Non-Functional Requirements Document

SCL Corporation - Canteen Ordering System

SCL_PROJECTTASK10--Continued..

Purpose

The purpose of this document is to outline the non-functional requirements for the Canteen Ordering System developed for SCL Corporation. These non-functional requirements define the quality attributes and constraints that the system must adhere to.

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1. Performance

1.1 Response Time

- **Requirement:** The system shall respond to user interactions (e.g., placing orders, updating menus) within 2 seconds.
- **Rationale:** Ensure a responsive and efficient user experience during peak usage.

1.2 Throughout

- **Requirement:** The system shall support a minimum of 1500 concurrent users placing orders simultaneously during peak hours.
- **Rationale:** Accommodate the expected user load during busy periods.

2. Security

2.1 Data Encryption

- **Requirement:** All sensitive user data, including payment information, shall be encrypted using industry-standard encryption algorithms (e.g., AES-256).
- **Rationale:** Protect user data from unauthorized access and breaches.

2.2 User Authentication

- **Requirement:** User authentication shall follow industry best practices, including password hashing and salting.
- **Rationale:** Ensure secure access to user accounts.

3. Usability

3.1 User Interface

- **Requirement:** The user interface shall follow established design guidelines and be intuitive for employees and customers.
- **Rationale:** Enhance user satisfaction and ease of use.

3.2 Accessibility

- **Requirement:** The system shall comply with accessibility standards (e.g., WCAG 2.0) to ensure usability for individuals with disabilities.
- **Rationale:** Promote inclusivity and accessibility.

4. Reliability

4.1 System Availability

- **Requirement:** The system shall have an uptime of at least 99.9%.
- **Rationale:** Ensure the system is consistently available for users.

4.2 Error Handling

- **Requirement:** The system shall provide clear and user-friendly error messages in case of failures or issues.
- **Rationale:** Assist users in resolving problems effectively.

5. Scalability

5.1 Scalability

- **Requirement:** The system architecture shall be designed to accommodate future growth and scaling of user and order volumes.

- **Rationale:** Support SCL Corporation's expanding operations.

6. Availability

6.1 Disaster Recovery

- **Requirement:** The system shall have a disaster recovery plan in place, including regular backups and procedures for data restoration.
- **Rationale:** Ensure data integrity and availability in case of unexpected events.

7. Maintainability

7.1 Code Maintainability

- **Requirement:** The system's codebase shall adhere to coding standards and be well-documented for ease of maintenance and future development.
- **Rationale:** Facilitate ongoing system maintenance and updates.

8. Compliance

8.1 Legal Compliance

- **Requirement:** The system shall comply with all relevant legal and regulatory requirements, including data protection and food safety standards.
- **Rationale:** Avoid legal issues and penalties.

9. Documentation

9.1 System Documentation

- **Requirement:** Comprehensive system documentation, including user guides and technical documentation, shall be maintained, and updated.
- **Rationale:** Assist users and administrators in understanding and using the system effectively.

10. Dependencies

10.1 Third-Party Dependencies

- **Requirement:** Any third-party software or services used in the system shall be regularly monitored and updated to ensure compatibility and security.
- **Rationale:** Mitigate risks associated with third-party dependencies.

11. Acceptance Criteria

- **Requirement:** All non-functional requirements specified in this document shall be verified and validated during system testing and user acceptance testing (UAT).

- **Rationale:** Ensure that the system meets the specified quality attributes and constraints.