to keep the application's content and design up to date, as well as make sure it was backed up and completely working. Check to see if the local networks are up and running. He has the authority to accept or reject any registration. He'll also keep track of all the orders.

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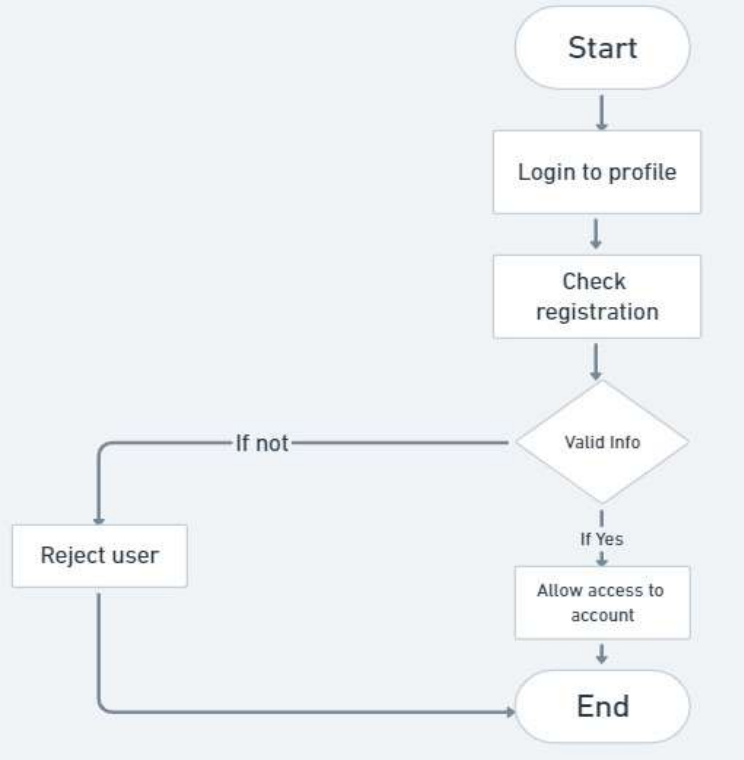

Fig 4.4: Admin Flowchart

4.3 Algorithm:

1. Start
2. Log in
3. Search for medicine or any medicinal product
4. If product found then:
a. adds to cart
b. Place the order
c. selects the payment method and do the payment
5. If not found:
a. Then searches for another medicine
b. Or get alternative suggestion
6. Exit

5. OTHER SPECIFICATIONS

5.1 Advantages:

Pharmacist Benefits include:
1. Take your company online.
2. Increase the number of pharmaceutical orders.
3. Patients with chronic illnesses can place refill orders.
4. Attract new customers.
5. Expand the company and reach out to a broader clientele.

Customers will benefit from the following features:
1. With only a few clicks, you may have your medicine delivered to your home.
2. Time-saving
3. Medicines are more readily available for persons who are confined to their houses or who live far from a pharmacy.
4. People with impairments and the elderly can have their medications delivered to their homes.
5. Customers can place prescriptions at any moment.

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5.2 Disadvantages:

1. The user must have internet access.
2. Medicine and drugs are not covered by the BUY BACK POLICY, which means that once a product is delivered, it cannot be returned or replaced.

5.3 Applications:

All pharmacies and users will be able to access this application.

6. SOFTWARE TESTING

6.1 Unit Testing:

Unit testing entails creating test cases to ensure that the program's underlying logic is working properly and that program inputs result in valid outputs. Validation should be performed on all decision branches and internal code flow. It is the testing of the application's individual software parts. This is intrusive structural testing that depends on prior knowledge of the structure. Unit tests are used to verify a single business process, application, or system configuration at the component level. Unit tests guarantee that each individual route of a business process follows the published specifications and has clearly defined inputs and outputs.

- Functions, classes, procedures, and interfaces are examples of testable parts of a program. Individual pieces of source code are examined to see if they are fit for usage using the unit testing approach.
- Software engineers write and run unit tests to ensure that code adheres to its design and requirements and act as intended.
- Unit testing is used to separate each component of a program and ensure that each one is operating properly.
- This means that when a set of inputs is supplied to a function or method, it should return the appropriate values. When incorrect input is provided, it should gracefully manage errors during execution.
- A unit test is a documented agreement that a piece of code must fulfill

6.2 Integration Testing:

Integration tests are used to see if two or more software components can work together as a single application. Testing is primarily concerned with the fundamental output of screens or fields and is event-driven. Integration tests verify that, while individual components were satisfied, the combination of components is right and consistent, as demonstrated by successful unit testing. Integration testing is a type of testing that focuses on uncovering issues that occur from the integration of components.

- We also perform integration testing after combining two separate components.
- When two separate modules, Module A and Module B, are merged, integration testing is performed, as shown in the figure below.

7. CONCLUSION:

This technique can assist ordinary people in having their medicines and health care supplies delivered to their homes. This also aids small and large-scale pharmacies in expanding their consumer base and increasing earnings. During an emergency, this technology might be a lifesaver for medical institutes and clinics. Our chatbot allows even disabled people to obtain their medications in only a few clicks.

8. FUTURE WORK:

For big-scale enterprises and companies, this system may be improved and scaled up so that they can simply distribute their products throughout a broad network. To make the flow more user-friendly and effective, voice assistants can be introduced. This will benefit both of them, the elderly as well as individuals who are blind or disabled in some way. To expand the local network and connect other InterCitys, network mapping can be done. Doctoral support may be added to provide the customer with valuable assistance in answering any type of query and giving a quality consulting experience.

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