WIM LAB EXP - 7

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AIM:

1. *Define your Problem Statement such that it will accommodate all assignments completed till date, i.e. data collection, validation, confirmation by email & sms, payment done, report generation in pdf form, Dashboard etc.*
2. *Your problem statement must be related to realistic scenario.*
3. *This problem statement should be usable to somebody, after hosting.*
4. *Data entered can be captured in csv/xml json files, if you feel comfortable using database, you may use database of your comfort.*
5. *Draw Data Model for the problem statement's data requirement.*
6. *Present integrated application for the problem statement & present the Data Model for the problem's data requirement. Create a document.*

THEORY:

1. Problem statement:

Title: *Food Waste Management System*

Introduction*: Food wastage is a significant global issue, with tons of edible food discarded daily while millions go hungry. The disconnect between surplus food sources (like restaurants, caterers, and households) and the underprivileged who can benefit from it is a key contributor to this problem. A centralized platform to bridge this gap can help reduce food wastage and improve food access for those in need. Moreover, by organizing and efficiently managing donations, such a platform could support NGOs and community organizations in their fight against hunger and malnutrition.*

Proposed Solution: *The* ***Food Waste Management System*** *is a web-based platform designed to connect food donors with individuals or organizations that can manage and use donated food. The system enables registered users (donors) to list food items available for donation, specifying details like location, contact information, and pickup instructions. Admins can manage the donations, approve or reject food requests, and track donations. The platform also includes a feature for users to contribute monetarily to NGOs or social schemes.*

2. Real Life Users:

- ***Admins:*** *Manage the system, handle user inquiries, oversee donations, and generate reports.*
- ***Donors:*** *Register and log in to the system, list food items for donation, specify pickup details, and receive notifications upon donation.*
- ***Beneficiaries/Requestors:*** *Can request food items directly from the contacts shown on the site and further communicate their needs to the admin of the platform through the enquiries.*
- ***NGOs/Social Schemes:*** *Receive food donations and monetary contributions, enabling them to support underprivileged communities.*

3. Key Features and Functionality for each role:

a) Admin:

- ***User Authentication:*** *Sign-up and login functionalities for both admins and donors.*
- ***Dashboard for Admins****: Display metrics like the number of active food requests, pending inquiries, and registered food donations***.** *There may be some charts to visualize the textual data better.*
- ***State and City Management:*** *Add and manage states and cities to categorize donations based on location. (CRUD Operations)*
- ***Food Request Management:*** *Admins can manage food requests by marking them as new, completed, or rejected.*
- ***Enquiry Management:*** *Admins can view and respond to user enquiries, filtering between read and unread messages.*
- ***Reports:*** *Generate printable reports on food donations and registered food donors.*

b) Donor:

- ***User Authentication:*** *Sign-up and login functionalities for both admins and donors.*
- ***Food Donation Details:*** *Donors can specify food items, pickup details, and other relevant information.*
- ***Notifications:*** *SMS and email notifications to donors upon donation.*
- ***Monetary Donations (using payment gateways):*** *Allows donors to contribute financially to NGOs and social schemes using payment gateways.*

c) Beneficiaries/Requestors:

- ***View-Only Site****: For the beneficiaries/requestors.*
- ***Contact Us Page****: For further communication and contributions.*

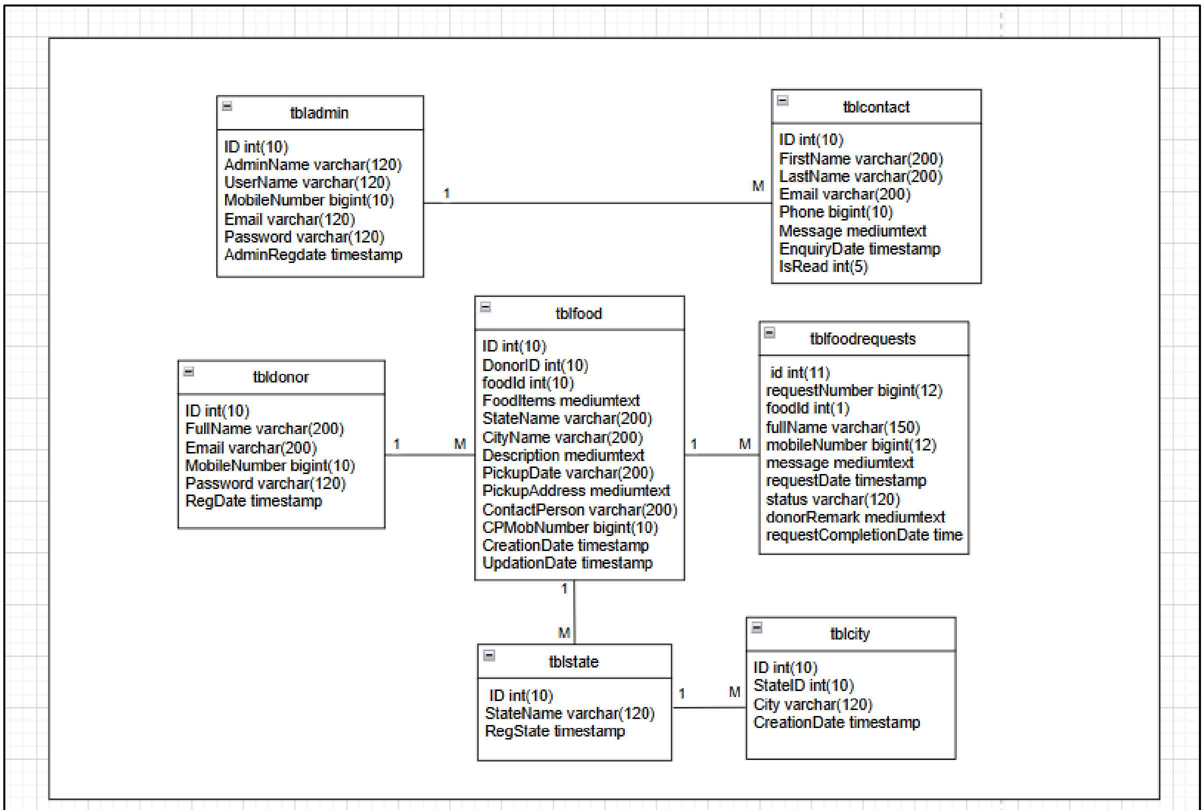
d) NGOs:

- *Receive monetary help from donors.*

4. Tech Stack:

- *Frontend: HTML, CSS, JavaScript (possibly with a frontend framework like React or Angular).*
- *Backend: PHP (or another server-side language such as Node.js).*
- *Database: MySQL for managing and storing relational data.*
- *Notifications: Integration with SMS and email services for communication with donors.*

5. Data Model:



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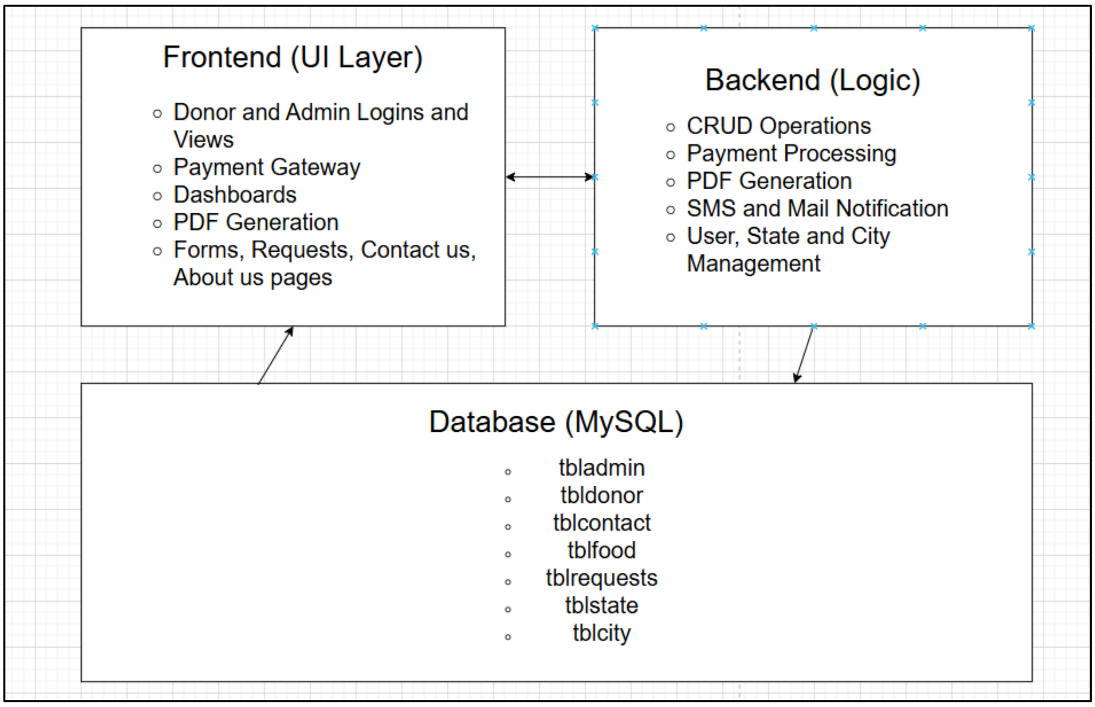
6. Architecture:



CONCLUSION:

The Food Waste Management System provides an ***impactful, centralized platform*** *to* ***connect food donors*** *with* ***beneficiaries****, thereby addressing the critical issue of food wastage. As it has user login and signup – various data validation protocols are implemented and data is collected beforehand for the database.*

By facilitating food donations, managing requests, and offering options for ***monetary contributions*** *(by integrating payment gateways) to NGOs, the system ensures efficient and transparent distribution of resources.*

With features like real-time ***SMS and Mail notifications****, location-based donation categorization, and comprehensive* ***admin and donor dashboards****, it streamlines the process of managing food surplus.*

The system not only helps reduce food waste but also aids in feeding those in need, ultimately ***fostering a sense of community responsibility and contributing to a more sustainable future.***