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ONLINE MEDICINE ORDERING SYSTEM

Software Engineering

Mini Project Report

SUBMITTED BY

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MAHARASHTRA (INDIA)

April, 2022

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CERTIFICATE

It is hereby certified that the work which is being presented in the TY B.Tech. Software Engineering Mini Project Report entitled **"Online Medicine Ordering System",** in partial fulfillment of the requirements for the award of the **Bachelor of Technology in Computer Engineering** and submitted to the **School of Computer Engineering and Technology of MIT Academy of Engineering, Alandi(D), Pune, Affiliated to Savitribai Phule Pune University (SPPU), Pune** is an authentic record of work carried out during an Academic Year 2021-2022, under the supervision of **Prof. Santosh Warpe, School of Computer Engineering and Technology.**

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ACKNOWLEDGEMENT

We would like to express our deepest appreciation to all those who provided us the possibility to complete this report. A special gratitude we will give to our Mini project guide, Prof. Santosh Warpe who invested his full effort in guiding us in achieving the goal.

Furthermore, we would also like to acknowledge with much appreciation the crucial role of the class teacher Prof. Sanjay Ghodke who gave the permission to use all required help and the necessary support to complete the micro project on "Online Medicine Ordering System"

We sincerely thanks to our Software Engineering Course Instructor Prof. Santosh Warpe proved to be a constant motivation for the knowledge acquisition and moral support during our course curriculum.

Our great obligation would remain towards our Head of Department Mrs. Ranjana Badre, whose contribution in stimulating suggestions and encouragement helped us for writing report. She provided with an opportunity to undertake the Minor project. We appreciate the guidance given by other staff members of SCET for improving our presentation skills thanks to their comment and advice.

[1] Aadiraj Narayane

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Abstract

It is said that the more you sweat in practice, the less you bleed in war. Software prototyping is the soul of a successful product and a base for building a firm and effective application. In order to solve a problem, we need to understand the problem firstly. This involves understanding the need, eliciting the requirement, calibrating the feasibility and modularizing the application.

The main objective of the online medicine ordering system is to automate the existing manual system with the help of advanced computerized software so, that valuable data can be stored for a longer period with easy access and manipulation of the same.
The registered user can access the account with valid credentials. The user can surf the medicine items according to categories, Cart and online payment options are available to the user. The user can track their orders with the medicine details.
In Online medicine Ordering System Admin can handle the functionalities like add new medicine items, edit/delete medicine items, Enable/Disable the medicine items according to availability and their expiry dates. Admin has the authority to view order details and update the delivery status of medicines. The payment transaction and user details are also viewable to admin.

1 Introduction

1.1 Purpose

We are going to develop & host a web portal for Patient entitled “Online Medicine Ordering System” in which they will be able to Order Medicine for any disease. In the given SRS, development of Online Medicine Ordering System is included till design phase which covers functionality of all modules of our software.

1.2 Intended Audience and Reading Suggestions

This Project Report is Developed for the stakeholders of our system directly and indirectly connected and involved in a system and restricted to related persons only. Such as Customer Representative, Development team, management team, marketing team, sales team and other teams working on same project.

1.3 Product Scope

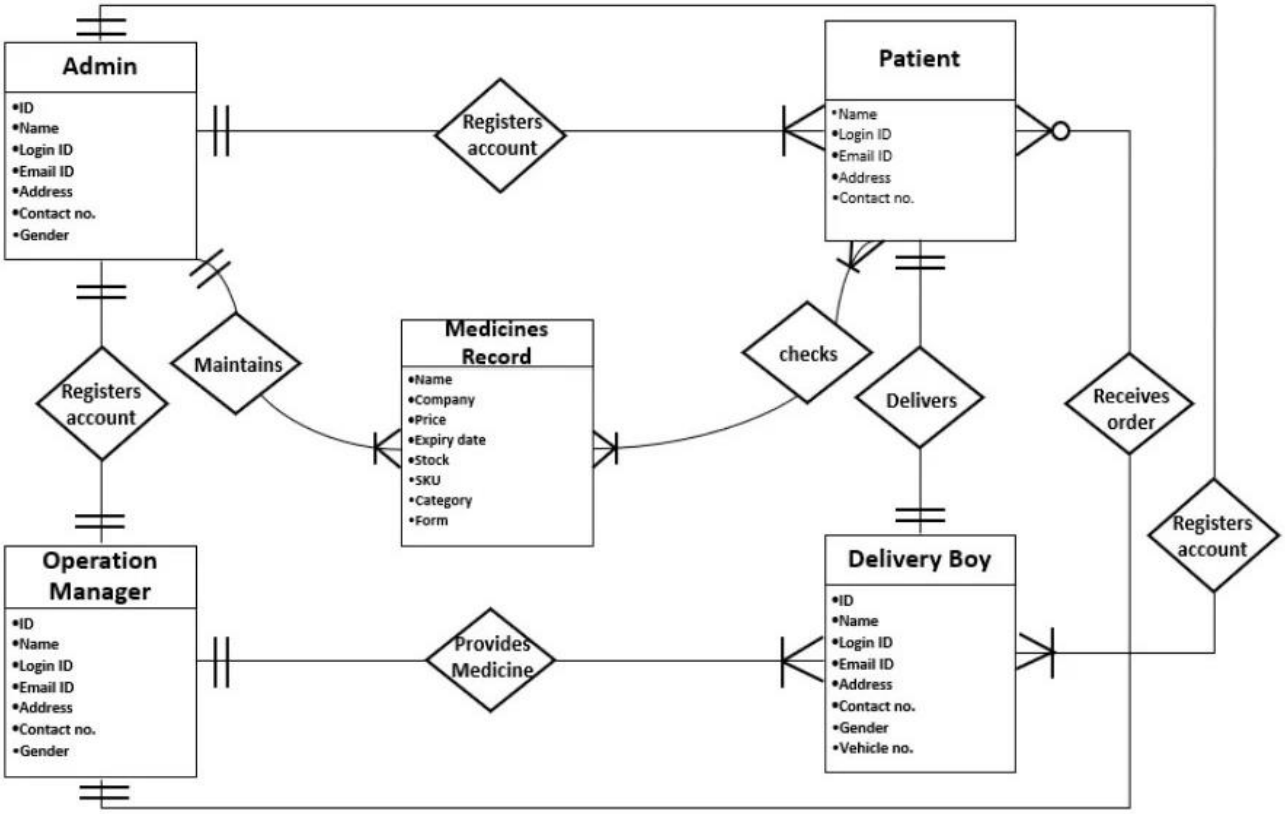
This system product is created to allow the admin to manage the record of the drugs so that he can easily update the stock details according to the drugs available in store if a new drug is added or any existing drug is deleted from the stock. The users can search and select medicines by their names. The system will allow customers to register themselves by entering their essential credentials like name, e-mail address, postal address, and contact number to view the medicines in stock and to place an order.

2. Overall Description

2.1 Product Perspective

- **System name or title**
  Online Medicine Ordering System(Web portal)
- **System category**
  - Major application: performs clearly defined functions for which there is a readily identifiable security consideration and need
- **Operational status**
  - Under development

2.2 Product Functions



2.3 User Classes and Characteristics

System Admin:

- Verification of users
- Validation of Medicine data
- Add and Delete medicine from stock

Shop Owner:

- Add medicines
- Order management
- Patient
- Self-verification
-

Patient:

- Search Medicine
- Order Medicine
- Get details of Medicine
- Check/view Medicine

2.4 Operating Environment

1. Cloud

2. 3-tier System
3. Mysql
4. Operating system: Windows
5. Platform: PHP(Web)

2.5 User Documentation

- Online Help
- Tutorials

2.6 Assumptions and Dependencies

1. **Input:**

   Owner will give available medicine to patient will request for the medicine at desired location. other service owners will register themselves for particular (medicines details, syrup details)

2. **Output:**

   Patient Registration status, Available medicines, services nearby.

3. **Financial constraints:**

   payment between owner and patient will get done through different payment Method.

   Software: website will be developed for the problem

- **Operating environment:**
  - browser will be used for running the website
  - Availability of Information and resources:
  - Information and resources will be latest.

3. Interface Requirements

3.1 User Interfaces

- Front End using PHP Framework.
- Backend using MySQL

3.2 Hardware Interfaces

- Windows.

- A browser which supports CGI, HTML & JavaScript.

3.3 Software Interfaces

Operating System	Any standard operating System is applicable as this is web portal only the requirement is OS should support browser.
Browser	Any standard browser working on most of the system nowadays is okay.
Database	As a part of MERN stack we have chosen MySQL database.
Platform	For the front-end development, we use React framework as a Part of MERN Stack development.

4 System Features

Functional Requirements :

1] User Registration :

Name	Registration & Profile Creation
Purpose	User Registration
Input	User Basic Profile Details
Output	User Registration
Scope	User (Patient, shop Owner) Admin

2] User Authentication :

Name	Login
Purpose	User Authentication
Input	User Credentials
Output	User Authentication
Scope	Student, shop Owner, Admin

3] Payment Gateway :

Name	Payment
Purpose	Payment for order
Input	UPI / E-Wallet Gateway
Output	Payment for order
Scope	User, Gateway Party, Admin

4] Sorting of Medicine by price/budget :

Name	Filter by Price
Purpose	Medicine Budget Filtering
Input	Medicine Price
Output	Price relevant display of Medicine
Scope	User(Patient, Owner), Admin

5] Order Medicine:

Name	Order Medicine

Purpose	Medicine based on patient Symptoms
Input	Payment confirmation
Output	Order Confirmation
Scope	Users(Patient), Admin

6] Verification of Medicine :

Name	Verification
Purpose	Verifying Medicine based on Symptoms
Input	Patient Symptoms
Output	Medicine
Scope	User(Patient),Admin

7] Encryption of Sensitive data :

Name	Encryption
Purpose	Security of Patient data
Input	Plain text (User data)
Output	Cipher text
Scope	User, Admin

8] Selection of Medicine :

Name	Filtering by Amenities
Purpose	Patient get appropriate medicine
Input	Patient Symptoms
Output	Medicine based on patient symptoms
Scope	User (Patien5), Admin

9] Logout :

Name	Logout
Purpose	Ending User Session
Input	GUI Click
Output	Ending User Session
Scope	User (Patient)Admin

10] Delete:

Name	Confirmation
Purpose	Enable Deletion of Data
Input	GUI Click
Output	Reflects Deletion

Scope	Admin

11] Updates :

Name	Update / Modification
Purpose	Enable Updation of data
Input	Click (Request and data)
Output	Reflect Updates
Scope	User (Student, provider), Admin

5 Other Nonfunctional Requirements

Non-Functional Requirements :

1) Communicative

Every detail about the related user should be notified. User should get every update regarding his request/change in details.

2) Informative

Basic facilities should be available on the site. All the amenities must be listed under description. Well organized content in location sorted form.

3) Transparency

Commitment should be fulfilled. The Order details and confirmations should be made on both the ends.

4) Ease of access and Efficiency

Quick and simple process to access the information. The entire navigations should be user friendly and easy to access for a non-technical person

5) Integrity

Changes to database should be reflected to all the users. Hence the application should be dynamic. The student's details and patient details should be verified.

6) Eligibility and Authorization

Our website must satisfy all needs of patients.

7) Reliable

The sources should be trusted and the availability related changes must be reflected at both the ends.

Time to time backups

8) Secure

- Transaction and Authentication must be done securely.
- Sensitive information should be encrypted.

9) Up-to-date

- Medicine availability details must be updated regularly.
- Any availability or unavailability of the amenities must be notified in the description.

10) Flexible-Portability

- Patient must be able to convey his urgency and order a medicine as per his time availability. Also, User should be able to access from desktop/mobile platforms.

11) Fast

- Quick Responses
- No or low latency.
- 24x7 Server functioning.

13) Accuracy of Data

- Appropriate and relevant data
- No fake data must be allowed.

14) System Optimization

-Search results must be optimized as per the relevance factors such as location, pricing, type of medicines/syrups, amenities available, etc.
-Redundant or irrelevant data must not be displayed

15) User Verification (Using document verification)

- shop owner Verification and Patient Verification must be done using authentic techniques such as email patient admission/educational details, medicines.

6. Feasibility

6.1 System Interaction

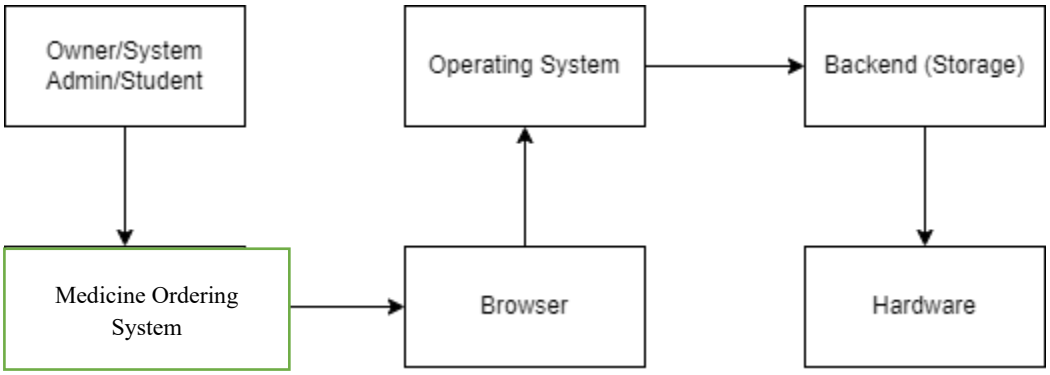


Fig. 6.1.1: System Interaction of Online Medicine Ordering System

6.2 Methodology

We conducted extensive survey of existing scenario for evaluating proposed system to arrive at a feasible alternative in such a way that many patients were asking for the MEDICINES and they were not getting clear information and ordering was not available online without checking medicines and surrounding area. also owners were asking for patientswho wants medicine as they were having very much available medicines.

6.3 Evaluation Criteria

- As considering user convenience and ease of system use,
- we decided to develop website for the problem where all options will get covered to overcome traditional offline ONLINE MEDICINE ORDERING system.
- also, web type application will provide flexibility to user to use the system.

6.4 Recommendation

- without complete and accurate information of owner, user and Medicine, ordering should not get done.

- other services can be updated later on, but Medicine details are important.

6.5 Proposed System

6.5.1 Description of Proposed System

The main objective of the online medicine ordering system is to automate the existing manual system with the help of advanced computerized software so, that valuable data can be stored for a longer period with easy access and manipulation of the same.

The registered user can access the account with valid credentials. The user can surf the medicine items according to categories, Cart and online payment options are available to the user. The user can track their orders with the medicine details.In Online medicine Ordering System Admin can handle the functionalities like add new medicine items, edit/delete medicine items, Enable/Disable the medicine items according to availability and their expiry dates. Admin has the authority to view order details and update the delivery status of medicines. The payment transaction and user details are also viewable to admin.

6.6 Impacts

6.6.1 Operational Impacts

Describe the effects on operations, such as:

- User operating procedures
- checking, verification and validation of emails and location procedure
- booking of medicines procedures

6.6.2 Developmental Impacts

- Both the users need to create their login accounts in order to avail medincens Booking
- Hosting/Server is required such AWS (incurs subscription cost)
- Localhost is required for local testing at initial level before deployment
- User session management, credential management, encryption

6.6.3 Security and Privacy Impacts

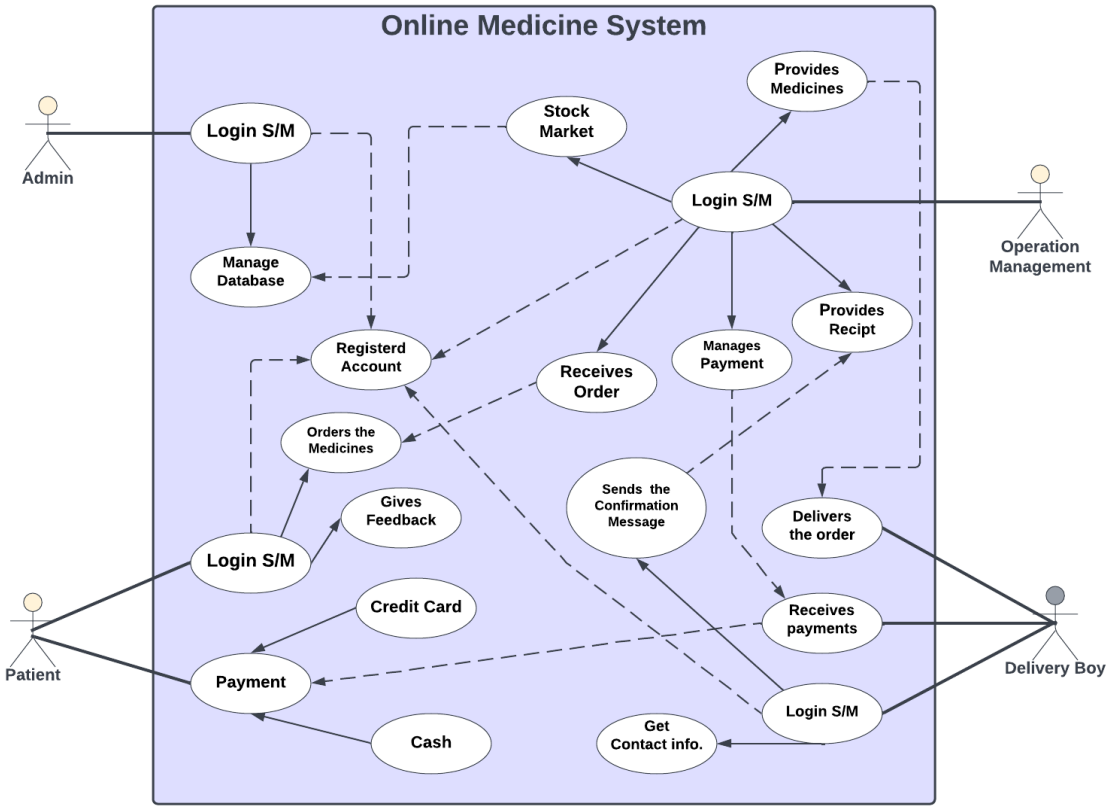
The User credentials and data needs to be secured to be through encryptions and secured databases with proper session management and form handling.

6.4 Rationale for Recommendations

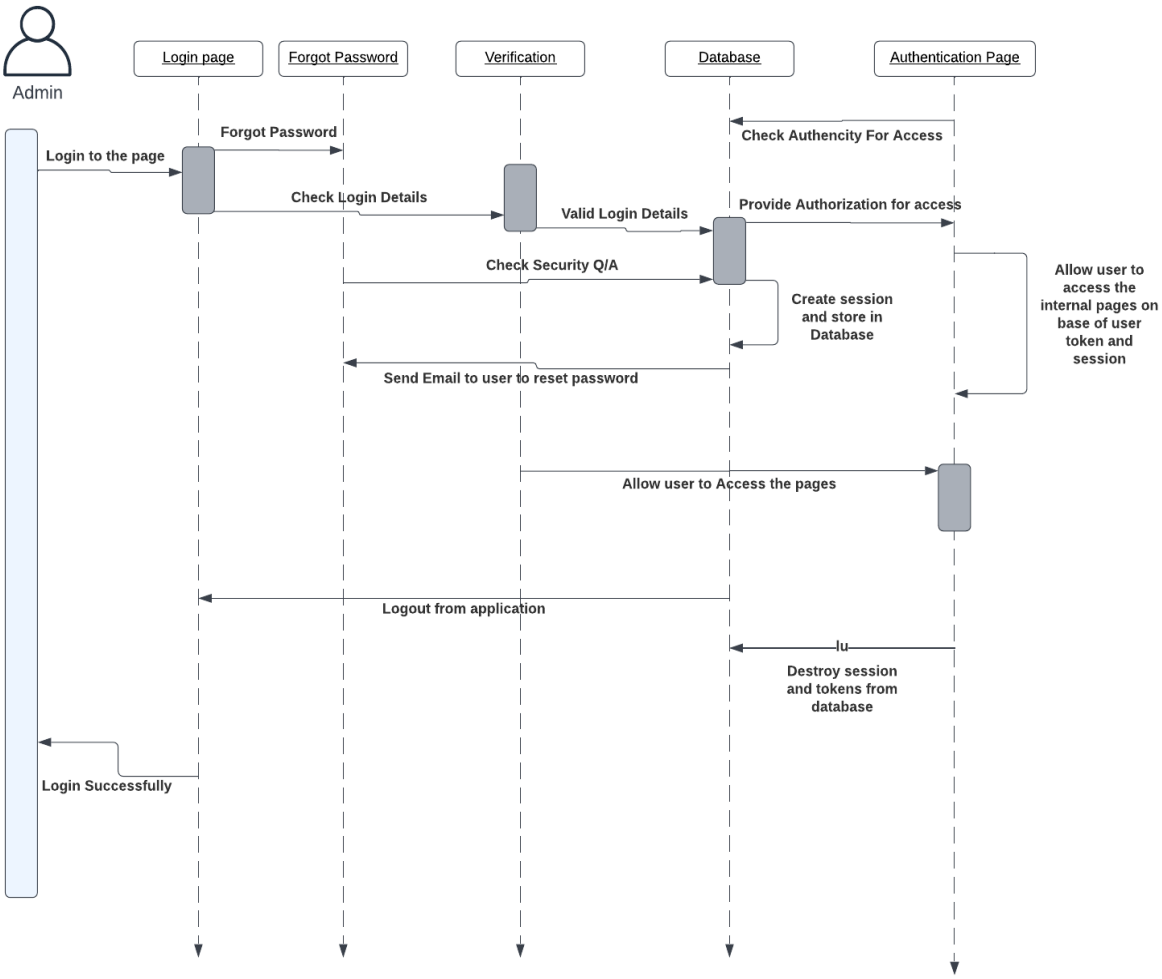
1. Online Medicine Ordering system has become important factor in modern society hence the need to have a rental house management application.
2. It is difficult to find medicines for patients in a specific area coming from distant places.
3. It is also difficult to find the medicines on time, for the medicals shopa and patients .
4. Recently these Kinds of system are functioning in New-York, Boston (US), and Australia.

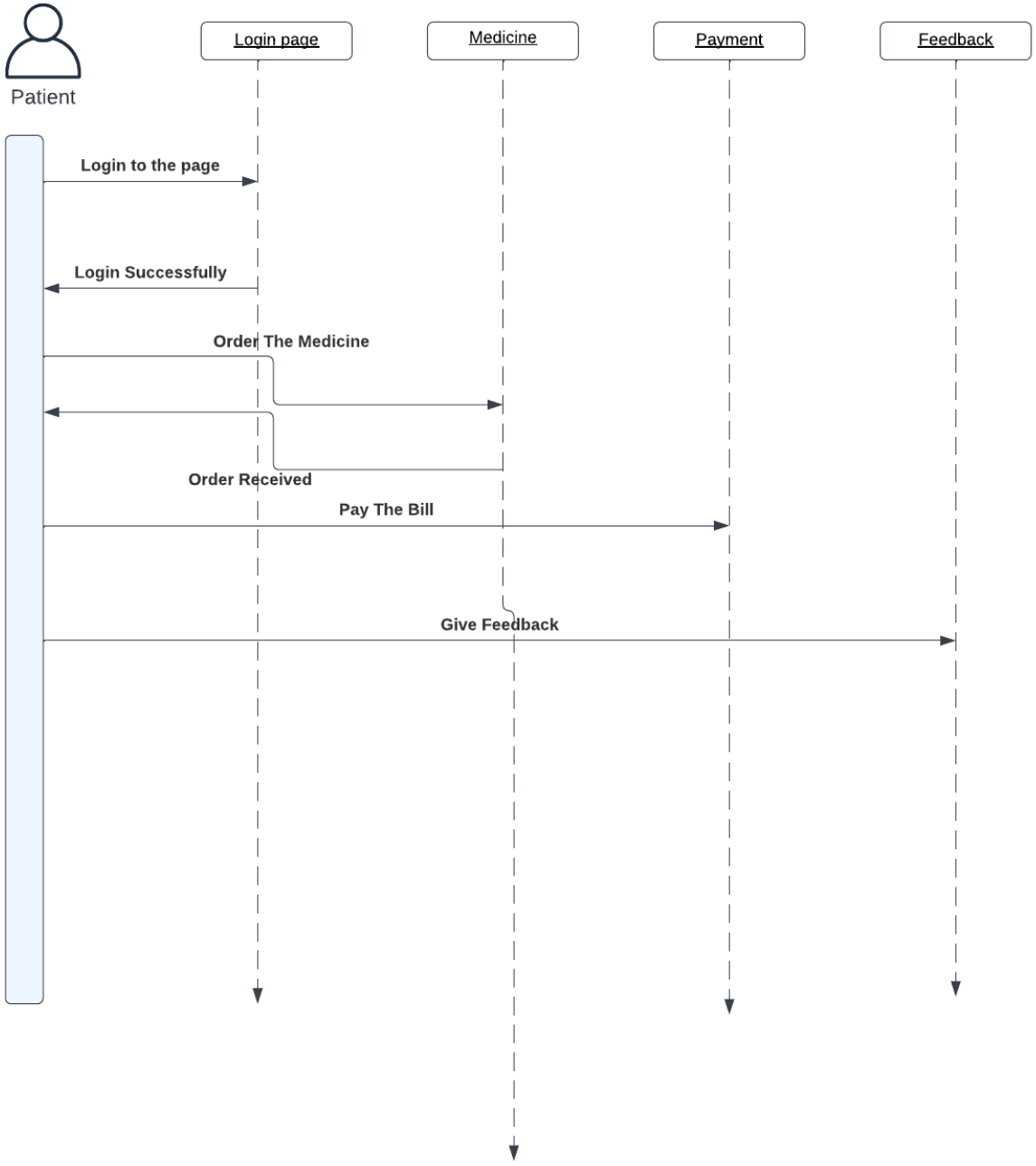
7. UML Modelling

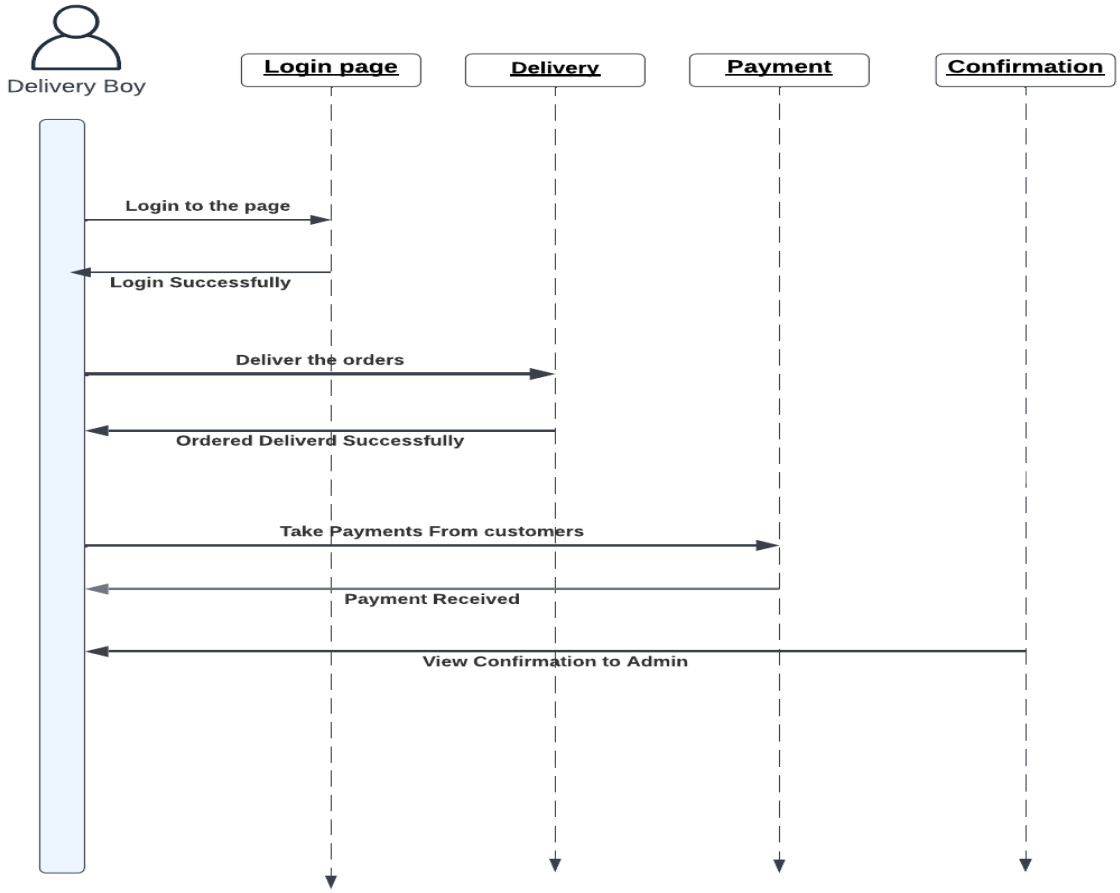
7.1 Use Case Diagram



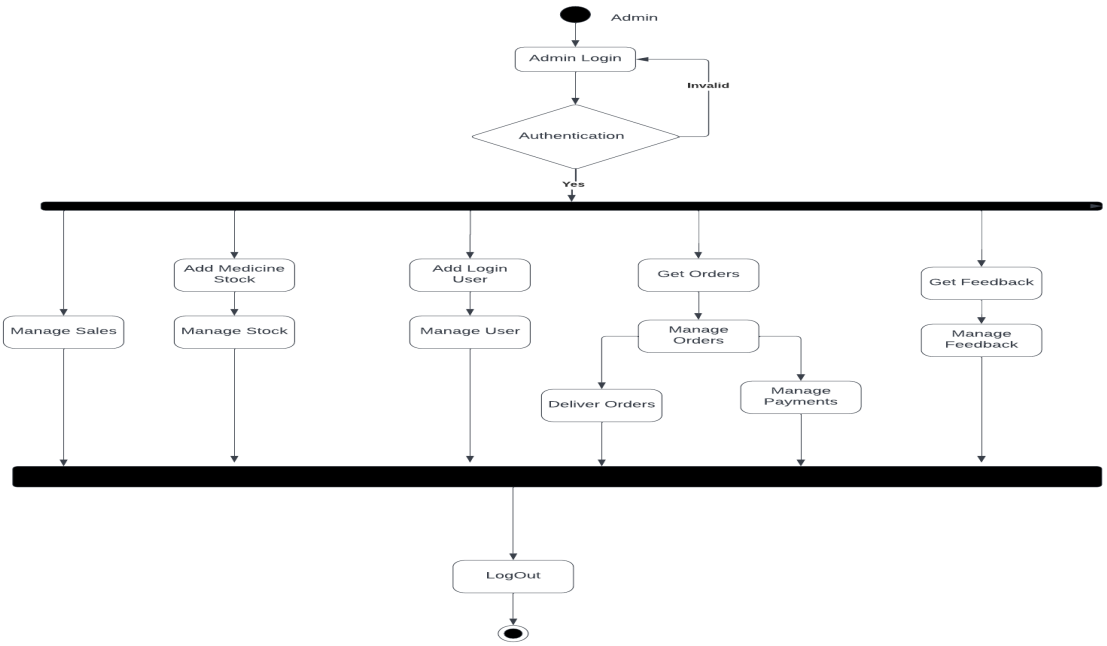
7.2 Sequence Diagram


Admin
Login page
Forgot Password
Verification
Database
Authentication Page
Check Authencity For Access
Forgot Password
Login to the page
Check Login Details
Valid Login Details
Provide Authorization for access
Check Security Q/A
Create session and store in Database
Allow user to access the internal pages on base of user token and session
Send Email to user to reset password
Allow user to Access the pages
Logout from application
lu
Destroy session and tokens from database
Login Successfully

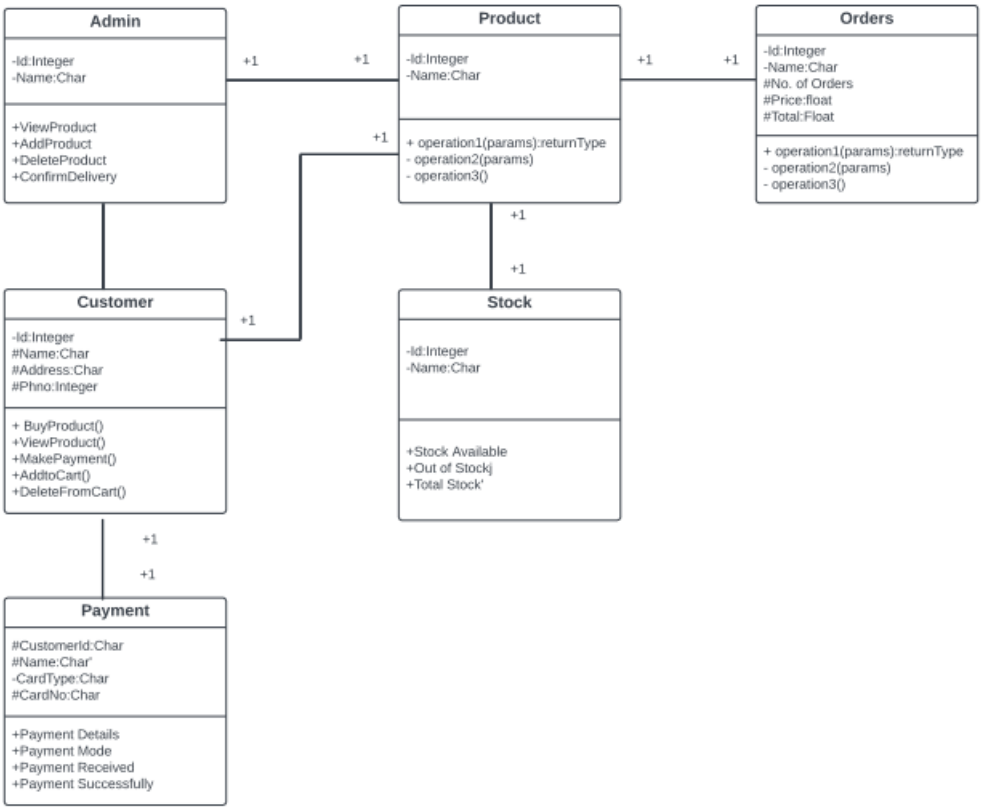

Patient
Login page
Medicine
Payment
Feedback
Login to the page
Login Successfully
Order The Medicine
Order Received
Pay The Bill
Give Feedback



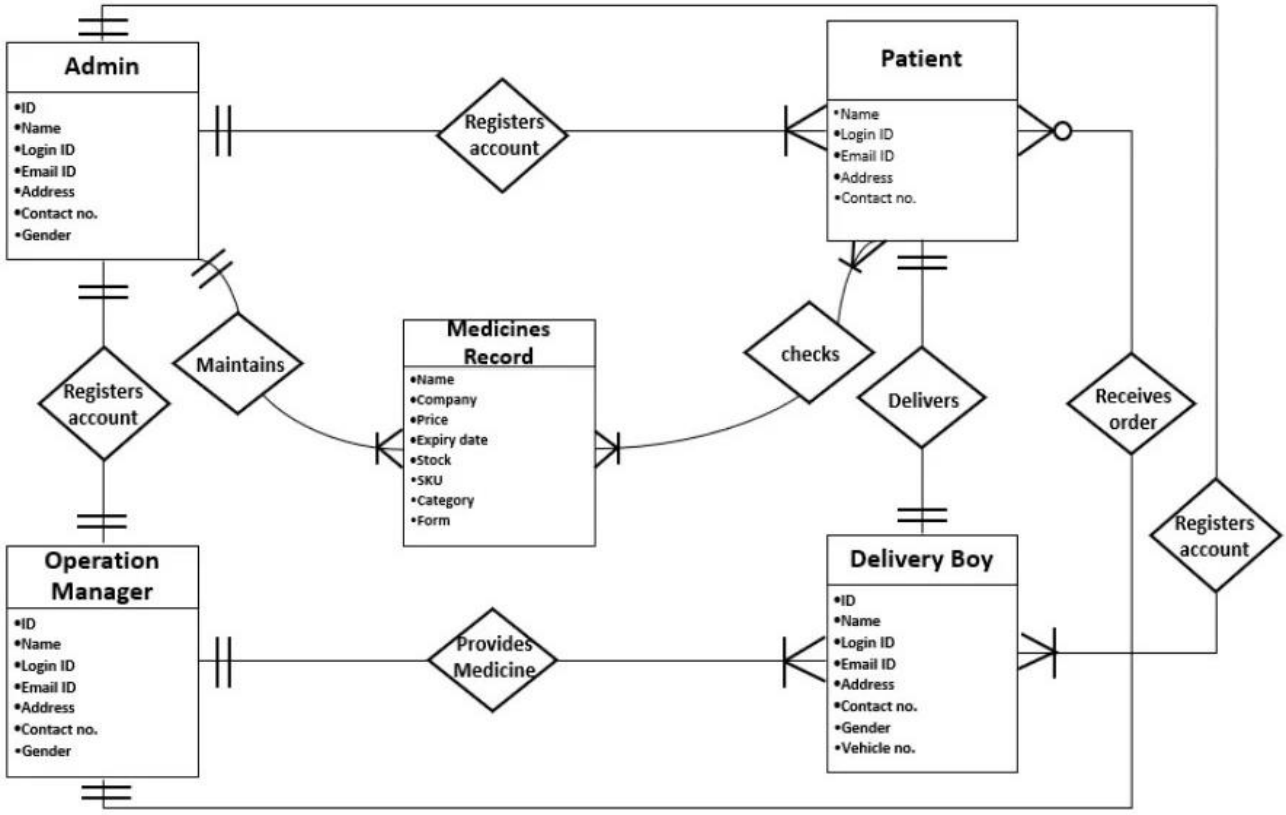
7.3 Activity Diagram



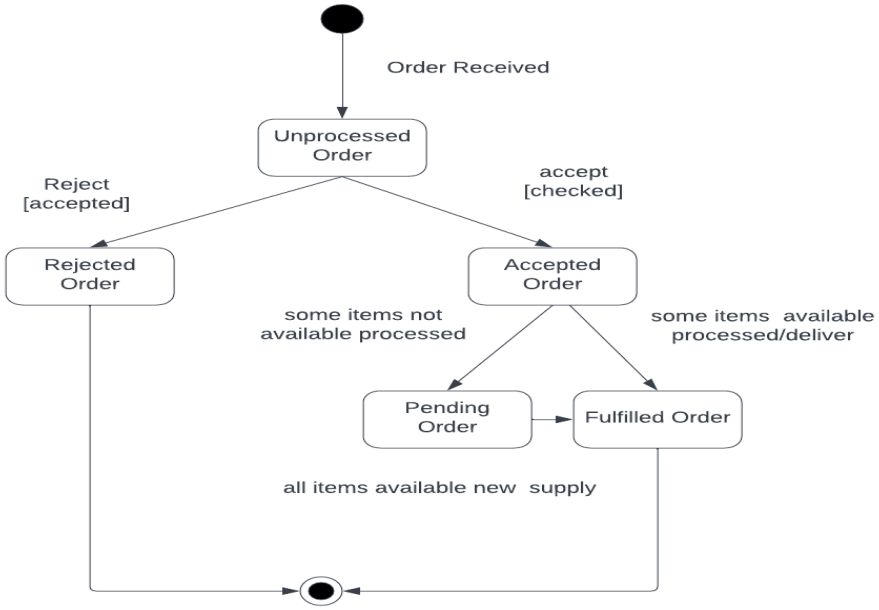
7.4 Class Diagram



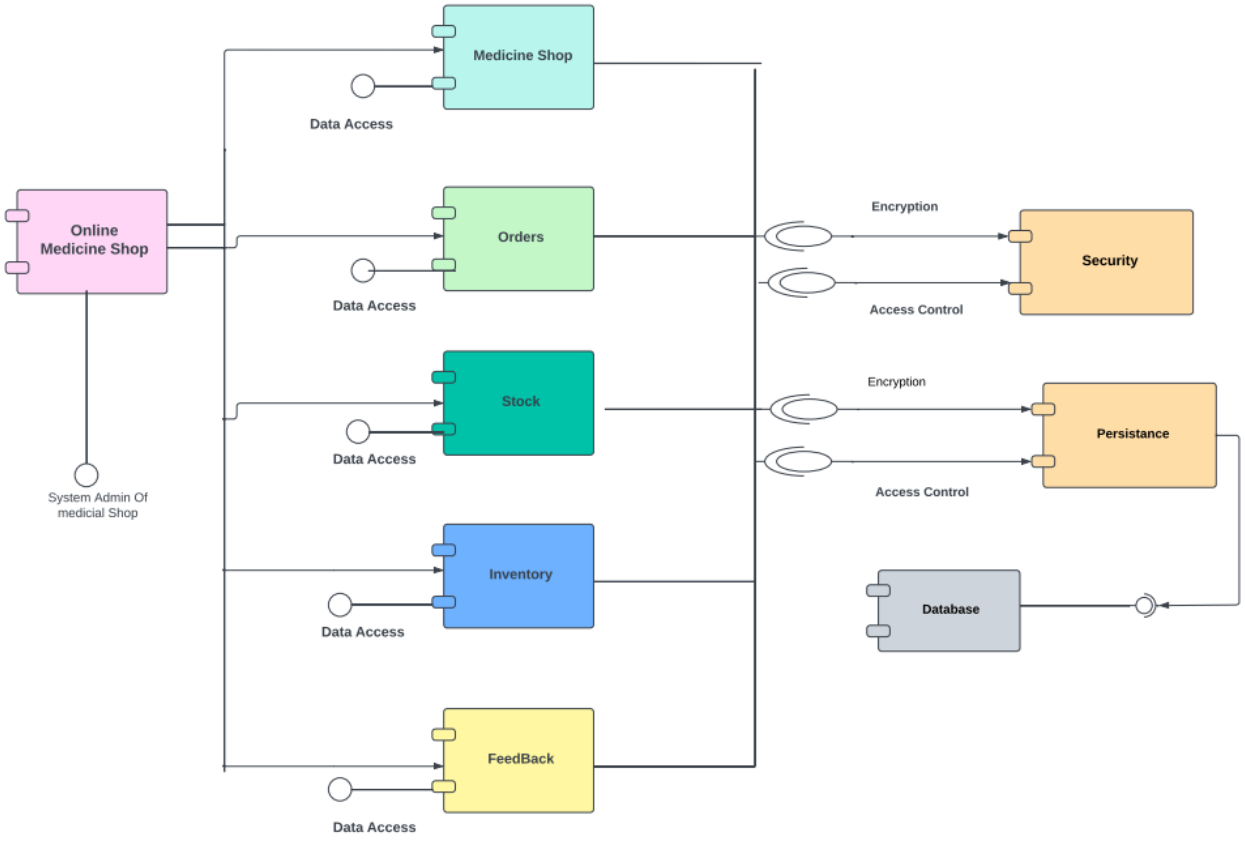
7.5 ER Diagram



7.6 State Transition Diagram



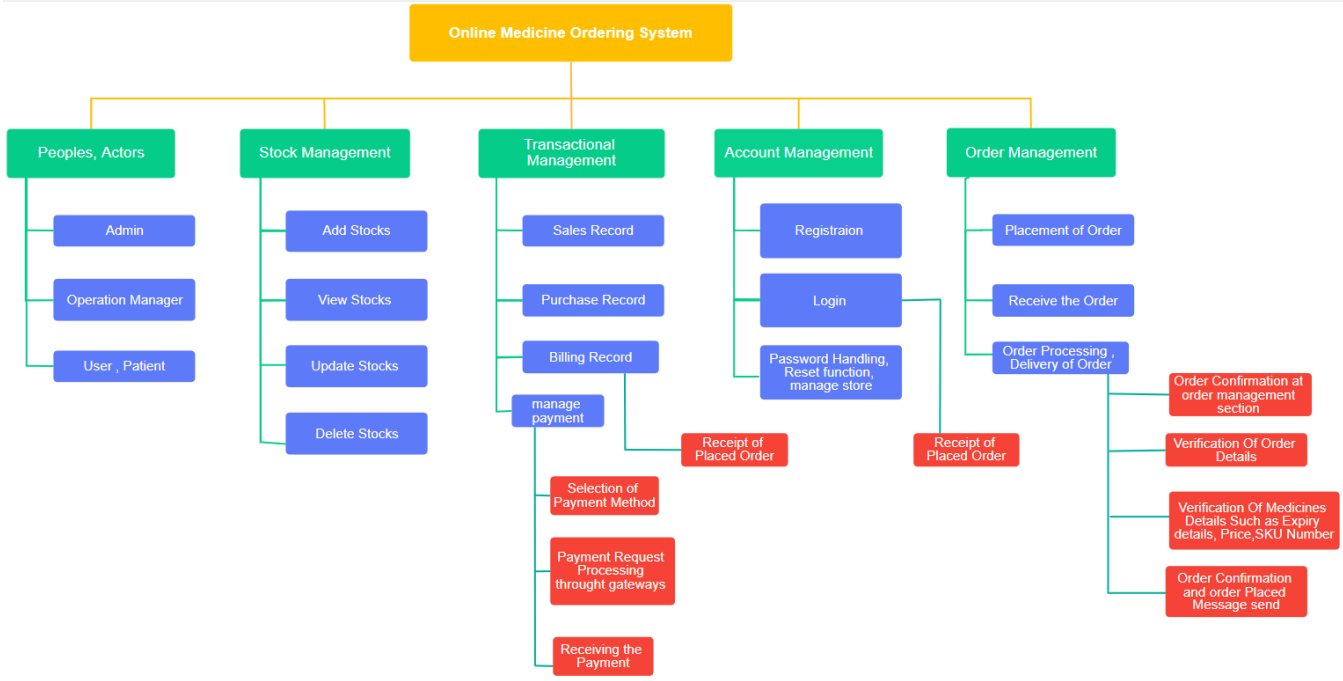
7.7 Component Diagram



8. Gantt Chart

9. Work Breakdown Structure (WBS)

Assume Budget Allocated = 2 LAKH



10. Cost Estimation

KLOC=3.545kloc

Estimation of development effort

Organic:

Effort = 2.4 * (KLOC)^1.05 PM = 2.4 * (3.545) ^ 1.05 = = 9.063 MM

Estimation of development time

Organic:

Development Time = 2.5 (Effort) 0.38 Months = 2.5 *9.063 ^ 0.38 = 5.7 Person Months

Average Staff Size = (Efforts/Development Time) persons = 9.063 /5.7 = 159 persons

Productivity = KLOC/Efforts = 3545/9063 = 0.39 KLOC/PM = 390 LOC/PM

Productivity by Staff /Month = Staff Size * Productivity = 35 * 0.39 = 13.6 KLOC

Time Required for Coding KLOC = KLOC / productivity by staff = 3545 / 13.6 = 260.67 months

Calculating Effort Adjustment Factor (EAF):
Here all assessment values are multiplied together to determine the EAF:

EAF= 1.15×1.16×1.30×0.85×1.21×1.30×1.15×0.86×0.80×1.0×0.90× 0.95×1.0×0.83×0.85
EAF= 1.1

Estimating Effort :

Effort (Man/Month) = 2.4 * (KLOC) 1.05 *EAF …..(3)
Effort = 2.4 * (3.545) 1.05 *1.1
Effort = 9.970 MM

Estimating Time :

Time = 2.5 * (Effort) .38 …..(2)
Time = 2.5 *(9.970).38 Time = 5.99 Months

11. Risk Mitigation

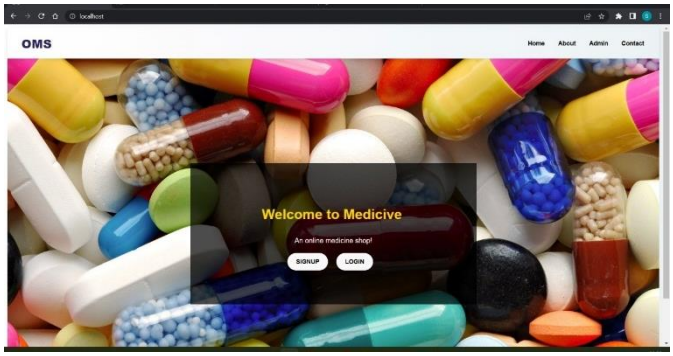
ID	Risk Identified	Risk Impact	Probability	Priority	Mitigation	Action
1	**Login Conflict**: An attempt to login to the same account from multiple devices can be made (at once or while one device is logged in and then other attempts to log-in) which arises session concurrency issues.	Moderate (This problem is highlighting when any transaction is taking place)	Low	High	**Pre-emptive Sessions** We can keep session locks. As soon as any user logs in from another device the other device will be logged out and atomicity will be preserved.	Control
2	**Database failure** / remote DB not responding	High	Low	High	A prominent, flexible and sustainable cloud service needs to be purchased in order to assure seamless and immaculate accessibility. Also, to overcome data loss, timely backups need to be automated.	Avoid And Transfer

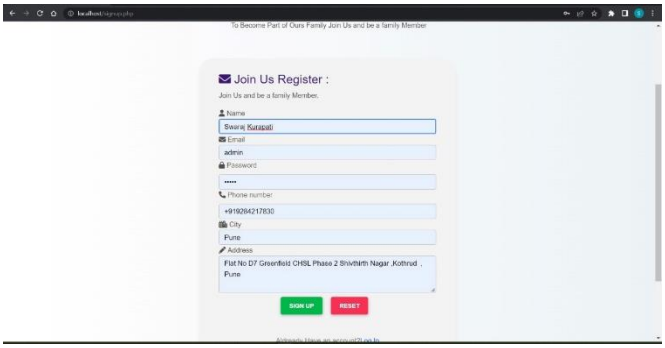
3	**Server Failure** (down / maintenance / offline) Due to several contingencies the server may go offline or be down for a while. Also, during maintenance the services may get stopped	High	Low	High	RAID | Multiple server instances Active automated backups, RAID disks and multiple server instances (spare servers) Deploy and host on cloud (AWS)	Transfer

4	**Payment Failure** (Bank server down) (Gateway unavailable) (Network issue)	Critical	Moderate	High	Reflect the failure reasons And ensure atomicity through commits and rollbacks	Accept
5	**Failure to load data from server to client** (Heavy CSS or connection timeout)	Low	Low	Moderate	Keep most of the CSS and UI code in Client side. Show user a progress baruntil page loads.	Control
6	**Unresponsive due too many requests** Server may get overwhelmed requests and can get crashed	High	Low	Low (High when service is scaled higher)	Use cloud deploymentand allocate flexible resources. (High-capacity server)(eg. AWS	Accept and Transfer

					lambda)	
7	**Unavailability of stocks**	Moderate	High	Moderate (For low scale manual intervention can be done but in case of huge order, not possible)	Contact to the managerfor extra stock or keep backup of every stock.	Control or Manage stock (Depend ingupon cost)
8	**Spam Requests** (Spamming from the same device / IP / account)	Moderate	Low	Low	Block the user IP/ devicefor certain time frame Flag the account as spam	Avoid
9	**Concurrency issue while ordering** (Multiple users may want to order the same	High	High	High	Exclusive / Non-preemptible transaction lock (Consistent Access) When one user has proceeded to the transaction part, The	Control

12.Output


OMS
Home
About
Admin
Contact
Welcome to Medicive
An online medicine shop!
SIGNUP
LOGIN


Join Us Register :
Join Us and be a family Member.
Name
Swara Kurapati
Email
admin
Password
Phone number
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City
Pune
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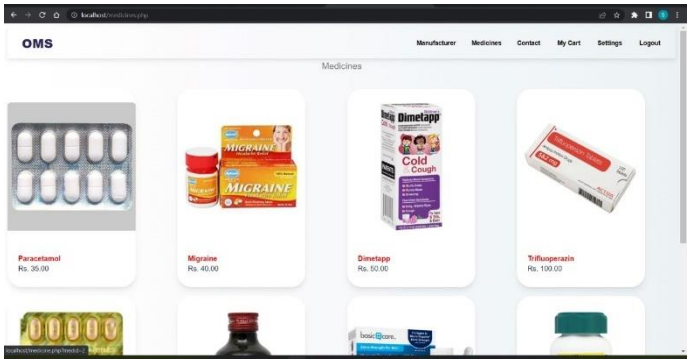
Flat No D7 Greenfield CHSL Phase 2 Shivbirth Nagar ,Kothrud , Pune
SIGN UP
RESET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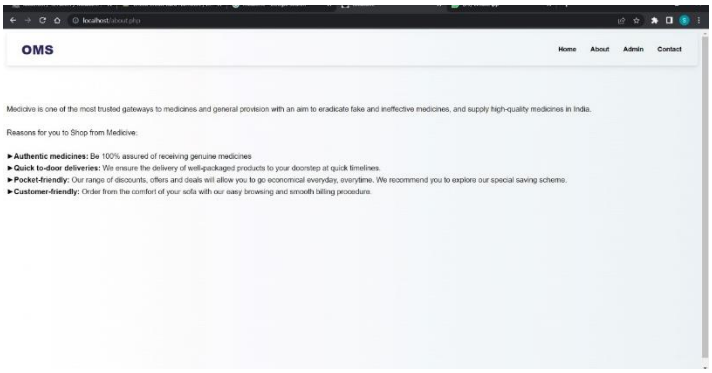
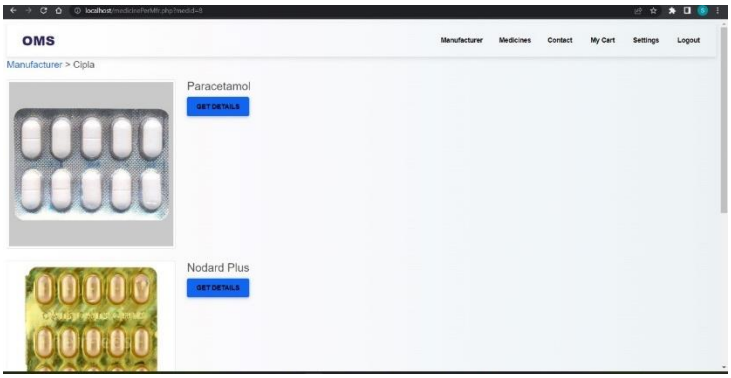
Migraine
Rs. 40.00
Dimetapp
Rs. 50.00
Trifluoperazin
Rs. 100.00


OMS
Home
About
Admin
Contact
Medicive is one of the most trusted gateways to medicines and general provision with an aim to eradicate fake and ineffective medicines, and supply high-quality medicines in India.
Reasons for you to Shop from Medicive:
►Authentic medicines: Be 100% assured of receiving genuine medicines
►Quick to-door deliveries: We ensure the delivery of well-packaged products to your doorstep at quick timelines.
►Pocket-friendly: Our range of discounts, offers and deals will allow you to go economical everyday, everytime. We recommend you to explore our special saving scheme.
►Customer-friendly: Order from the comfort of your sofa with our easy browsing and smooth billing procedure.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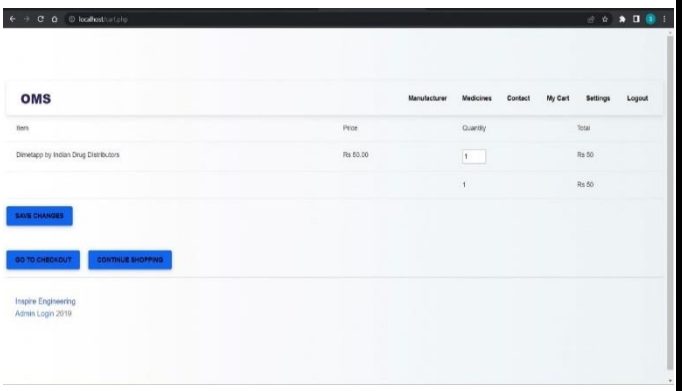
Paracetamol
GET DETAILS
Nodard Plus
GET DETAILS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Rs 50
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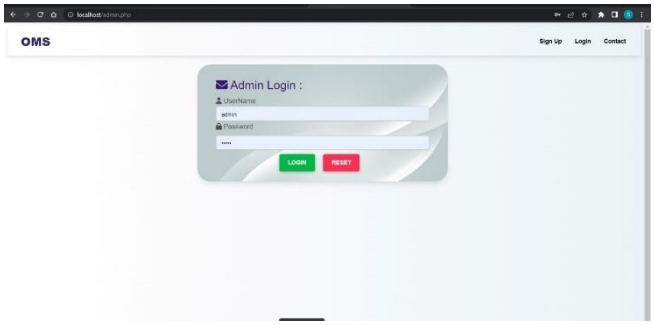
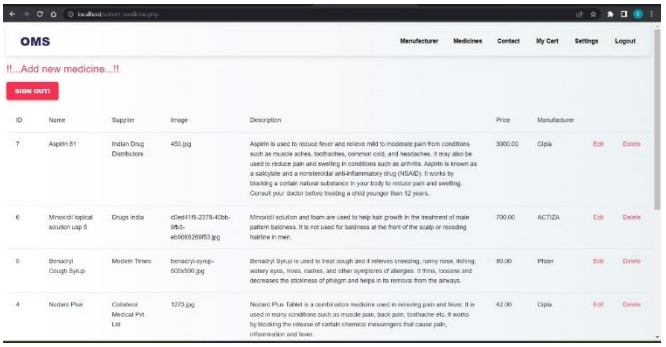
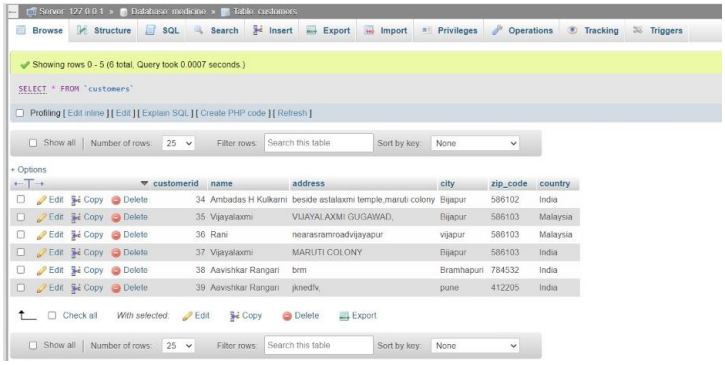
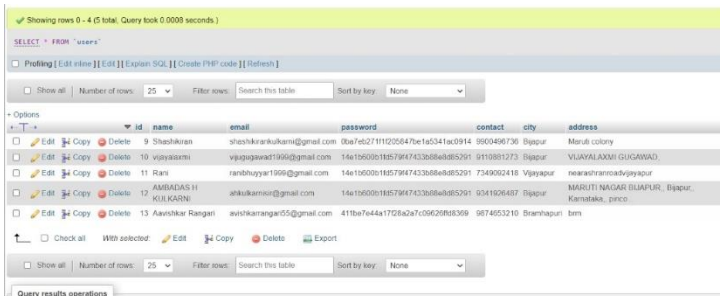
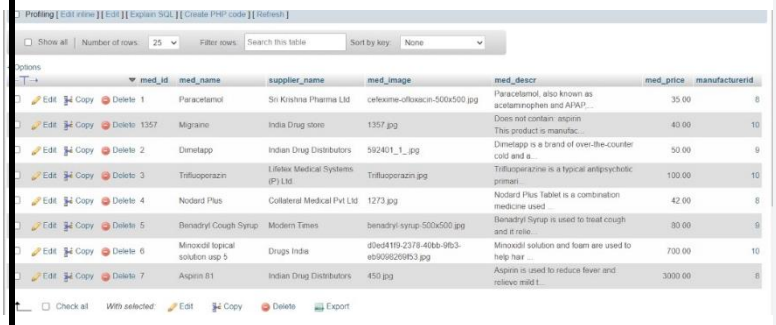
GO TO CHECKOUT
CONTINUE SHOPPING
Inspire Engineering
Admin Login 2019

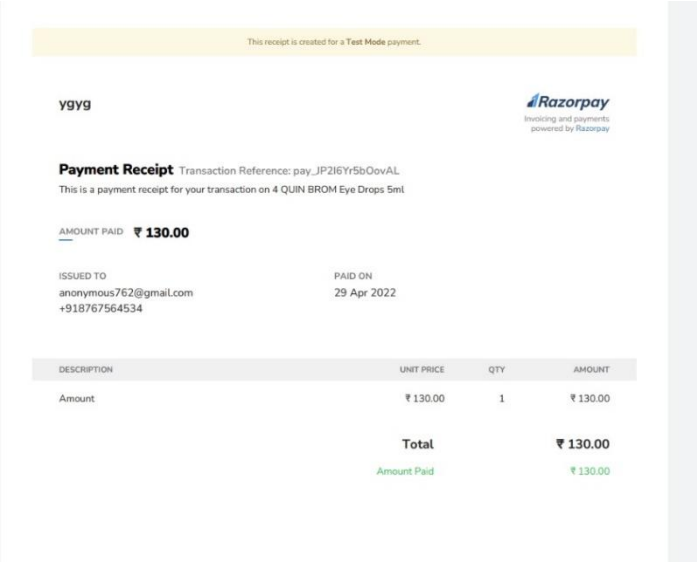

OMS
Sign Up
Login
Contact
Admin Login :
UserName
admin
Password
LOGIN
RESET


OMS
Manufacturer
Medicines
Contact
My Cart
Settings
Logout
!!...Add new medicine...!!
SIGN OUT!


Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Tracking
Triggers
Showing rows 0 - 5 (6 total, Query took 0.0007 seconds.)
SELECT * FROM `customers`


Showing rows 0 - 4 (5 total, Query took 0.0008 seconds.)
SELECT * FROM `users`


Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]


This receipt is created for a Test Mode payment.
ygyg
Razorpay
Invoicing and payments powered by Razorpay
Payment Receipt Transaction Reference: pay_JP2I6Yr5bOovAL
This is a payment receipt for your transaction on 4 QUIN BROM Eye Drops 5ml
AMOUNT PAID ₹ 130.00
ISSUED TO
anonymous762@gmail.com
+918767564534
PAID ON
29 Apr 2022
DESCRIPTION
UNIT PRICE
QTY
AMOUNT
Amount
₹ 130.00
1
₹ 130.00
Total
₹ 130.00
Amount Paid
₹ 130.00

13. Appendix

13.1. Appendix A: Glossary

OS	**Operating System**
SRS	**Software Requirement Specification**
MERN	**MySQL, PHP Framework for web development**
CGI	**Computer-generated imagery**
HTML	**Hyper Text Markup Language**
UPI	**A Unified Payment Interface (UPI) is a smartphone application that allows users to transfer money between bank accounts.**
AEIOU	**AEIOU stands for 5 elements to be coded: Activity, Environment, Interaction, Object, and User.**

14.2 Appendix B: Analysis Models

None

14.3 Appendix C: To Be Determined List

- *Analysis models*

15. References

Book :
Effective Prototyping for Software Makers by Jonathan Arnowitz, Michael Arent, Nevin Berger
Released July 2010 Publisher(s): Morgan Kaufmann
ISBN: 9780080468969

Software Platform and Tools used :
1) https://www.invisionapp.com/
2) https://proto.io/
3) https://lucid.app/documents#/dashboard

4) https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airline-database

IEEE Article :Software Platform and Tools used :

1) https://www.invisionapp.com/

2) https://proto.io/

3) https://lucid.app/documents#/dashboard

Original Document Link:

1. https://lucid.app/lucidchart/1129e570-58c4-4345-90c3-22a16e62e032/edit?page=0_0&invitationId=inv_b93d32c1-0ac8-4a81-ac4a39cd287e3471#
2. https://lucid.app/lucidchart/0fcbd326-34c9-4b53-8f16-762a091c5be0/edit?page=0_0&invitationId=inv_4a8a78aa-e419-4cd2- 9812-7d08306bbc7f#
3. https://lucid.app/lucidchart/f3daa0f8-392e-471c-9b97-ceb2f11feac7/edit?page=0_0&invitationId=inv_a831768e-4cd8-4a31- 8e1f-7523af61d482#