Thali Sanjha



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**INTRODUCTION**

In a world where millions go to bed hungry every night, food wastage remains a paradoxical and pressing issue. Every day, large quantities of edible food are discarded from households, restaurants, events, and institutions—not because it's unfit for consumption, but because there’s no streamlined mechanism to redirect it to those in need. This glaring mismatch between surplus and scarcity inspired the creation of **Thali Sanjha**—a socially-driven digital platform aimed at minimizing food waste while maximizing food reach to the underprivileged.

**Thali Sanjha** is more than just a food donation initiative; it is a movement that aims to create a community-based solution to a global problem. The word “Thali” signifies a traditional Indian platter, often associated with nourishment and sharing, while “Sanjha” means shared or common. Together, “Thali Sanjha” symbolizes a shared plate—a metaphor for collective responsibility and communal care.

The primary objective of this project is to create a seamless, technology-enabled bridge between individuals or institutions with excess food and organizations or individuals who can redistribute it effectively. The platform is designed with simplicity and scalability in mind, ensuring that donors can easily post information about available food, and NGOs or volunteers can quickly respond and arrange pickup and distribution.

The project is especially relevant in urban areas where both food wastage and food insecurity coexist in stark contrast. Events, corporate offices, hostels, and restaurants often have leftover food that is perfectly consumable but ends up in trash bins due to lack of coordination. At the same time, thousands of people in the same localities struggle to afford a single meal. **Thali Sanjha** seeks to address this imbalance through a structured, tech-driven solution.

The platform integrates features such as user authentication for donors and NGOs, geolocation-based matching, and real-time updates on donation status. By leveraging modern web technologies and a user-centric design, Thali Sanjha ensures that the process of donating and collecting food is quick, transparent, and efficient.

Ultimately, **Thali Sanjha** is not just a software project; it is a step toward building a more compassionate, resource-efficient society. It empowers citizens to contribute actively to the fight against hunger, encourages responsible consumption, and promotes a culture of sharing and sustainability.

**Flow of the Thali Sanjha Project**

**1. User Registration and Authentication**

The system supports two main types of users:

* **Donors** (individuals, restaurants, event organizers, etc.)
* **NGOs/Volunteers** (those who collect and distribute food)

Each user must:

* Register with personal or organizational details
* Log in securely with verified credentials
* Have a distinct dashboard based on user type

**2. Food Donation Posting (Donor Dashboard)**

After logging in, donors can:

* Fill a donation form with food details (type, quantity, freshness)
* Upload a photo (optional)
* Enter location, pickup time, and contact information
* Submit the donation request

This request is immediately made visible to nearby registered NGOs.

**3. Real-Time Notification and Matching**

Once a donation is submitted:

* **Nearby NGOs** are notified via dashboard alert or email
* The system uses **location filtering** to display nearby posts
* NGOs can view all available food donations in their area

**4. Food Pickup Request (NGO Dashboard)**

NGOs can:

* View donation details
* Request to pick up the donation
* Communicate with the donor for confirmation and logistics

Once accepted, the food item status is marked as **"In Progress"** or **"Picked"**.

**5. Admin Panel Control**

An **Admin Panel** is responsible for:

* Managing user roles and permissions
* Monitoring donation activities
* Handling disputes or misuse
* Reviewing system performance

Admins can also:

* Manually approve NGOs
* Verify flagged posts
* Generate reports on food waste reduction

**6. Status Tracking and History**

Both donors and NGOs can:

* Track the status of donations (Pending → Picked → Delivered)
* View history of past donations or pickups
* Provide feedback or rate the experience

This builds transparency and trust in the system.

**7. Feedback and Community Engagement**

After a successful donation:

* NGOs can leave feedback or thank the donor
* Donors can receive appreciation messages or badges
* The system may highlight frequent contributors

These features promote ongoing engagement and motivate users.

**8. Reporting and Analytics**

The backend includes reporting tools to:

* Track total meals saved
* Analyze donation frequency and locations
* Generate data-driven insights for improving reach and impact

**9. Future Enhancements (Optional Scope)**

The project is scalable with features like:

* Mobile app integration
* AI-based donation matching
* Integration with government food programs
* Corporate CSR partnerships

**Technology Stack Used in Thali Sanjha**

The **Thali Sanjha** platform is a modern, web-based application built to streamline food donation and distribution by connecting donors with NGOs and volunteers. The project leverages a powerful technology stack designed for performance, scalability, and a seamless user experience.

**1. Frontend Development**

* **React.js**: A component-based JavaScript library used for building dynamic and responsive user interfaces. React allows for fast rendering and efficient state management throughout the application.
* **Next.js**: A React framework used for server-side rendering (SSR), routing, and optimized performance. It enhances SEO and provides a better user experience with pre-rendering and static site generation.
* **Tailwind CSS**: A utility-first CSS framework that enables rapid UI development with responsive design principles. Tailwind ensures clean, consistent styling across all components.
* **Axios / Fetch API**: Used for handling HTTP requests to communicate with the backend, particularly for data submission and retrieval.

**2. Backend Development**

* **Node.js** *(optional for APIs, if used)* or **PHP**: If you're using APIs with React, Node.js may power backend services. If not, a traditional PHP backend handles requests and processes form submissions.
* **MySQL**: A relational database used to store user profiles, food donation posts, NGO records, and transaction history. It ensures data consistency and supports complex queries.

**3. Admin and User Dashboards**

* Custom dashboards for **Donors**, **NGOs**, and **Admins** are built using React components and Tailwind styling.
* Features include real-time donation tracking, status updates, and user feedback.
* Role-based access controls are implemented for secure navigation across interfaces.

**4. Security and Validation**

* **NextAuth.js or JWT** (if implemented): Used for secure authentication and session handling in the React/Next.js app.
* **Form Validation**: Handled via React hooks or libraries like Formik/Yup to ensure robust data input on the client side.

**5. Hosting & Deployment**

* **Vercel**: Ideal for deploying Next.js applications with built-in optimization and CI/CD workflows.
* **Firebase** or **cPanel**: Can be used for backend hosting or static asset delivery if needed.

**6. Future Enhancements**

* Integration with **Google Maps API** for location-based donations.
* **PWA (Progressive Web App)** capabilities for offline access.
* Push notifications for real-time alerts to NGOs and donors.
* Use of **MongoDB** or **Supabase** for enhanced scalability.

This stack combines modern frontend technologies with a solid backend infrastructure, making **Thali Sanjha** fast, scalable, and user-friendly—perfect for creating social impact through tech.

**Modules of the Project**

The **Thali Sanjha** platform is organized into distinct functional modules, each addressing specific roles and responsibilities within the system. These modules work together to enable seamless food donation, pickup coordination, and system administration.

**1. User Authentication Module**

* Handles secure registration and login for all user types: Donor, NGO, and Admin.
* Implements role-based access control to restrict functionalities based on user roles.
* Maintains session management and password encryption to ensure data privacy.

**2. Donation Management Module (Donor Side)**

* Allows donors to post details about available food (type, quantity, location).
* Enables uploading of photos and specifying pickup timings.
* Provides a dashboard to track current donations, status updates, and donation history.

**3. NGO Interaction Module (NGO Side)**

* Displays nearby or available food donations for NGOs.
* Enables NGOs to claim donations, coordinate pickups, and mark completion.
* Stores pickup history and supports viewing past activity records.

**4. Admin Control Module**

* Grants system-level control to the administrator to monitor platform activities.
* Allows manual verification or banning of NGOs or donors in case of misuse.
* Generates reports, manages database entries, and resolves user issues.

**5. Notification Module**

* Sends alerts or updates to NGOs when new donations are posted nearby.
* Notifies donors when their food is picked up or delivered.
* Can be extended with email or push notifications using external services.

**6. Feedback & History Module**

* Lets users (donors and NGOs) review past donation or pickup activities.
* Facilitates feedback collection and appreciation mechanisms.
* Helps build transparency and community trust within the platform.