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Web Portal for Donating Unused Medicines

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Abstract: *This project seeks to give unneeded medications and treatments. Unused remedies may be given to a needy person for future use. This software enables users to donate unneeded medications to non-profit organizations. Admin, NGO, and User are the three individuals who make up this organization. Many people in India live below extreme poverty. So, it becomes difficult for those people with low income to pay for their health care and medication. As a result, they live with a number of diseases and as a result, number of deaths increases daily. Apart from that, there are various people who are overdosing on drugs even after they have stopped their medication. Here, we have set up a website for donating medicines to NGOs. This program will help people in donating their unused medicines to NGOs and they can distribute them to people who need them. This site will help in reducing the cost of health services by making better use of unused drugs as well as helping poor or people with low income to get better healthcare. This site is also assisted in assessing the availability of essential medicines for nearby NGO's. The purpose of this project is to donate unused medicines. Unused medicine can be donated to the poor for further use. This application helps users donate unused medicines to NGOs. Administrators manage members by logging in and deleting and blocking users who have provided incorrect or expired medications. The administrator needs to confirm the expiration date of the uploaded image. NGOs help manage inventory and track available medications*

Keywords: Medicine Donation, NGOs, Distribution of Medicines, Unused, Health Services.

I. INTRODUCTION

Healthcare is a fundamental aspect of human well-being, yet many individuals face significant health challenges, particularly in developing countries where access to medical services is hindered by a shortage of healthcare professionals. India, as a developing nation, has made progress in public health initiatives through both public and private sectors. Several key factors affect healthcare access in India:

Population Density: With approximately 1.38 billion people, India has a population density of around 382 individuals per square kilometre.

Limited Medical Professionals: There are only about 1.34 doctors for every 1,000 citizens, according to the World Health Organization (WHO).

Poverty: Around 6.7% of the population lives below the poverty line, defined as earning a mean income of $2 per day, severely limiting their ability to access healthcare services and essential medications.

Additionally, the platform will assist NGOs in monitoring the availability of crucial medicines. Our survey indicates that 86.9% of respondents believe in the need for a reliable platform for donating unused medications and regard our portal as trustworthy. Many are willing to contribute their surplus medicines to support those in need.

People in extreme poverty who use our application are able to afford a variety of necessary medications and retain those medications for future use. Here, our goal was to develop a web application that would aid in the collection of unused medications from donors, as well as offer assistance to those with limited financial resources or who are unable to pay for quality healthcare. Accredited doctors could also recommend specific medications for this site's low-income users.

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Because in these competitions, people living below the poverty line do not pay for health care goals. Apart from the "drug dosage" is the most important thing for most of them. Therefore, they cannot afford medicines and suffer from several types of illnesses, and several people donate their lives.

Here, we aimed to create a web site, which could help collect unused, unused medicines from donors through NGOs, and provide for the poor or low-income people and Accredited physicians could recommend medicines for poor or low income people who use this site. We also help monitor the availability of essential medicines for NGO's.

II. LITERATURE SURVEY

Title	Year	Author	Objectives	Key Features	Limitations
Medicine Redistribution and Wast e Reduction	2023	Lee & Patel	To examine how digital platforms can help reduce medicine waste through improved tracking and distribution systems.	Focuses on optimizing the supply chain for donated medicines to reduce waste.	Does not address donor-NGO matching or medicine validation in-depth.
User-friendly Web Portals for Medicine Donation	2023	Patel, S., et al.	To design a user-friendly web interface for medicine donors	Focused on user-friendly interface, mobile compatibility	Limited geographic reach, lacks realtime updates
Improving Medicine Donation with Bloc k chain Technology	2022	Lee, M., Wang, H.	To propose a secure system for tracking and verifying donated medicine	Secure tracking of donated medicines	High implementation cost, complex setup
NGO Participation in Medic ine Donation via Digital Platforms	2021	Gupta, A., Sharma, P.	To explore the role of NGOs in medicine donation through online portals	NGOs can manage donations, user-friendly interface	Limited donation tracking features
Web-based Solutions for Medicine Redistribution	2020	Khan ,R., et al	To study the effectiveness of online platforms for redistributing medicine	Simple web interface for medicine donations	Lacks features to prevent expired medicine donations

III. METHODOLOGY

This system will gather drugs from persons who have recovered entirely from their illnesses and no longer require them, as well as from organizations and individuals who want to give pharmaceuticals. Following the collecting of these drugs, they will be transferred to non-governmental organizations (NGOs) who will inspect them and, if authorized, would distribute them to the people directly for free.

The system will consist 3 entities:

Admin 2.NGO

User

Admin:

Admins must first log in, then input their email and password, after which the email and password must be verified.

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Login will be successful if the administrator enters a legitimate email address and password; else, the process will be repeated. After logging in, admins will be able to add NGOs, then review the NGO/User list, verify prior transactions, and collect medicine.

NGO:

NGO's must log in if they are already registered, or they must first register. Then, after completing the registration procedure, the NGO can log in using their email and password. If all of the information is right, the NGO will be able to login successfully; otherwise, the process will be repeated. After successfully logging in to the NGO, you can check the medicine list and make a request for medication

USER:

First, if the user is already registered, he or she should login; otherwise, the user must login with credentials for the first time. After that, the user must enter their email address and password, after which their credentials will be verified. The user will be able to login successfully if all of the credentials are accurately filled out. After successfully logging in, users can contribute medicine, check their donation history, and provide feedback.

At the same time, the recipient can receive the medicines from the NGOs in person by showing the official prescription given by the doctors for the treatment. Alternatively, the patient needs to call a doctor that is registered with the program and if the patient is unable to pay for the medication, then the doctor may request the medication through the portal and suggest him to visiting the NGO for the reference to get medicines. Therefore, the recipients do not need direct access to the portal that overcomes their power as well as technology issues related to smart devices and internet usage. Prior to dispatching medication to recipients, the administrator concerned keeps a check on the availability of the prescribed medication.

NGO's and pharmacists or providers need to create an account on our web portal where the system will verify the account and the information provided by the provider and NGOs. During the registration, name, address, registering email ID and password of the user will be mandatory. The conceptual system is shown in figure 1

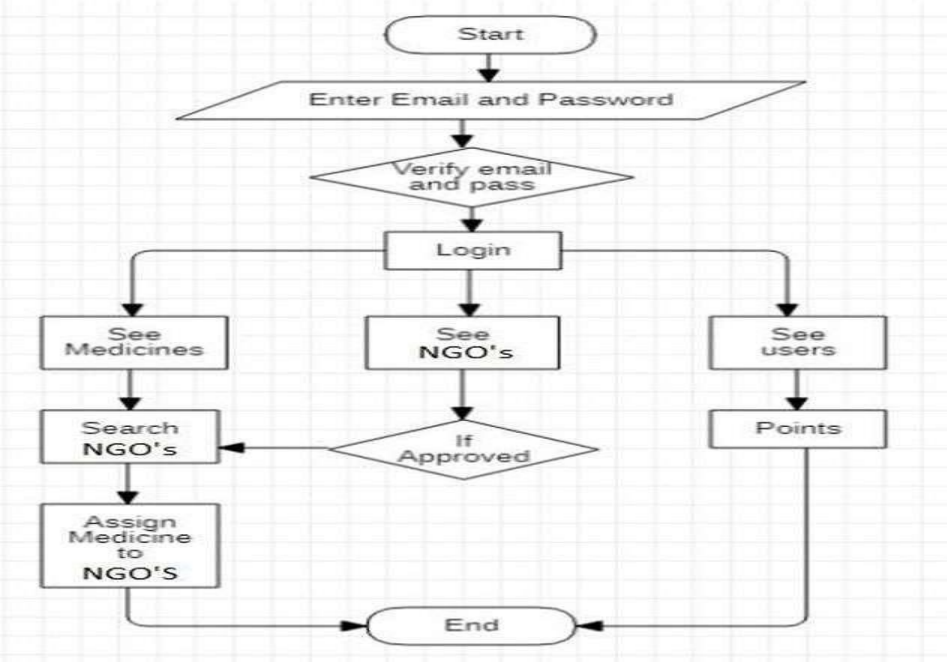

Figure 1 Flowchart

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IV. SYSTEM ARCHITECTURE

The system is designed using a modular service-oriented architecture to manage and facilitate medicine donations between users, NGOs, and administrators. It ensures scalability, security, and efficient data management. The architecture comprises three main layers: **Users**, **Backend Services**, and **Databases**.

User Role:

There are three types of users interacting with the system:

User (L): Individuals who wish to donate medicines.

NGO (M): Non-Governmental Organizations that receive, manage, and distribute donated medicines.

Admin (N): System administrators who oversee the entire process, manage reports, and handle transactions.

These user roles interact through a centralized **Backend API**, which routes requests to appropriate services

Backend Services:

The backend layer is composed of several micro services, each responsible for specific system functions. These include:

Authentication Service: Handles user login, registration, and secure access to the system.

Medicine Donation Service: Processes and validates donation requests submitted by users and stores donation-related data.

Inventory Management Service: Manages medicine inventory for NGOs, ensuring proper tracking of stock levels and availability.

Databases:

Each service is associated with a dedicated database to ensure data isolation, integrity, and faster retrieval:

User Database: Stores information related to users and their donation activities.

NGO Database: Maintains inventory and operational data related to participating NGOs.

Admin Database: Stores admin-specific data, including generated reports and system audit logs

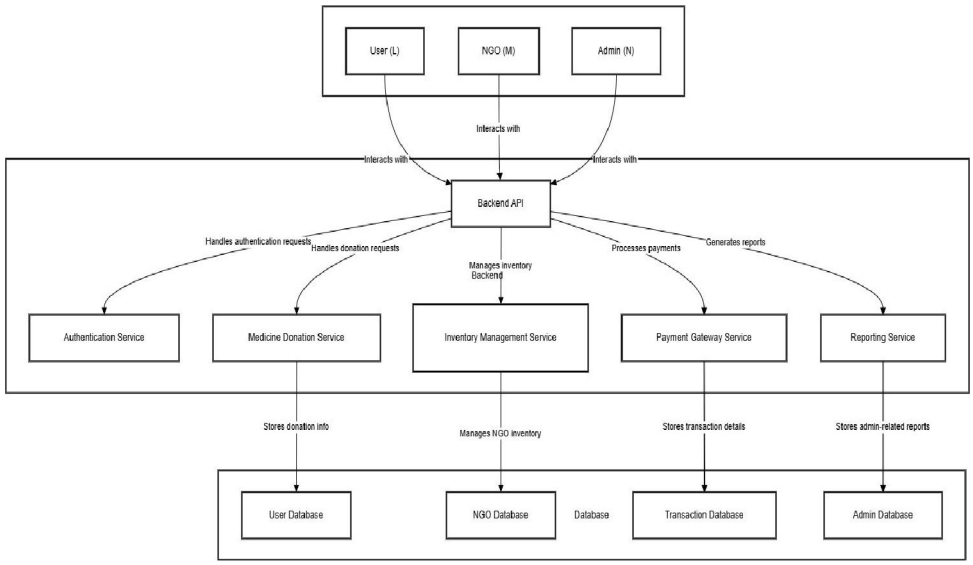

Figure 2 System Architecture

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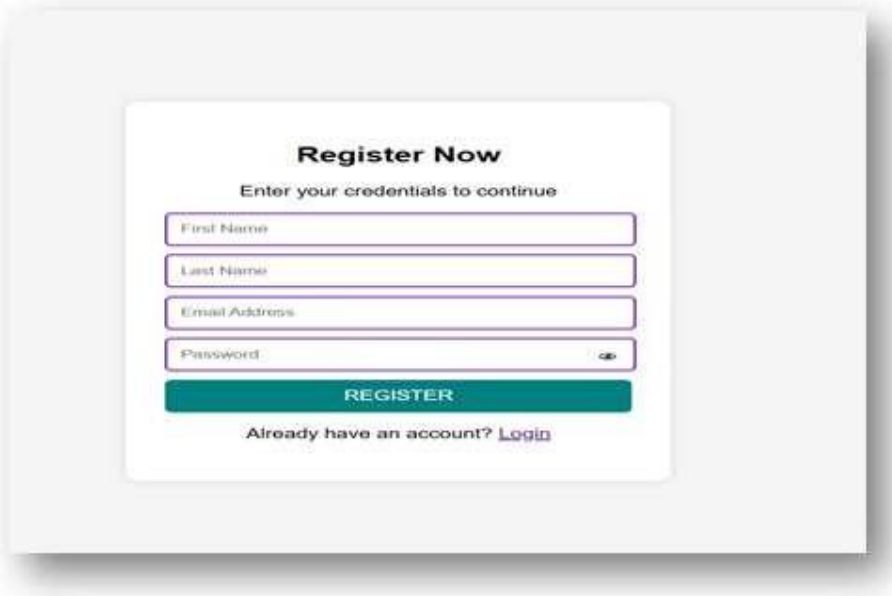
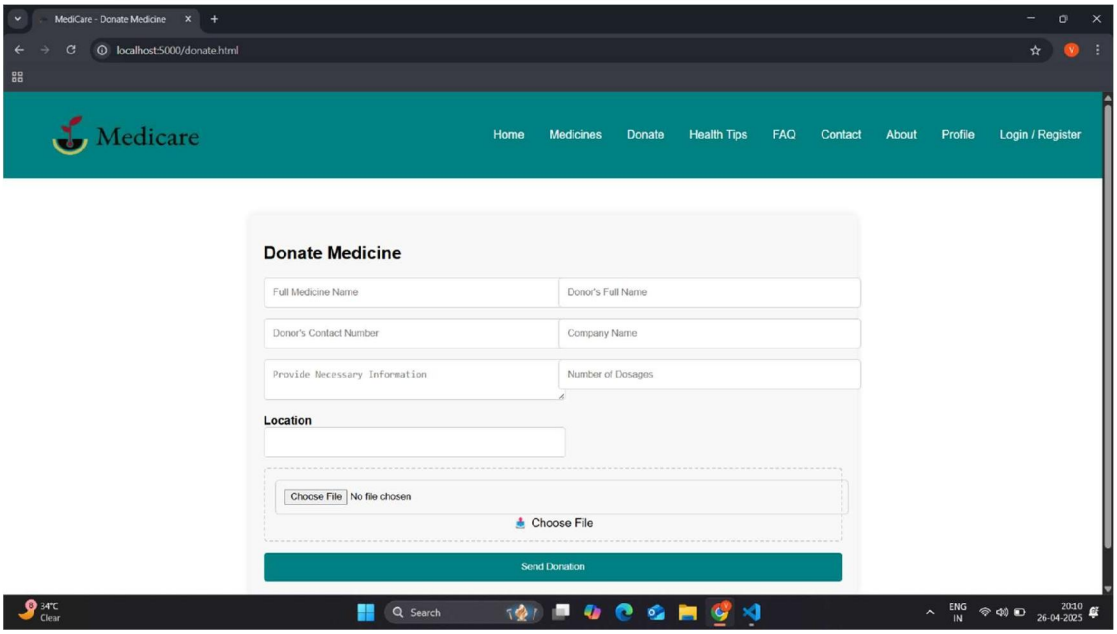
V. RESULTS





VI. FUTURE WORK

In the future, the web portal can be enhanced through several key improvements. AI-based systems could be integrated to automatically validate medicine labels and expiry dates, ensuring safer donations. A mobile application would improve accessibility, while real-time inventory tracking and geo-location features could optimize logistics and NGO coordination. Integrating donation pickup services with local delivery providers would further ease the donation process. Additionally, an advanced admin dashboard with analytics, blockchain integration for secure records, and a user feedback system for NGOs could significantly boost transparency and trust. Support for regional languages and accessibility features would make the platform more inclusive. Lastly, linking the portal with government health databases can help ensure compliance and expand the system's reach and credibility.

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VII. CHALLENGES

Developing a web portal for medicine donation presents several challenges. Ensuring the authenticity and safety of donated medicines is a major concern, as expired or counterfeit items could pose health risks. Building trust among users and NGOs requires a secure and transparent system, which demands robust authentication and data protection mechanisms. Managing real- time inventory updates across multiple NGOs can be complex, especially in the absence of standardized reporting systems.

Logistics coordination, such as organizing pickups or deliveries, also adds operational difficulties. Additionally, user adoption may be limited in regions with low digital literacy or internet access. Legal and regulatory compliance related to pharmaceutical donations further adds to the complexity, requiring thorough validation and alignment with health authorities.

VIII. CONCLUSION

The development of a web portal for online medicine donation to NGOs provides an innovative solution to reduce medicine wastage and support underprivileged communities. By connecting individual donors with NGOs through a secure and user- friendly platform, the system promotes social responsibility and improves access to essential medicines. The modular architecture ensures scalability, while features like authentication, inventory management, and reporting enhance transparency and operational efficiency. Although the project faces challenges related to medicine validation, logistics, and regulatory compliance, it lays a strong foundation for future improvements. With further enhancements and wider adoption, this portal has the potential to become a vital tool in bridging the healthcare gap and promoting a healthier society.

REFERENCES

[1] Alice Fabbri, Lisa Parker, Jane Williams, “Medical donations are not always free: an assessment of compliance of medicine and medical device donations with World Health Organization guidelines (2009–2017) Sally McDonald”, Lisa Bero International Health, vol. 11, issue 5, September 2019, pp. 379–402

[2] IRJET-V7450 International Research Journal of Engineering and Technology (IRJET)

[3] International journal of Cretive research thoughts (IJCRT)

[4] Kuppuswamy, Bayus, B.L. Crowd funding Creative Ideas: The Dynamics of Project Backers.In the Economics of Crowd funding: Startups, Portals and Investor Behavior, 1st ed.

[5] GiveMed: A Webportal for Medicine Distribution among Poverty-stricken People December 2017 DOI: 10.1109/R10HTC.2017.8288960 Conference: Humanitarian Technology Conference (R10- HTC), 2017 IEEE Region 10 Project: Development and Evaluation of Health Information Systems pp. 108

[6] “AUTHENTICATION OF UNUSED MEDICINE DONATION FOR NGOs” J. Esther Jenslin and P. Sahaya Jenitha, S.Sri Selva Meenakshi International Journal on Cybernetics & Informatics (IJCI), May 2021

[7] “ONLINE MEDICINE DONATION WEBSITE” Devyani S Mangalkar, Kadambari S Ghatole,Manali J Karmore International Journal of advance research in science, communication and technology (IJARSCT) 2 june 2021.

[8] “ONLINE MEDICINE DONATION PORTAL” Sanket Rajendrakumar More. Ashutosh Nitin More. Sana Hatture. International Journal of advance research, Ideas and innovation in technology.2021.

[9] K. Shubham, C. Vasu, B. Vaibhav, S. Ajay Kumar, and K. Sunil, “An online web portal for donating unused medicine to ngos,” International Journal of Computer Applications, vol. 184, no. 15, pp. 0–25, 2022.