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**Part 1:**

Software Requirements Specification (SRS) for Helping Hands Resource Management System

1) Introduction.

Purpose:

This document outlines the software requirements for [Helping Hands] to streamline operations, increase communication, and manage resources more effectively. The website will make it easier for volunteers, supporters, and staff to obtain information, track progress, and communicate with the community. (Burak.2023)

Scope:

Design and implement a web-based solution to meet the organization's key concerns. The scope of work includes managing resource distribution, monitoring outcomes, increasing stakeholder communications, and tracking and managing donations. An agile methodology will be used, focussing on iterative development to quickly address emergent demands while soliciting continuous feedback from stakeholders. (Burak.2023)

The Agile Methodology is a flexible, iterative method to software development that emphasises tiny, incremental changes through ongoing feedback and collaboration. Rather than following a fixed, linear method, Agile divides the project into short development cycles known as sprints, which typically run 2-4 weeks. Each sprint is dedicated to building and polishing specific features, allowing for constant testing and revisions depending on stakeholder feedback. By implementing Agile, our SRS will remain dynamic, changing as user requirements change, ensuring timely delivery of high-priority features and efficiently addressing modifications. This iterative process fosters openness, early releases, and faster feedback replies, ensuring that the system meets the needs of the organisation. (Stackify.2024)

2) Functional Requirements

- User Registration: The system will allow users (volunteers, contributors, and employees) to register and create accounts with personal information. Users must provide a valid email address when registering. Passwords’ must be at least eight characters long and contain one uppercase letter, one lowercase letter, and one number. The system will prevent registration with duplicate email addresses. If a user tries to register using an already-registered email or an invalid password, an appropriate error message is displayed, and registration is blocked.

- Login and Authentication: Users must be able to log in to the system using their email and password, with authentication handled securely.To prevent brute force assaults, the system will temporarily freeze the account for 15 minutes after five failed login attempts.

- Resource Distribution Tracking: The system must track and record all resources distributed, such as food, clothing, and educational materials. Reports will cover the date, kind, and quantity of resources distributed. The technology will ensure accurate and timely data entry during resource distribution.

- Program Outcome Monitoring: The system will provide reports outlining the results of various programs, such as food distribution and educational activities. Reports will include result measures for each program, such as total beneficiaries and types of resources supplied.

- Volunteer Management: The system will maintain volunteer profiles, including availability and involvement in various initiatives. Volunteers must be able to provide updated availability and contact information. The system will track each volunteer's participation history.

- Communication site: The system will contain a messaging site for staff and volunteers to communicate about current work. Messages will be saved for future reference, including time stamps and sender information.

- Donation Management: The system will receive online donations, produce receipts, and keep donors updated on their donations. The system will update donation records in real time and send donors an email. The system must manage unsuccessful payment attempts by displaying clear error warnings and offering retry choices.

-Event Management: The system will enable the organisation to arrange and manage events, such as volunteer sign-ups. Event organisers must have the ability to update event data such as the date, time, venue, and capacity.

- Reporting System: Create reports on a variety of parameters, including resource distribution, program success rates, and cash donations. Reports must be exportable in both PDF and CSV formats.

- Document upload: Users should be able to add necessary documents (such as proof of service) to their profile or submit claims. The maximum file size permitted is 10 MB. Acknowledged file formats are PDF, DOCX, JPEG, and PNG. If a user uploads a file that exceeds the size restriction or is in an unsupported format, an error message will appear and the upload will be refused

(GeeksForGeeks. 2020)

3) External Interface Requirements

Payment Gateway Integration: The system will accept and manage donations via external payment processing services (such as PayPal or Stripe). This interface will securely communicate payment data and verify the transaction statuses.

To do this, the system would make use of PayPal or Stripe APIs. API keys are securely saved, and payment information is captured via a front-end form. Stripe Elements, for example, processes secure card data and generates a token. The backend handles this token by talking with the payment source to confirm transactions. Payment information is kept in the database after a successful transaction, and security measures such as HTTPS and PCI compliance are implemented. Testing would take place in a sandbox environment prior to deployment. (Barrett.2023)

4) Non-Functional Requirements

- Security: The system must adhere to security requirements, including the encryption of sensitive user data (e.g., passwords, financial transactions) over HTTPS. Regular security audits will be carried out to identify vulnerabilities and verify compliance with industry standards.

- Performance: The system must manage up to 1,000 concurrent users while keeping page load times under 3 seconds. Performance will be maintained during peak usage using optimisation techniques such as caching and load balancing.

- Usability: The interface must be intuitive and user-friendly, allowing even non-technical users to easily traverse the site. Accessibility features will be added to help users with disabilities.

- Scalability: The system must be scalable to allow for future growth in terms of both the number of users and transactions. This will include the ability to add more resources or servers while maintaining service.

-Reliability: The system should offer a minimum uptime of 99.9% to ensure that consumers and personnel have uninterrupted access to services. Automated backups and failover procedures will be used to reduce downtime.

(GeeksForGeeks. 2020)

**References:**

Barrett, K. 2023. Detailing the External Interfaces in the Software Requirements. [Online]. Available at: <https://qat.com/external-interfaces-software-requirements/>

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