PHARMACY MANAGEMENT SYSTEM

(An online pharmacy shop)

 \mathbf{BY}

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DEDICATION

This project work is dedicated to the ALMIGHTY GOD for making me being able to startup and finish in sound health. Also to my parents as well for being supportive in the cause of this project work both financially and spiritually and to my brother and close friends for being supportive and kind to me during the cause of this project work.

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ABSTRACT

This project is an online pharmacy system for a pharmacy that already exists. The project aims to transform an online shopping app into an online pharmacy and to give customers of physical stores access to the benefits of online shopping. It allows you to buy medication from a pharmacy anywhere in the world using the internet and a web browser. In this manner, the client will get the help of internet shopping and home conveyance from the pharmacy that he chooses. This system can be used by any local pharmacy or by a multinational branded pharmacy. On the off chance that pharmacy is giving an online entryway where their clients can appreciate simple shopping from anyplace, the pharmacy will not lose additional clients to the moving on the web pharmacy, for example, flip cart or eBay Since the application is in web stage and can undoubtedly be available and continuously accessible. Over this project of our own is being created to assist pharmacies with effectively selling accessible medications from anyplace in the most ideal manner and lessen the human endeavors.

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CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION

People need medicine when they become sick and unable to enjoy their normal life. People have to go in the pharmacy for buying medicine. But sometimes they can't get the proper medicine due to the lack of easy availability. So, the patients have to search for the desired medicine in every medicine shop which wastes their time and energy. Sometimes, in emergency cases, the condition of patients become very serious without taking medicine at the right time.

Online Medicine Shop will give the opportunity to buy proper medicine sitting at home without any trouble. There are many medicine shops in every city but online medicine shop is very rare. The online medicine shop is operated over the internet. It will bring comfort to every buyer and seller of the medicine. The seller can manage the shop, store the details and relevant information of the medicine and sell the medicine in one system easily. The customer can see, search, buy medicine and give review about the service quality in this website. So, Online Medicine Shop will create a convenient way of selling and buying medicine and will make our life easier and hassle free.

1.2 MOTIVATION

Perhaps it isn't another mission, but rather something new. Long lines, even the pharmacies are not opening because of the inter activeness of every medication, organizations don't offer medication conveyance at the perfect moment, regardless of whether the medication's expiration date has passed, every one of the issues have an answer in this undertaking. Where effectively it very well may be available in 3 classes. The general public should visit Pharmacies, and pharmacy companies can access drug store shops to learn about the amount of drugs available in the pharmacies, as well as what pharmacies are actually stocking which types of medications, and so on. As a result, we can assume that our product is a good arrangement and a complete package.

1.3 OBJECTIVE

The main objective is to manage the details of customer, vendor, medicine, stock, order and sell the medicine in online. In this technological era, everything becomes very faster. People love to enjoy a comfortable life. This online medicine and preserves the records and documents of the medicine. And the profit will be high also. That's why, Online Medicine Shop is developed where the management of the medicine shop is web based through which can manage a medicine shop easily from anywhere at anytime.

1.4 APPLICATION

This software can be used in any pharmacy that has a database to keep track of. The software will produce reports based on the needs of the consumer. The app allows you to print invoices, bills, and receipts, among other things. It can also keep track of the materials that the supplier sends in.

1.5 MODULES

Following a thorough review, the framework was determined to have the following modules and functions. The modules involved are:

- > Administrator
- ➤ Users

The administrator is the super user of this application. Only the admin can have access to the admin page. Admin may be the shop's director. All of the information about all of the users and all of the items is open to the administrator.

- ➤ Manage Products
- ➤ Manage Orders
- ➤ Add Products

The shopping cart project includes a variety of items. By label, the goods can be divided into various categories. Admins may add new items to the current system, complete with all required information and an image.

➤ Delete Products

The administrator can delete products based on their stock.

> View products

The administrator will be able to see a list of all the items that are currently available. He may also use the name of a product to find it.

➤ View User

The administrator would be able to see a list of all the users who have signed up for the system. Except for passwords, the admin can see all of the information of each user in the list.

➤ Add User

Admins can explicitly add a user by supplying the necessary information.

➤ Delete User

The administrator has a right to delete a user.

➤ Block/Unblock User

Administrators have the right to block and unblock users.

➤ View Order

The Orders issued by the users can be viewed by the administrator. He has the right to double check the purchase's data.

➤ Delete Order

When the product is ready for delivery, the admin can remove the order from the orders list.

➤ User

To access the items in the system, a new user must first register in the system by providing the necessary information.

➤ Login

After registering, a user must log in to the system using his user name and password.

➤ View Product

After successfully logging in, the user can access a list of items based on their names. Users can display a comprehensive overview of a product that includes the product name, product information, product image, and price.

> Search Product

Users may use the name of a product to find it in the list.

➤ Add Cart

The user can add a product to his cart by selecting the add to cart option on the product page. By clicking on the cart button, he can see what's in his cart. In the cart, you can see all of the items that have been added. By clicking delete, the user can remove an object from the cart.

> Submit Cart

The user will apply the cart after verifying the products in it and providing a delivery address. The cart will be empty after a good submission.

CHAPTER 2 SYSTEM ANALYSIS

2.1 SYSTEM ANALYSIS

It's the most imaginative and troublesome phase of the framework's life cycle. The applied model of the framework is planned during the investigation cycle, while the actual model is planned during the development stage. During this cycle, a ton of work should be finished. We began the plan interaction by figuring out which types, reports, and different yields the framework would produce. The particular information for each was then pinpointed. We drew the shapes, or rather, the screens, as they should look, on paper as a model for the venture to begin, and afterward, we demonstrated the structure on a PC show utilizing one of the computerized framework configuration apparatuses. After the plan of the structures, the subsequent stage was to characterize the information to be inputted, estimated, and put away separately, just as the computation interaction. During the programming stage, document constructions, for example, paper records were picked, and systems were composed to disclose how to deal with the information and methods the yield. The archives were plan particle the type of diagrams. The yield configuration alludes to the

organization where the outcomes ought to be introduced. It ought to be in the most easy-to-use and engaging arrangement conceivable. The information configuration thinks about what ought to be the framework's information and, thus, readies the info design. The document configuration measure is worried about how information could be prepared on actual gadgets. The meaning of the strategy for doing the procedure on the gave information is remembered for the interaction plan.

2.2 EXISTING SYSTEM

The current framework for shopping is to visit the drug store physically and from the accessible medication pick the thing patient need and purchasing the thing by installment of the cost of the thing.

- > It require more Paperwork.
- ➤ Less secure.
- ➤ User take more endeavors so the measure is tedious.

2.3 SYSTEM OBJECTIVES

The framework administrations and objectives are set up by a discussion with the framework client. They are then characterized in subtleties and fill in as a framework detail. Framework necessities are those on which the framework runs.

2.4 GENERAL DESCRIPTION

Functional requirement – User

➤ User Login

Description of feature This component is utilized by the client to login into a framework. A client must log in with his client name and secret word to the framework after enrollment. If they are invalid, the client is not permitted to enter the framework. Functional requirement- Username and secret key will be given after client registration is confirmed. - Password ought to be stowed away from others while composing it in the field.

➤ Register

New User Description of feature another client should enroll in the framework by giving fundamental subtleties to see the items in the framework. Functional requirement—The system should have the option to check and approve data. - The framework should encode the secret phrase of the client to give security.

> Purchasing an Item

Description of the feature The client can add the ideal item into his truck by clicking add to truck choice on the item. He can see his truck by tapping on the truck button. All items added via truck can be seen in the truck. A client can eliminate a thing from the truck by clicking eliminate. After affirming the things in the truck the client can present the truck by giving a conveyance address. On fruitful presenting the truck will get unfilled.

Functional requirement- The system should guarantee that lone an enrolled client can buy things. Administrator-

➤ manage user

Description of feature The director can add client, erase client, see client, and square client.

➤ Manage Products

Description of feature The overseer can add an item, erase an item, and view an item.

➤ Manage Orders

Description of feature The Admin can see orders and erase orders. Practical prerequisites The framework should recognize the login of the administrator. Admin record ought to be gotten so just proprietor of the shop can get to that account.

2.5 Requirement Collection and Analysis

Requirement collection and analysis is very crucial part of any project. Without analysis, collecting data or a good planning, a project will never complete properly. When we are developing on a project, a delivery time of the project has already given. That's why project work must be planned and executed to the deliver time.

My project is an online Web-based Pharmacy Management system. Analysis and requirement collection was a big challenge, when I started thinking about this project. After start analysis I figure out some significant features that boost my project.

Hardware and Software Requirement for our system:

Whenever you install any Software or any Hardware for your computer, you should first make ensure that your computer supports the system requirements. We need an internet connection based system hardware's such as computers, laptops, tablets, smart phones and so on.

I	have	used	some	sof	tware	tools	s and	l pl	latfo	orm :	for	deve	lopn	nent	is	descri	bed	bel	ow:

HTML5
CSS3
Bootstrap
JavaScript
React
Node js Framework
MongoDB Database

2.6 FEASIBILITY STUDY

An attainability examination includes a definite appraisal of the need, worth, and reasonableness of a proposed venture, like frameworks advancement. The way toward planning and carrying out record-keeping frameworks has critical responsibility and asset suggestions for an association. Attainability investigation will help you settle on educated

and straightforward choices at pivotal focuses during the formative interaction to decide if it is operationally, financially, and reasonable to continue with a specific strategy. Most attainability reads are recognized by the two clients and examiners. To start with, the investigation frequently surmises that when the plausibility report is being readied, the examiner is in a situation to assess arrangements. Second, most investigations will in general disregard the disarray intrinsic in framework improvement – the requirements and the accepted perspectives.

2.7 TECHNICAL FEASIBILITY

Individuals are characteristically impervious to change, and PCs have been known to encourage change. A gauge ought to be made of how solid a response the client staff is probably going to have toward the advancement of an automated framework. It is normal information that PC establishments have something to do with turnover, moves, retraining, and changes in representative occupation status. In this way, it is perceived that the presentation of an up-and comer framework requires exceptional exertion to instruct, sell and train the staff on better approaches for leading business.

2.8 SPECIALIZED POSSIBILITY

Specialized possibility revolves around the current PC framework (equipment, programming, and so on) and to what exactly broaden it can uphold the proposed expansion. For instance, if the current PC is working at 80% limit – a subjective roof – at that point running another application could over-burden the framework or require extra equipment. This includes monetary contemplation to oblige specialized upgrades. Assuming the financial plan is a genuine requirement, the task is decided about not doable.

CHAPTER 3 DATABASE DESIGN

3.1 DATABASE DESIGN

Information bases are the storage facilities of information utilized in the product frameworks. The information is put away in tables inside the data set. A few tables are made for the control of the information for the framework. Two fundamental settings for a data set are the essential key the field that is special for all the record events.

- ➤ Unfamiliar key-the field used to set the connection between tables.
- > Standardization is a strategy to stay away from excess in the tables.

3.2 SYSTEM TOOLS

The different framework instruments that have been utilized in creating both the front end and the back finish of the venture are being talked about in this part.

3.3 FRONT END

- > HTML
- > CSS
- > JAVA SCRIPT and
- > BOOTSTRAP

Are used to carry out the front end.

➤ Hyper Text Markup Language (HTML)

HTML is a language structure used to design a book archive on the web.

➤ CSS (Cascading Style Sheets)

CSS is a template language utilized for depicting the look and arranging of a record written in a markup language.

➤ Java Script

Java Script is a unique PC programming language. It is most normally utilized as a component of internet browsers, whose executions permit customer-side contents to connect with the client, control the program, impart non concurrently, and adjust the report content that is shown. Java Script is utilized to make spring up windows showing various alarms in the framework like "Client enlisted effectively", "Item added to truck" and so forth

3.4 BACK END

The back end is carried out utilizing MySQL which is utilized to plan the data sets. > MongoDB

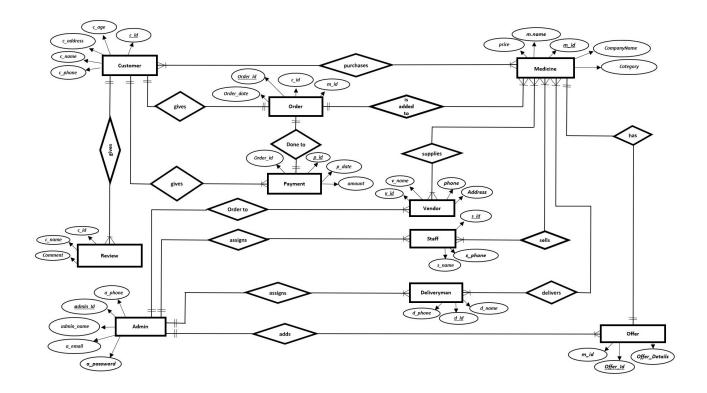
MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas. MongoDB is developed by MongoDB Inc. and licensed under the Server Side Public License which is deemed non-free by several distributions.

➤ Node.Js

Node.js is an open-source server environment. Node.js is cross-platform and runs on Windows, Linux, Unix, and mac Operating System. Node.js is a back-end JavaScript runtime environment. Node.js runs on the V8 JavaScript Engine and executes JavaScript code outside a web browser.

3.5 E-R DIAGRAMS

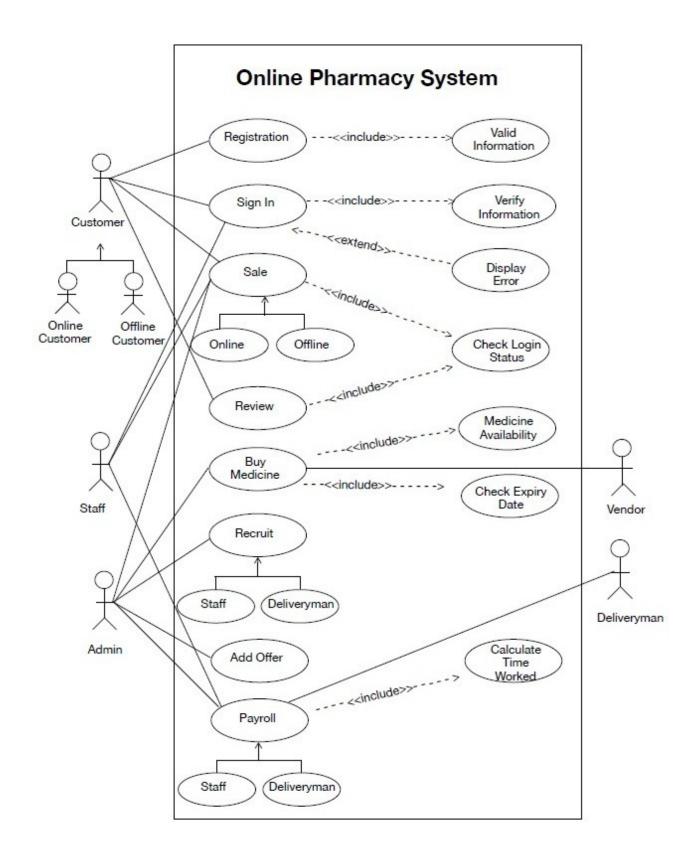
An Entity-relationship model (ER model) describes the structure of a database with the help of a diagram, which is known as Entity Relationship Diagram (ER Diagram). An ER model is a design or blueprint of a database that can later be implemented as a database. The main components of E-R model are: entity set and relationship set.



This ER diagram for the medical shop management system depicts the Medical Shop Management System, which manages the details of Sells, Medicines, Stocks, Company, and Inventory. It keeps track of all the Sells, Medical shops, Inventory, and Sells. This ER diagram for a medical shop management system depicts the flow of activity through a sequence of actions. The activity diagram is a critical diagram for describing the system. The activity is defined as a system action or operation. An activity diagram depicts the overall control flow. The ER diagram for the medical shop management system of Medical Store Management System shows all of the visual instruments of database tables and the relationships between Medicines, Company, Medical Shop, Sells, and so on.

3.6 Use Case Diagram

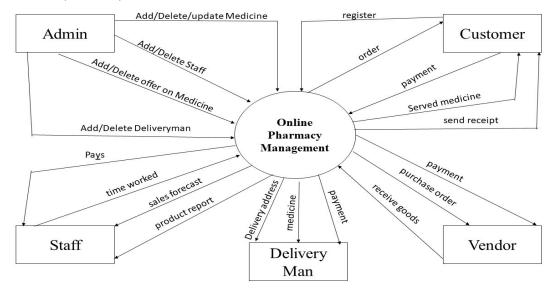
Use case diagram is the primary form of system/software requirements for a new software program underdeveloped. Use cases specify the expected behavior (what), and not the exact method of making it happen (how). Use cases once specified can be denoted both textual and visual representation. A key concept of use case modeling is that it helps us design a system from the end user's perspective. It is an effective technique for communicating system behavior in the user's terms by specifying all externally visible system behavior.



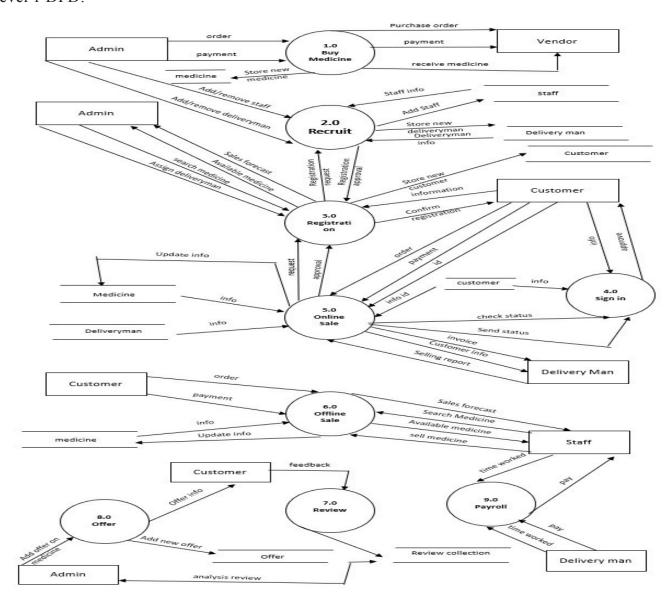
3.7 Data Flow Diagram

A data flow diagram is a graphical representation or technique depicting information flow and transform that are applied as data moved from input to output. The DFD are partitioned into levels that represent increasing information flow and functional details. The processes, data store, data flow, etc are described in Data Dictionary.

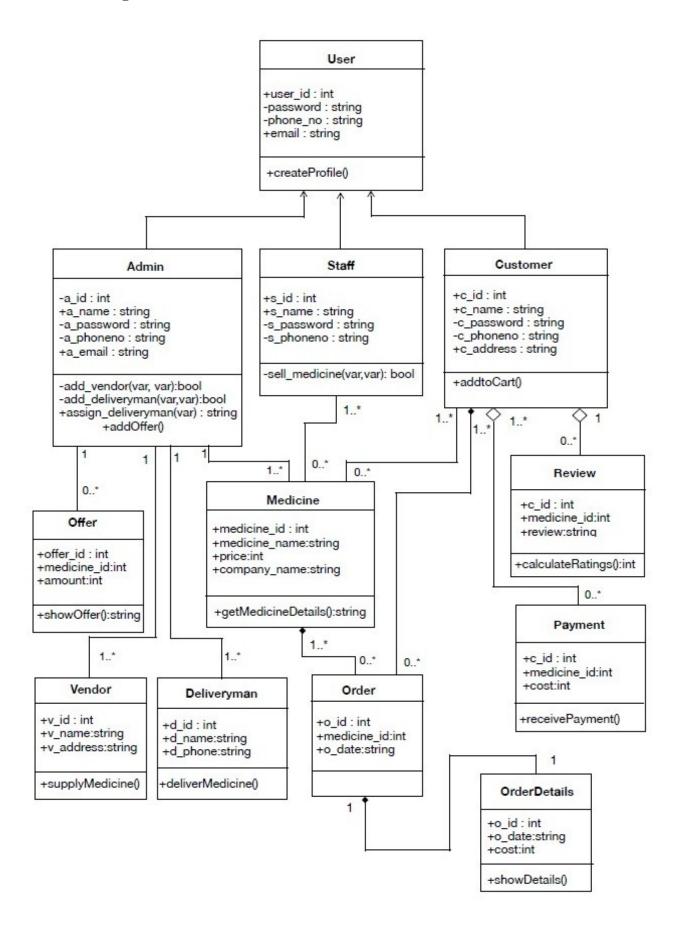
Context Level (Level 0) DFD:



Level 1 DFD:



3.8 Class Diagram

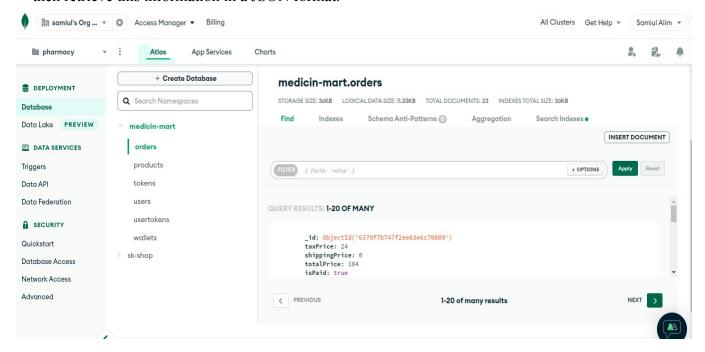


CHAPTER 4

IMPLEMENTATION AND TESTING

4.1 Implementation of Database

I have used "MongoDB" for designing our database. MongoDB is an open-source document database built on a horizontal scale-out architecture that uses a flexible schema for storing data. Founded in 2007, MongoDB has a worldwide following in the developer community. Instead of storing data in tables of rows or columns like SQL databases, each record in a MongoDB database is a document described in BSON, a binary representation of the data. Applications can then retrieve this information in a JSON format.



4.2 Implementation of Front-end Design

This is the Home page of "Medicine_Mart". A user needs to be log in to get access of buying medicine and other services.



Figure: Homepage of "Online Pharmacy Shop".

This is the registration page of "Medicine Mart". Users have to registration for access and using.

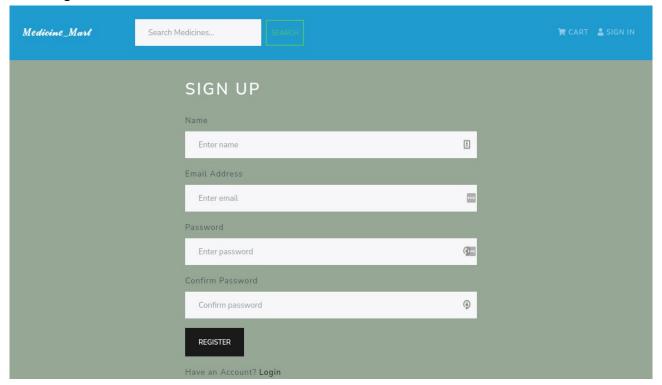


Figure: Registration page of "Online Pharmacy Shop".

This is the login page of "Medicine_Mart". To login user have to enter valid email and password-

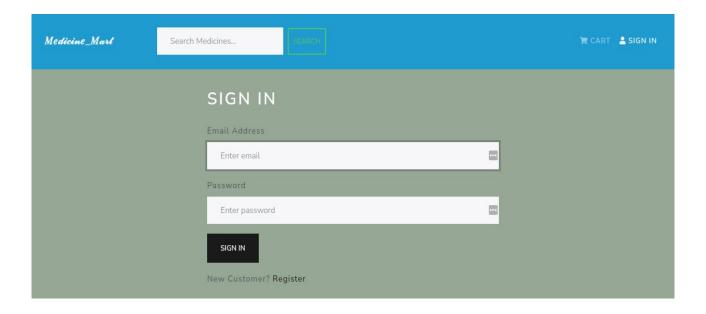


Figure: Login page of "Online Pharmacy Shop"

This is the User Dashboard of "Medicine_Mart". Here patient can view appointment, give reviews, check history, get token and recharge wallet.

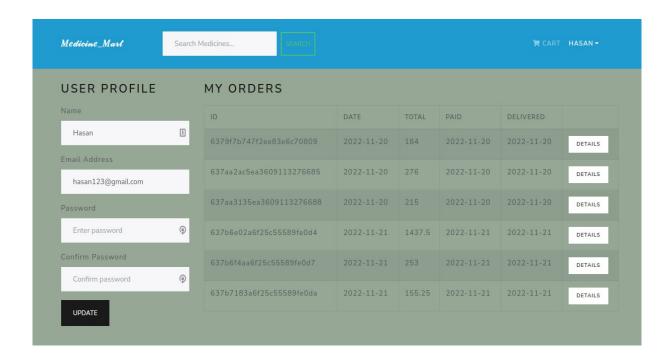


Figure: User Dashboard of "Online Pharmacy Shop"

This is the available medicine where user can see the medicine and their specialty.

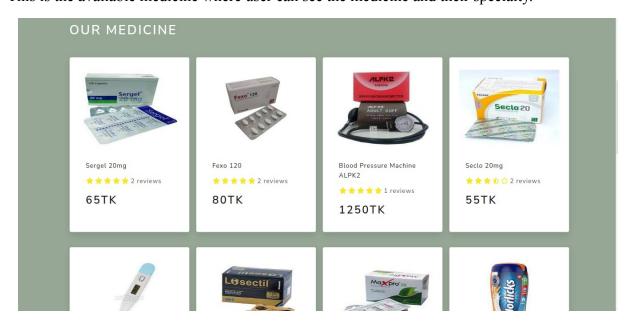


Figure: Available Medicines

Here patient can recharge their wallet by using token

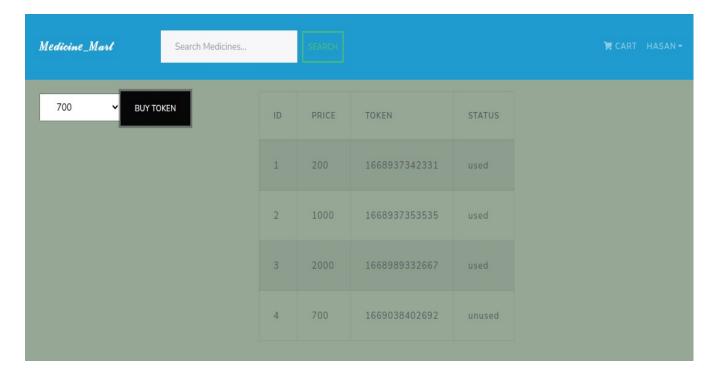


Figure: Get token to recharge Wallet

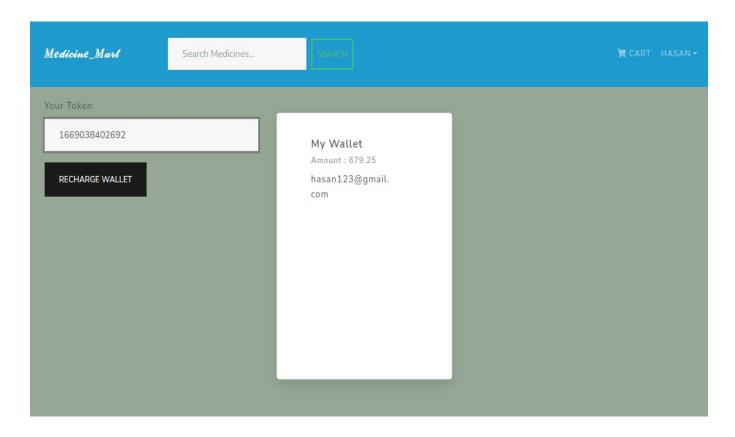


Figure: Recharge wallet

Here is how user can pay their bill

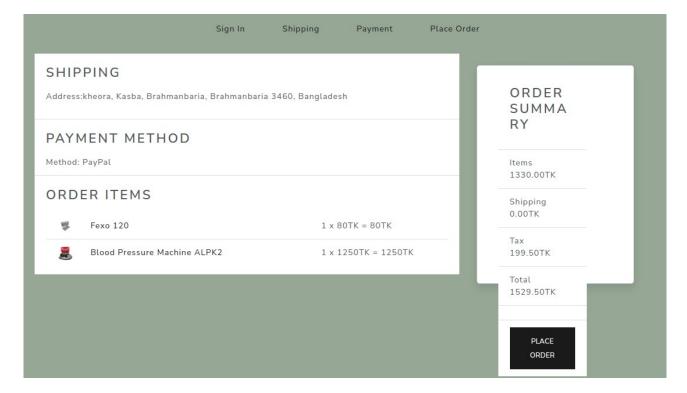


Figure: Pay bill

Here User can see review and ratings

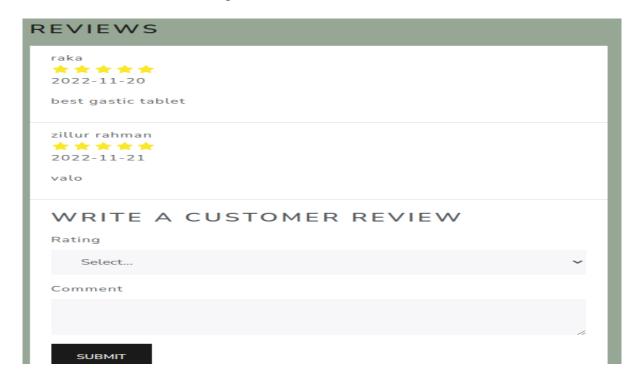


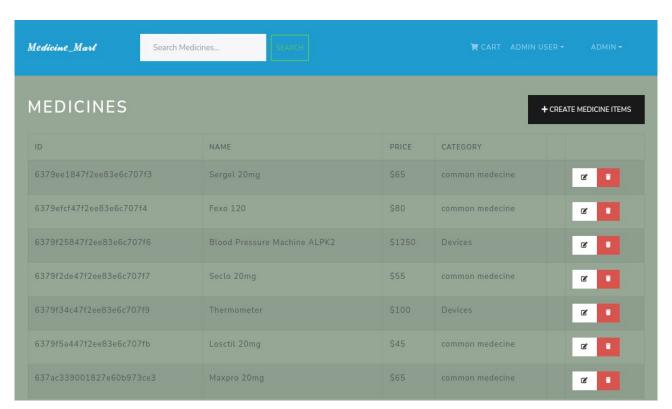
Figure: Review section

Here is the Admin dashboard. Admin can see all the user, Product, add product, manage user, manage order and create token.

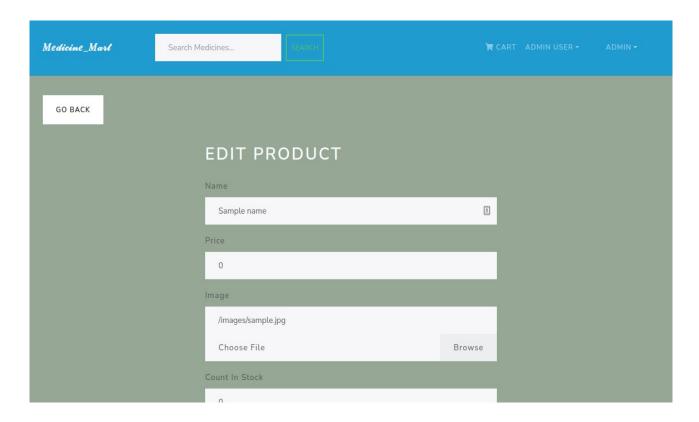
Admin User Dashboard-

Medicine_Marl Search Medicines	SEARCH	≒ CAR	T ADMIN USER	▼ ADMIN ▼
USERS				
ID	NAME	EMAIL	ADMIN	
63795b2d622968743d7cb026	Admin User	admin@example.com	~	œ 🚺
63795b2d622968743d7cb028	Jane Doe	jane@example.com	×	œ T
6379f6fb47f2ee83e6c70805	Hasan	hasan123@gmail.com	×	œ 🚺
637a8a09d2bed33a37c3c7e6	Ekbal	ekbal@gmail.com	×	œ T
637aaedde30e78b12e3c747e	raka	sk@gmail.com	×	œ 🚺
637b4dc2a6f25c55589fe0bd	Noor	ab@gmail.com	×	œ T
637b7207a6f25c55589fe0dc	basar	bs123@gmail.com	×	Z

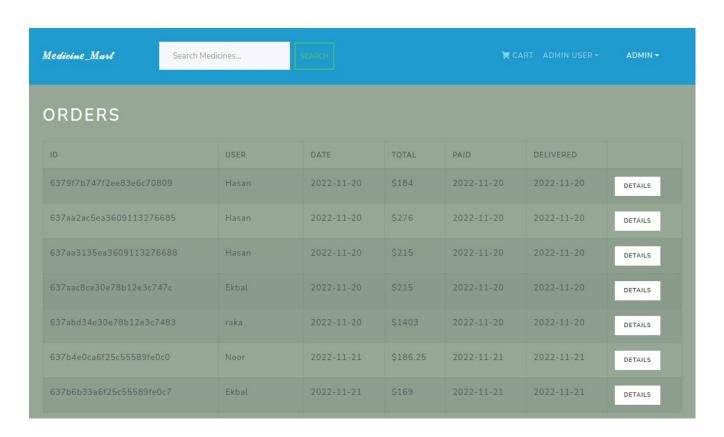
Admin Medicine Dashboard-



Admin Add Medicine -



Admin Orders Dashboard-



Admin Create Token Dashboard-

Medicine_Marl Search Medicines	SEA	ARCH	Ì≢ CAR⊺	ADMIN USER •	ADMIN -
Set Price	ID	PRICE	TOKEN	STATUS	ACTION
CREATE TOKEN	1	100 Tk.	1668937336479	sold	Delete
	2	1000 Tk.	1668937353535	sold	Delete
	3	50 Tk.	1668937359727	sold	Delete
	4	20 Tk.	1668937394425	sold	Delete
	5	100 Tk.	1668989306477	unsold	Delete
	6	200 Tk.	1668989314886	unsold	Delete
	7	FOO TI	4.00000000000	7.1	0.11

4.3 Implementation of Interactions

Interactions are the common thing in today's system. It is a key to make a system dynamic and attractive to user. And it is very necessary to make a system interactive. Like I said before I tried to build a user friendly and an interactive platform. It should be done such a way that attracts the user.

4.4 Testing Implementation

The main purpose of this test to evaluate my systems compliance with the specified requirement. I tried to make this system secured. Every single data that a user input on the system must pass the test.

4.5 Test Result and Reports

Sl No	Test case	Input	Expected outcome	Actual output	Result	
1	Email check	Input without @ Invalid email		Invalid email. Must have @	Passed	
2	Valid phone number	Input numeric value	correct	Correct	Passed	
3	Invalid phone number	Input character	Incorrect	Numeric value required	Passed	
4	Special character	Input special character	Special character not allowed	Not allowed	Passed	

Table: Registration and Login Test Case

Sl No	Test case	Input	Expected outcome	Actual output	Result
1	Display the webpage	Tested on us browser, chrome	Display successful	Display successful	Passed
2	User name	Wrong	Login failed	Login failed	Passed
3	Blank or Incorrect pass	Wrong password	Login failed	Login failed	Passed
4	Username	Input character	Special character not allowed	Letter and whitespace allowed	Passed

Table: Input User Information Test Case

<u>CHAPTER 5</u> CONCLUSION AND FUTURE SCOPE

5.1 Discussion and Conclusion

Pharmacy management system is designed to improve the accuracy, enhance safety and efficiency in the pharmaceutical store. It is a computer based system which helps the Pharmacist to improve inventory management, cost, medical safety etc. Pharmacy management system was developed to ensure the security of information and reliability of Pharmacy records when accessing and providing services to the customers. The information gathered during the data collection was properly analysis and the results provided the basis for the new system. The system was tested and found to be functional and the outputs produced by this system were encouraging. The application will hence reduce the loss of information unlike the existing system and also information will be processed fast.

Effective implementation of this software will take care of the basic requirements of the pharmacy management system because it is capable of providing easy and effective storage of information related to activities happening in the stipulated area. With these, the objectives of the system design will be achieved. In order to allow for future expansion, the system has been designed in such a way that will allow possible modification as it may deem necessary by the pharmacy management, whenever the idea arises.

5.2 Scope of Further Development

- Detailed information gathering has to be done. Without that the purpose for using the software won't be satisfied properly.
- However it can give good profits in the long run.
- Implementing the software requires change in the business practices.
- Efficient organization of all knowledge is the analysis company and easy analysis access and retrieval of information is possible.
- In this project we can also include BAR CODE facility using the bar code reader, which will detect the expiry date and the other information about the related medicines.
- Company using this software will always be able to plan in future and always be aware of their financial position in the market.
- > It leads to streamlining of business processes.
- The implementation and maintenance costs run very high.

APPENDIX

Appendix A: Project Reflection

In our daily life we face a lot of problems. Disease is one of most common issues for a person's life. If anybody is ill and wants to buy medicine from pharmacy. He or she needs to visit the local pharmacy and could not necessary medicine available. Then they should go for large pharmaceutical shop or district. It is a lengthy process and wasting people's time. Sometimes people do visit here for buy medicine but the medicines is not available some various reason. It's the only way to get to know when people just visited their places. It harass people a lot. Day by day online system become an important part of our society. So I have decided to build this system.

REFERENCES

https://www.w3schools.com/

https://www.wikipedia

https://www.pharmacytimes.com/

https://www.wolterskluwer.com/

https://www.researchgate.net/

https://www.mondaq.com/

https://codecanyon.net/item/pharmastore-online-pharmacy-management-system/28330789

https://www.bdtask.com/pharmacy-management-system.php

http://dspace.daffodilvarsity.edu.bd:8080/handle/123456789/3314

https://www.researchgate.net/publication/305426561 Online Pharmaceutical Management Sys

https://www.med2x.com/pharmacy-management-software.php

https://www.aimprosoft.com/blog/blog-how-to-develop-a-pharmacy-management-software/

https://codebun.com/online-pharmacy-management-system-project-in-java-with-source-codeand-

https://sites.google.com/site/ignoubcafinalyearprojects/project-report/pharmecy-

https://www.academia.edu/34972089/

https://www.slideshare.net/sudiahmad1/pharmacy-management-system-112602894

https://projectsgeek.com/2017/04/pharmacy-management-system-project.html

https://www.docsity.com/en/pharmacy-management-project/5033537/

https://projects.ng/project/pharmacy-management-system/

https://www.phptpoint.com/projects/pharmacy-management-system/

https://www.coursehero.com/file/24302089/%20https:/www.freeprojectz.com/project-report/16340/