CSE370: Database Systems
Project Report

Project Title: Food Donation Management System

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Introduction

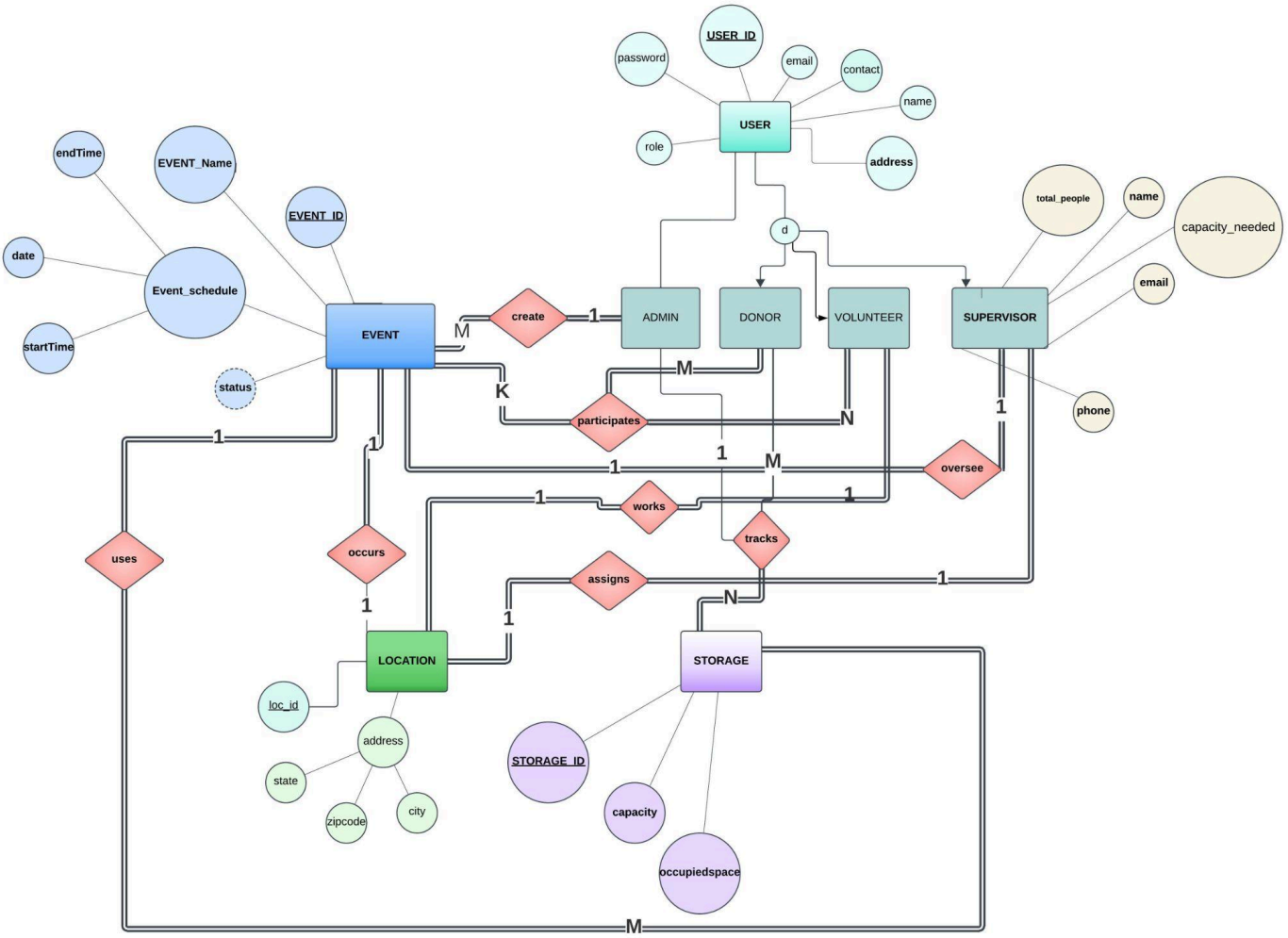
The Food Donation Management System is an innovative platform created to tackle the critical issue of food waste while providing support to those in need. Designed to connect donors, supervisors, and volunteers within specific communities, the system facilitates the organization and participation in food donation events. By providing an efficient way to redistribute surplus food, the platform ensures that it reaches underprivileged individuals and families who lack access to sufficient nutrition. This non-profit initiative seeks to reduce food waste, promote sustainability, and improve social welfare by bridging the gap between excess food and those in need. Its ultimate goal is to become a vital resource for communities, fostering a culture of generosity and responsibility.

Project Features

1. User login/registration
2. User Roles and Authentication
3. Insertion of user login information.
4. Dashboard for admin, donor, supervisor, volunteer
5. Event Creation
6. Assignment of the event donor, volunteer, and supervisor by the admin
7. Donors, volunteers, and supervisors can view the event after the event is created by the admin
8. Ongoing event data and expired event data can be viewed by the admin.
9. All user information can be viewed by the admin
10. Update/delete the data of the users by the admin
11. Location-based assignments of the participants in the event by the admin

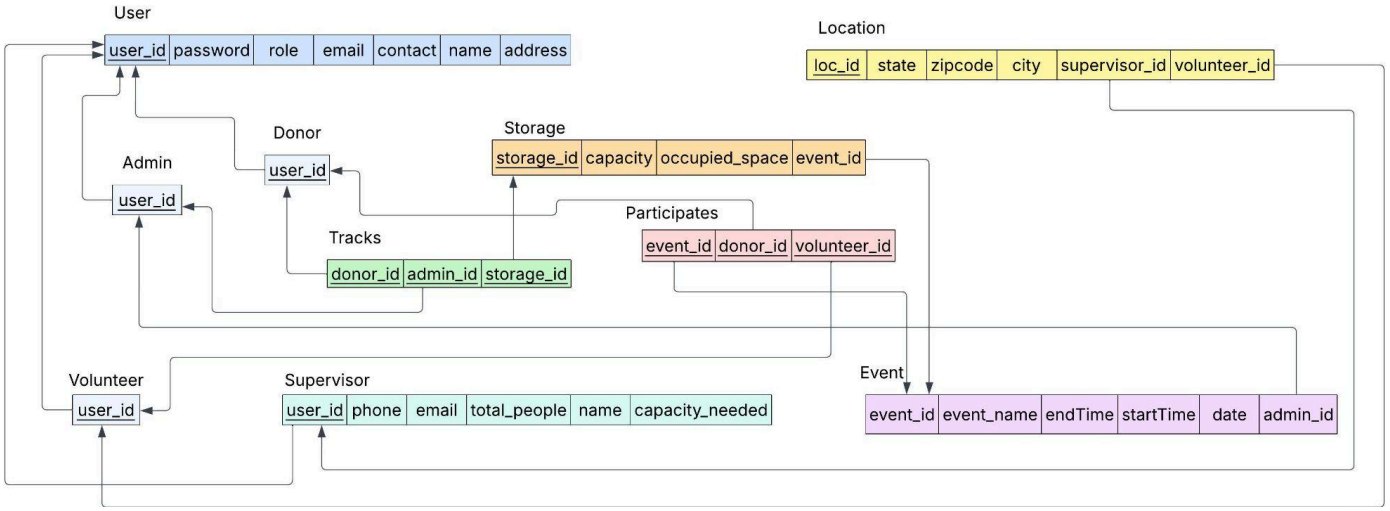
ER/EER Diagram

https://lucid.app/lucidchart/b709bfaa-1842-4a89-a3e0-387ec33d0489/edit?view_items=R.CetSNI4xRc&invitationId=inv_eabbf18c-c0e3-492f-bed4-63eebed987a8



Schema Diagram

https://lucid.app/lucidchart/d138f4b8-5ca5-4dfb-9367-45c3e0ad6892/edit?viewport_loc=239%2C348%2C3344%2C1506%2C0_0&invitationId=inv_9ff2f7c4-6ce6-4ead-b2c1-11fcc046de6b



Backend Development

Contribution of ID: 23101004, Name: Subhana Nawar Sadita

- **Donor_supervisor_events.php**

The script checks the logged-in user's role and fetches the events they have access to (based on being a Donor, Volunteer, or Supervisor). Additionally, for Supervisors, the script fetches their specific SupervisorID. It displays these events in a table, along with the list of volunteers assigned to each event.

- **Donor.php**

Here, the session is checked to verify that the user is logged in and if it's a donor. Unauthorized access will terminate the script. Furthermore, it fetches the donor's information from multiple tables in the database, i.e., personal details and storage info. The donor's details are displayed on the dashboard. Moreover, a link is provided to view events related to the donor. At the end, a logout link is included at the end for the user to sign out.

- **Drop_event.php**

Here, the features include displaying of the current time in Dhaka along with a query to fetch events whose EndTime is earlier than the current time and whose status is not 'Closed'. Furthermore, the expired events are displayed and their status is updated to closed while ensuring that all the data of the expired event is removed from the relevant tables.

- **Ongoing_events.php**

This script ensures that only admin users can access it through session authentication. It then fetches the current date and time to query the database for ongoing events that are active, meaning their start time has passed and their end time is yet to come. For each event, the script retrieves the participants (Donors, Volunteers, and Supervisors) and displays their

details. The ongoing events and participants are shown on the page, and a back button is provided for the admin to return to the admin page.

- **Supervisor.php**

The script ensures that the user is logged in as a supervisor before fetching their personal and organization-related details from the database. It then displays the supervisor's information, including their name, contact details, location, and organization. Additionally, a link is provided for the supervisor to view their events, and a logout option allows them to exit the system.

- **User_info.php**

This script provides the admin with a dashboard where they can view and manage the details of Donors, Volunteers, and Supervisors. Each user role's details are fetched from the database and displayed in tables with options to update or delete the records. Each row has a form with Update and Delete buttons that send the corresponding userID and role to the update_or_delete.php page.

Contribution of ID: 22201284, Name: Maisha Chowdhury Neha

- **Admin.php**

This PHP script handles an admin dashboard with functionalities such as creating events, fetching participants based on city, and assigning participants to events. It verifies the admin user, allows event creation with location data, and handles adding donors, volunteers, and supervisors to events. The script also includes forms for managing ongoing and expired events, ensuring the proper assignment of roles and times for participants.

- **Connect.php**

This PHP script establishes a connection to a MySQL database named "project_final" using the MySQL extension. It specifies the server, username, password, and database name for the

connection. If the connection fails, it triggers an error message displaying the reason for the failure. If successful, the connection is maintained for further database operations.

- **Index.php**

This PHP script handles both the user login and signup processes. It starts by establishing a session and includes the database connection. For login, it validates the user's credentials against the database and redirects to the appropriate dashboard based on the user's role (Admin, Supervisor, Donor, or Volunteer). For signup, the script captures user information, including location and role, and stores it in the database. It also handles role-specific fields, such as donation amounts for donors and organization details for supervisors. The script includes HTML forms for both login and signup, with dynamic field display based on user role.

- **Update_or_delete.php**

This PHP script allows an admin to update or delete user information. It starts by checking the user's session and role. If the action is "delete," it deletes the user and their associated data from relevant tables using a transaction. If the action is "update," it fetches the user's data, displays it in an HTML form for editing, and saves the changes upon submission. Error handling is in place to ensure smooth operations. The script also includes a "Back" button to navigate to the previous page.

- **Volunteer.php**

This PHP script creates a volunteer dashboard that displays the logged-in volunteer's details, such as name, email, phone, and location. It ensures that the user is logged in and has a volunteer role. The script fetches the volunteer's information from the database and presents it on the webpage. It also provides a link to view events the volunteer is involved in and a logout option. If the volunteer is not found or not logged in, an error message is shown.

- **Volunteer_events.php**

This PHP script displays a list of events the logged-in volunteer is associated with, fetching event details, such as event name, date, start time, and end time. It also retrieves and displays the list of donors and supervisors for each event, including their contact and location information. The script ensures the user is logged in and has a valid volunteer role, handling different roles and displaying relevant event details accordingly. If no events are found, it notifies the user.

Frontend Development

Briefly discuss Frontend Development and add relevant Screenshots (if required) by mentioning Individual Contributions

Contribution of Subhana Nawar Sadita:

I focused on building the structural foundation of the website and handled the HTML layout, ensuring all elements were in place, such as headers, footers, forms, and navigation menus. Moreover, I ensured that the content was properly organized and easy to read. I also worked on structuring the pages with semantic HTML tags like <header>, <footer>, <main>, and <section>, creating a solid, accessible layout. In addition, I focused on implementing basic JavaScript functionality to handle user interactions, such as form validation and simple DOM manipulations.

Contribution of Maisha Chowdhury Neha:

I have focused on the styling and responsiveness of the website. They take the structure built by the first member and bring it to life visually with CSS. This includes defining colors, fonts, and spacing, and ensuring the layout is visually appealing. They work on making the website responsive, so it looks good on devices by adding media queries and adjusting styles

based on screen size. Additionally, I handled JavaScript features, such as creating interactive elements like modals and dropdowns, and ensuring a smooth and engaging user experience.

Both of us collaborated closely and made sure to communicate and sync the progress, allowing each person to focus on their areas while maintaining a cohesive result.

Source Code Repository

https://drive.google.com/drive/folders/1Xw92zG0sD8pjVALaiCYfknAfZjTjLrOO?usp=sharing

Conclusion

To sum up, the Food Donation Management System is a transformative platform aimed at addressing two major societal issues: food waste and hunger. By connecting donors, supervisors, and volunteers, the system provides a streamlined and sustainable method for redistributing excess food to those who need it most.

With its innovative features—such as real-time coordination, location-based matching, and data analytics—the system not only optimizes the management of food donations but also promotes community engagement and social responsibility. This project showcases the power of technology in solving real-world challenges, offering a scalable and impactful solution to food insecurity while contributing to environmental sustainability.

As the project progresses, it has the potential to integrate advanced features like AI-driven predictions for food supply and demand, collaborations with local organizations, and mobile app integration. Ultimately, the goal of the Food Donation Management System is to create a world free of hunger, where no food is wasted, and every meal is delivered to someone in need.

References

1) **https://cdnjs.com/libraries/font-awesome**
2) **https://www.w3schools.com/php/php_functions.asp**
3) **https://getbootstrap.com/**