



Project requirements

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Community & UN SDG(s):	Community: Regina Humane Society (RHS), Organizations Receiving Food from RHS, and Suppliers UN SDG Goals: Goal 2: Zero Hunger – Ensuring food is distributed efficiently to those in need. Goal 12: Responsible Consumption & Production – Reducing food waste and improving how resources are managed.
Date:	February 9, 2025

Project Name	WhiskerBytes
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Functional Requirements

1. User Authentication & Role-Based Access Control

- Users will be able to sign up and log in securely.
- Four user roles: **Admin/Staff, Suppliers/Donors, Community Organizations/People (Receiving Food), and Volunteers.**
- Admins can manage all users and approve new accounts.

2. Food Request & Approval System

- Community organizations can submit structured food requests via a digital interface.
- Admins will review and approve/decline requests with notifications sent to requesters.
- Request history tracking for better visibility and accountability.

3. Supplier Donation Logging

- Suppliers/Donors can log new donations in the system.
- The system will track food type, quantity, and expected delivery time.
- Admins can verify and approve logged donations.

4. Inventory Management

- Real-time inventory tracking based on incoming donations and outgoing distributions.
- Admins can monitor stock levels and generate alerts for low-stock situations.

5. Automated Reporting & Analytics

- The system will generate real-time reports on food donations, distributions, and request fulfilment.
- Reports can be exported in **CSV and PDF formats** for further analysis.
- Admins will have access to dashboard-based data insights.

Technical/Performance Requirements

Technology Requirements

- **Frontend:** React.js for a responsive and user-friendly interface.
- **Backend:** Node.js with Express.js for handling API requests.
- **Database:** MongoDB for storing user data, inventory details, and requests.
- **Hosting & Deployment:** Vercel for frontend hosting and backend deployment.

Performance Requirements

- **API Response Time:** System responses should be processed within **2 seconds** under normal load.



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- **Scalability:** The system should support **at least 100 concurrent users** without performance degradation.
 - **Security Measures:** JWT authentication for secure access control, role-based authorization, and encrypted user data.
 - **Data Accuracy:** Inventory updates should reflect real-time changes with **99% accuracy**.
 - **System Uptime:** The platform should maintain **99.5% uptime**, ensuring availability during peak usage.
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