**Title:** Online Unused Medicine Donation System  
**Type:** Web Application

**1. Project Overview**

The Online Unused Medicine Donation System is a web-based platform that facilitates the donation of unused medicines from individuals and organizations to charitable institutions, NGOs, and those in need. The platform aims to minimize medicine wastage while ensuring that surplus medicines reach the underprivileged efficiently.

**2. Problem Statement**

A significant number of medicines go unused and are discarded while many people cannot afford essential medications. There is no centralized system to collect, verify, and distribute unused medicines safely. The lack of an organized structure results in wastage and missed opportunities to help those in need**.**

**3. Problem Solution**

This platform will connect donors, NGOs, and healthcare providers. It will provide features for donors to list surplus medicines, ensure quality control through verification, and facilitate seamless distribution through registered organizations. The system will also include tracking and reporting features to maintain transparency.

**4. Scope**

**Target users:** Individuals, hospitals, pharmacies, NGOs

**Geographic scope:** Initially local, with potential for expansion

**Types of medicines:** Non-expired, unopened, and properly stored medicines

**Verification process:** Pharmacist/healthcare professionals will validate donations

**Distribution:** Partnered NGOs and healthcare institutions

**5. Basic Features:**

| **Feature** | | **Description** | | |
| --- | --- | --- | --- | --- |
| **User Registration and Authentication** | | Allows users (donors and recipients) to create and manage accounts, track donation history, and update personal information. | | |
| **Medicine Listing** | | Donors can list available medicines with details such as name, dosage, expiry date, and quantity | | |
| **Verification**  **Search and Request Medicines** | | Admins (Pharmacists or healthcare professionals) verify listings to prevent expired or restricted drugs from being donated.  Recipients can search for medicines using filters (e.g., location, medicine type) and submit requests, which notify donors for approval. | | |
| **Location-Based Matching** | | Connects donors and recipients within close proximity. | | |
| **Admin Dashboard** | | Provides tools for administrators to monitor activities, verify user authenticity, approve/reject listings, and generate reports on donations and requests. | | |
| **NGO & Pharmacy Collaboration** | | Integration with registered organizations for safe distribution. | | |
| **Analytics & Reporting** | | Generates reports on donations, distributions, and impact. | | |
| **Notification System** | | Sends email or in-app notifications to inform users about request statuses, upcoming expirations, and important system updates. | | |
| **Feedback and Rating System** | | Enables users to rate their donation/request experience to ensure transparency and trust within the platform. | | |
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**6. Project Plan:**

**a. Modular Breakdown and Iterations**

This project follows the **Waterfall** **model** due to its structured and sequential development process. Since the system has clearly defined requirements, the Waterfall approach ensures thorough planning, development, and testing before deployment.

| **Iteration** | **Duration** | **Modules/Features** | **User Stories** |
| --- | --- | --- | --- |
| Iteration 1 | 2 weeks | - User Registration and Authentication - User Profile Management - Medicine Listing Functionality - Basic Admin Panel | - Functional user registration and login system - Profile management features - Ability for donors to list medicines - Admin panel with basic user and listing oversight |
| Iteration 2 | 2 weeks | - Medicine Search and Request System - Notification System - Advanced Admin Controls (approval workflows, reporting) | - Search functionality with filters - Request mechanism for recipients - Notification setup (email/in-app) - Admin capabilities to approve/reject listings and view reports |
| Iteration 3 | 2 weeks | - Feedback and Rating System - Enhanced Security Measures - System Testing and Bug Fixes - UI/UX Enhancements | - Post-transaction feedback and rating feature - Implementation of security protocols (data encryption, secure authentication) - Comprehensive testing reports - Improved user interface and experience based on feedback |

Each iteration follows a cycle of planning, risk assessment, prototyping, implementation, evaluation, and refining, ensuring continuous improvements while keeping risks under control.

### b. Team Roles

| **Name** | **Role** | **Responsibilities** |
| --- | --- | --- |
| [Taha, Shahzeb & Ali Ahmad] | **Project Manager** | Oversees project progress, coordinates between teams, and ensures timelines are met. |
| [Ali & Taha] | **Leader** | Heads the development team, makes key architectural decisions, and ensures code quality. |
| [Shahzeb] | **Frontend Developer** | Designs and implements the user interface, ensures responsiveness and usability. |
| [Taha] | **Backend Developer** | Develops server-side logic, manages database interactions, and ensures application security. |
| [Shahzeb & Taha] | **Quality Assurance or Testing** | Conducts testing (unit, integration, system), identifies and documents bugs, ensures feature compliance with requirements. |
| [Ali & Shahzeb] | **Architect** | Designs wireframes and prototypes, enhances user experience, and ensures intuitive design. |
| [Ali] | **Requirement Analyst** | Gathers and documents project requirements, liaises with stakeholders, ensures clear understanding of project scope. |

**7. Prototype of Main Features:**

| **Screen** | **Description** |
| --- | --- |
| **Home Screen** | Introduction to the platform, with options to register or log in. Highlights the mission and benefits of the platform. |
| **User Dashboard** | Post-login, users see their profile overview, recent activities, and quick links to donate or request medicines. |
| **Medicine Donation & Listing Page** | Form for donors to add new medicine details, including fields for name, dosage, expiry date, quantity, and upload images. |
| **Search and Request Page** | Interface for recipients to search available medicines with filters. Each listing provides a "Request" button for initiating the donation process. |
| **Admin Dashboard** | Dashboard displaying site statistics, pending approvals, user management tools, and reports on donation activities. |

Prototypes will include navigation flows, interactive elements, and design consistency to ensure a seamless user experience.

**8. Conclusion**

The **Online Unused Medicine Donation System** will be developed in a structured manner with clear iterations and assigned roles. The project plan ensures that each module is developed, tested, and deployed efficiently. This approach guarantees that the system will be user-friendly, efficient, and meet the needs of all stakeholders involved.