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Samwise Service App

System-Wide Requirements Specification

1. Introduction

The Samwise Service App is a web-based service platform designed to revolutionize the way service requesters and providers interact. In response to the shortcomings of existing service applications, the Samwise Service App seeks to bring transparency, reliability, and eco-consciousness to the forefront of the home maintenance and care service industry. This comprehensive system-wide requirements specification document outlines the essential components and functionality of the Samwise Service App, ensuring that it meets its vision and purpose. With a commitment to fairness, eco-conscious practices, and high-quality services, the Samwise Service App aspires to create a sustainable and ethical marketplace for service providers and requesters alike.

2. System-Wide Functional Requirements

2.1. Authentication and User Management
2.1.1. The system shall implement a secure user authentication process, requiring valid credentials for access.
2.1.2. The system offers functions such as creating accounts, logging in, and resetting passwords securely.

2.2. Scheduling
2.2.1. The system schedules the reservations of the service requesters and creates a timetable for the service provider.
2.2.2. The system prevents conflicts in the schedule.

2.3. Average Rating Calculation
2.3.1. The system shall calculate and display average ratings for each service provider according to the user reviews.

2.4. Payment Processing
2.4.1. The system shall support secure payment processing for service fees with multiple payment methods.
2.4.2. Transaction records and invoices shall be provided to users and service providers.

2.5. Customer Support
2.5.1. The system shall provide a customer support system to handle inquiries, issues, and disputes.
2.5.2. The system provides a chat service for the users to ask their questions.

2.6. Privacy and Security
2.6.1. The system shall prioritize data privacy and security, implementing encryption and user data protection measures.
2.6.2. Regular security audits and updates shall be conducted to address potential vulnerabilities.

2.7. Data Backup and Recovery
2.7.1. The system shall regularly back up data to prevent loss in case of system failures or disasters.
2.7.2. Data recovery procedures shall be in place to restore the system in unexpected outages.

3.   System Qualities

3.1. Usability
3.1.1. The Samwise Service App provides responsive design which adapts to various screen sizes and devices. This makes it more usable on smartphones, tablets, and desktops.
3.1.2. The Samwise Service App provides regular usability testing with real users to gather feedback and make improvements based on their experiences. This iterative process helps identify and address usability issues.
3.1.3. User manual and chatbot features increase the usability.
3.1.4. For the first release, the app supports the English language. The app should support localization to accommodate users from different regions and languages, with requirements for translation and cultural adaptation in later phrases.
3.1.5. The user interface focuses on essential contents and features to realize the use case scenarios as described in the Project Plan.

3.2. Reliability
3.2.1. The Samwise Service App should maintain a high level of availability, with a minimum requirement of 99.9% uptime.
3.2.2. The average amount of downtime should be less than or equal to the average amount of scheduled maintenance time.
3.2.3. The app should have a low rate of critical failures, with no more than one critical failure per month.
3.2.4. The time to resolution for non-critical failures should be less than 1 hour. The system should have a backup and recovery mechanism that can restore data and service within 1 hour.
3.2.5. The system requirements provide data integrity with monthly incremental data backup, data consistency via synchronous replication, and data recovery procedures. It ensures the reliability of data stored within the system.

3.3. Performance
3.3.1. The app provides a responsive user experience, with a maximum acceptable response time of 2 seconds for user actions.
3.3.2. The system should be capable of handling 100 concurrent users and requests, with a requirement for a minimum throughput of 100 requests per second during peak usage.
3.3.3. The system's capacity should be scalable to accommodate the growing user base and data volume via cloud based architecture.
3.3.4. The app should start and shut down efficiently, with a requirement for a startup time of under 10 seconds.

3.3.5. The system shall be designed to scale efficiently to accommodate a growing user base and increased service provider listings.

3.1   Supportability

3.4.1. The app supports compatibility with major web browsers with a requirement for regular compatibility testing and updates. Users and administrators can configure and customize the app to suit their needs and preferences.
3.4.2. The system should be designed to scale horizontally to meet increased demand, with a requirement to accommodate a 50% increase in user data within six months without performance degradation.
3.4.3. The system has a defined level of support and maintenance, including regular updates, bug fixes, security precautions and data protection, with a commitment to providing support for a minimum of three years from the initial release.
3.4.4. Support response times should be within 24 hours for critical issues.

4.   System Interfaces

4.1   User Interfaces

4.1.1   Look & Feel

The user interface of the Samwise Service App should embody a look of modernity, user-friendliness, and eco-consciousness. The look and feel should reflect an eco-friendly color palette with shades of green and earthy tones, instilling a sense of responsibility towards the environment. The style should be clean and minimalistic.

4.1.2   Layout and Navigation Requirements

The interface should consist of well-defined screen areas, including a homepage, service listings, reservation management, payment processing, and review sections. Major screen areas should be grouped logically, making it easy for users to navigate between related functions. Navigation should be intuitive, with a clear menu structure and easily accessible buttons for essential functions like creating, editing, and deleting services and reservations.

4.1.3   Consistency

We will ensure consistency in the screen layout and design elements throughout the application to allow users to predict the behavior of elements and controls. We will maintain consistency in terms and labels used across the application to ensure clarity and a uniform user experience. The interface will adhere to standard web design conventions to provide a familiar and predictable user experience.

4.1.4   User Personalization & Customization Requirements

Users will be able to personalize their profiles such as adding personal information and profile pictures. Service requesters may customize their preferences to receive eco-conscious service recommendations based on their location and past choices. To enable easier booking and payment processing, the application will remember user preferences.

4.2   Interfaces to External Systems or Devices

4.2.1   Software Interfaces

The Samwise Service App interfaces with various external software components, including web browsers, operating systems, and third-party payment platforms. It employs APIs and interfaces with external systems for secure and efficient payment processing, ensuring a seamless experience for users.

4.2.2   Hardware Interfaces

The Samwise Service App primarily relies on standard hardware configurations, including a stable internet connection and web-enabled devices such as personal computers, laptops, tablets, and smartphones. Users should ensure they have devices compatible with major web browsers, like Mozilla Firefox, Google Chrome, Opera, Microsoft Edge, and Apple Safari.

4.2.3   Communications Interfaces

The application communicates with external systems and services using standard internet communication protocols. This includes data transmission over local area networks and internet connections. The use of secure communication protocols is employed to protect user data and ensure the integrity of data exchanged between the application and external systems.These interface requirements ensure that the Samwise Service App offers an eco-conscious, user-friendly, and reliable experience to both service providers and requesters while interacting seamlessly with external systems and devices.

5. Business Rules

5.1 User Authentication and Account Management
5.1.1 User Authentication and Account Creation
5.1.1.1. Users must create an account and authenticate themselves before accessing the system.
5.1.1.2. User authentication includes verifying the user's identity through a secure login process, ensuring only authorized users can access the platform.

5.2 Service Scheduling and Provider Accountability
5.2.1 Scheduling and Provider Commitment
5.2.1.1. Service scheduling can be initiated by the service requestor, proposing specific times for the service.
5.2.1.2. Service requesters can request available times provided by the service provider.
5.2.1.3. Once a scheduling deal is agreed upon between the service provider and requestor, the service provider is obligated to show up at the scheduled time.
5.2.1.4. If the service provider fails to show up without valid reasons, they will be banned from the platform for a period of one week as a penalty.

5.3 Payment Processing and Transaction Handling
5.3.1 Payment Processing and Fund Transfer
5.3.1.1. Payments for services must be made through the system.
5.3.1.2. When the service provider shows up for the scheduled meeting and the service is completed to the satisfaction of the service requestor, the payment will be transferred from the requestor's account to the service provider's bank account through the system.
5.3.1.3. The service requestor must approve the payment through the system before the funds are transferred to the service provider.
5.3.1.4. Payment processing ensures secure transactions and timely fund transfers for completed services.

5.4 Premium User Discounts
5.4.1 Premium User Discounts
5.4.1.1 Users who subscribe to the premium membership plan are designated as premium users.
5.4.1.2 Premium users are eligible for a 10% discount on all services booked through the platform.
5.4.1.3 Additionally, premium users are entitled to a special promotion: a 20% discount on their first service booking made through the platform.
5.4.1.4 Premium user status is granted upon successful subscription to the premium membership plan and is valid for the duration of the subscription.
5.4.1.5 Premium user discounts are automatically applied during the checkout process for eligible services booked through the Samwise Service App.

5.5 User Interaction and Feedback
5.5.1 User Ratings and Reviews Transparency
5.5.1.1. Users can view the ratings and reviews of service providers before making a reservation.
5.5.1.2. Service providers cannot alter or delete user ratings and reviews once they are submitted.
5.5.1.3. Users have the option to report fraudulent or inappropriate reviews to the platform administrators for investigation.

5.6 Service Provider Management and Verification
5.6.1 Service Provider Qualification Verification
5.6.1.1 Service providers must submit valid credentials and certifications during registration.
5.6.1.2 The platform administrators will verify the qualifications of service providers to ensure authenticity and maintain service quality standards.

5.7 Support and Maintenance
5.7.1 Regular System Updates and Bug Fixes
5.7.1.1 The development team is responsible for releasing regular updates to enhance system features, improve

usability, and fix reported bugs.

5.7.1.2 Critical security updates and bug fixes will be prioritized and implemented within 72 hours of identification to ensure system stability and user security.

6.   System Constraints

6.1 The implementation of the system will be done using the Javascript programming language and Nodejs which is an open-source, cross-platform, server-side runtime environment that allows developers to run JavaScript code on the server.

6.2 As a database management system, the system will use MySql which is an open-source relational database management system to store and manage the structured data.

6.3 The development team will use Git as the version control system and follow the Gitflow branching model for source code management.

6.4 The system must be compatible with major web browsers, like Mozilla Firefox, Google Chrome, Opera, Microsoft Edge, and Apple Safari. Ensuring cross-browser compatibility is essential to reach a wide user base and deliver a consistent user experience.

6.5 The system must not consume more than 80% of available server resources, including CPU and memory, to ensure efficient and stable performance, and adhering to resource limits prevents resource exhaustion and maintains system stability. The system should enable 100 concurrent users to use the app.

6.6 The system should be designed to run on virtualized cloud infrastructure provided by Google Cloud. Cloud infrastructure provides scalability requirements without the constraints of physical hardware.

6.7 The system must comply with all relevant data protection laws, including the General Data Protection Regulation (GDPR) and the Turkish Kişisel Verileri Koruma Kanunu (KVKK).

7.   System Compliance

7.1   Licensing Requirements

7.1.1. User Licensing: Users, both service providers, and requesters are required to create user accounts. These accounts are free to create and do not impose any upfront licensing fees.

7.1.2. Service Provider Licensing: Service providers, who offer their services on the platform, are not burdened with licensing fees or usage restrictions. Instead, they have the freedom to list their services and enhance their offerings without incurring licensing-related costs.

7.1.3. Service Requester Licensing: Service requesters, who use the platform to book and manage services, are not subject to licensing fees or usage restrictions. They have the liberty to explore and engage with service providers without any additional licensing obligations.

7.1.4. Advertisement Licensing: In line with our approach to support the service providers without imposing financial burdens, we generate revenue through non-intrusive advertisements within the platform. Users who opt for our premium subscription service can enjoy an ad-free experience.

7.2   Legal, Copyright, and Other Notices

7.2.1. Legal Disclaimers: We include legal disclaimers to inform users and service providers about their rights and responsibilities while using the platform. These disclaimers clarify the terms and conditions governing the use of our service.

7.2.2. Copyright Notices: Copyright notices are placed strategically to acknowledge intellectual property rights. This includes the copyright of the software, any content created by the platform, and third-party content used with proper permissions.

7.2.3. Trademark and Logo Compliance: Our platform respects trademark and logo compliance requirements. We do not use trademarks, logos, or brand identities without proper authorization, and we encourage users and service providers to do the same.

7.2.4. Warranty Information: We provide warranty information that outlines the scope and limitations of any warranties offered in connection with our service.

7.3   Applicable Standards

The Samwise Service App adheres to a variety of applicable standards to uphold quality, security, and user satisfaction. These standards include:

7.3.1. Data Protection Standards: We follow data protection standards in compliance with the Turkish Data Protection Law (KVKK) and the General Data Protection Regulation (GDPR). This ensures the secure and responsible handling of user data.

7.3.2. Web Accessibility Standards: We aim to provide an inclusive platform by adhering to web accessibility standards such as HTML and Web Content Accessibility Guidelines (WCAG). This ensures that users of all abilities can access and use our services with ease.

7.3.3. Quality and Usability Standards: We consider industry standards for usability and quality in the design and development of our platform. This includes creating an intuitive user interface, ensuring reliable service delivery, and fostering a positive user experience. We will use the clean code principles to enhance the code quality.

7.3.4. Interoperability Standards: Our software is designed to be interoperable with various web browsers, ensuring compatibility with Mozilla Firefox, Google Chrome, Opera, Microsoft Edge, and Apple Safari. This allows users to access our platform using their preferred web browser.

7.3.5. Data Encryption Standards: We employ industry-standard encryption protocols such as SSL and HTTPS for data transmission and storage, ensuring that user data remains secure and confidential.

8.   System Documentation

8.1. Introduction

8.1.1. Purpose: The system documentation aims to provide users, administrators, and developers with comprehensive information about the Samwise Service App, its features, and functionalities.

8.1.2. Scope: This documentation covers online user documentation, help systems, notices, and sets expectations for the documentation process.

8.2. Online User Documentation

8.2.1. Content: Online user documentation will be available to guide users on using the app effectively.

8.2.2. Topics Covered: User registration, service request creation, matching services, ratings and reviews, payment processing, scheduling, and more.

8.2.3. Accessibility: The documentation should be designed to be accessible and user-friendly.

8.3. Help Systems

8.3.1. Contextual Help: The app will include in-app contextual help, providing information relevant to the user's current task.

8.3.2. Search Functionality: Users can search for specific topics or issues in the help system.

8.3.3. Live Chat Support: Offer real-time chat support for immediate assistance with common issues.

8.4. Help About Notices

8.4.1. Proactive Notices: Notify users about important app updates, changes in policies, and other critical information through in-app notices.

8.4.2. Frequency: Notices will be used judiciously, with an emphasis on user convenience.

8.5. Documentation Responsibility

8.5.1. User Documentation: The responsibility for creating and maintaining user documentation falls on the Product and User Experience (UX) team. This team will ensure that user documentation is up-to-date and reflects the current app features and changes.

8.5.2. Help Systems: The development team is responsible for implementing in-app help systems, including contextual help and search functionality.

8.5.3. Help About Notices: The app administrators will be in charge of creating and publishing important notices and updates.