Project Report:

Date: 30th September, 2024

Donation Tracking System

1. Introduction

This report outlines the proposed development of a Donation Tracking System designed to capture, track, and manage donations made by users. The system will serve as a centralized portal for recording donations, managing user information, and sending acknowledgment emails. The solution will be developed using Flask and will prioritize a seamless user experience.

2. Project Objectives

- **User Registration:** Allow users to register with personal details, including name, phone, email, location, and address.
- **Donation Management:** Capture and track various amounts pledged by users.
- **Email Notifications:** Send acknowledgement emails to users upon donation, including details of their contributions.
- **Data Management:** Provide a dashboard for administrators to view and manage donations.
- **Seamless Experience:** Ensure the application is user-friendly, efficient, and reliable.

3. Requirements

3.1 Functional Requirements

- **User Registration Module:**
    - Capture user information (name, phone, email, location, address).
    - Validate and store user information securely.
- **Donation Tracking Module:**
    - Allow users to submit donation amounts.
    - Record each donation with details linked to the respective user.
- **Email Acknowledgment:**
    - Automatically send acknowledgment emails to users after a successful donation.
- **Admin Dashboard:**

    - Provide an interface for administrators to view all donations.
    - Include options to filter donations by date, user, and amount.

3.2 Non-Functional Requirements

- **Scalability:** The system should accommodate an increasing number of users and donations.
- **Security:** Implement security measures to protect user data and ensure secure transactions.
- **Usability:** Ensure a user-friendly interface for both users and administrators.
- **Reliability:** The system must operate without significant downtime and handle errors gracefully.

4. Technologies to be Used

- **Backend Framework:** Flask
- **Database:** SQLite for development, with potential to scale to PostgreSQL or MySQL for production.
- **Email Service:** SMTP for sending acknowledgement emails.
- **Frontend:** HTML, CSS, and JavaScript for user interface development.

5. Project Timeline

Phase	Tasks	Duration
Phase 1: Planning	Requirement Gathering, Initial Design	1 day
Phase 2: Development	User Registration Module	3 days
	Donation Tracking Module	5 days
	Email Acknowledgment Feature	1 day
	Admin Dashboard Development	7 days
Phase 3: Testing	Unit Testing	3 days

6. Seamless Nature of the System

The Donation Tracking System is designed to ensure a seamless experience for users and administrators. Key aspects include:

- **User-Friendly Interface:** A clean and intuitive interface that guides users through the registration and donation process without confusion.
- **Automated Email Notifications:** Immediate acknowledgment of donations enhances user satisfaction and encourages future contributions.
- **Real-Time Data Tracking:** Administrators can easily access and analyze donation data, allowing for prompt decision-making and reporting.
- **Scalability:** The system architecture supports growth, ensuring it can handle increasing user registrations and donation volumes without performance degradation.

Conclusion

The Donation Tracking System aims to facilitate a streamlined process for managing donations while providing an engaging user experience. By leveraging Flask and incorporating essential features such as user registration, donation tracking, and email notifications, this project is set to enhance our ability to manage donations effectively.