Software Requirements Specification

for

<Project>

Version 1.0 approved

Prepared by <author>

<organization>

<date created>

Table of Contents

Table of Contents ii

Revision History ii

1. Introduction 2

1.1 Purpose 2

1.2 Document Conventions 2

1.3 Project Scope 2

1.4 References 2

2. Overall Description 2

2.1 Product Perspective 2

2.2 User Classes and Characteristics 2

2.3 Operating Environment 2

2.4 Design and Implementation Constraints 2

2.5 Assumptions and Dependencies 2

3. System Features 2

3.1 System Feature 1 2

3.2 System Feature 2 (and so on) 2

4. Data Requirements 2

4.1 Logical Data Model 2

4.2 Data Dictionary 2

4.3 Reports 2

4.4 Data Acquisition, Integrity, Retention, and Disposal 2

5. External Interface Requirements 2

5.1 User Interfaces 2

5.2 Software Interfaces 2

5.3 Hardware Interfaces 2

5.4 Communications Interfaces 2

6. Quality Attributes 2

6.1 Usability 2

6.2 Performance 2

6.3 Security 2

6.4 Safety 2

6.5 [Others as relevant] 2

7. Internationalization and Localization Requirements 2

8. Other Requirements 2

Appendix A: Glossary 2

Appendix B: Analysis Models 2

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

<The introduction presents an overview to help the reader understand how the SRS is organized and how to use it.>

## Purpose

<Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers.>

## Document Conventions

<Describe any standards or typographical conventions used, including the meaning of specific text styles, highlighting, or notations. If you are manually labeling unique requirement identifiers, you might specify the format here for anyone who needs to add one later.>

## Project Scope

<Provide a short description of the software being specified and its purpose. Relate the software to user or corporate goals and to business objectives and strategies. If a separate vision and scope or similar document is available, refer to it rather than duplicating its contents here. An SRS that specifies an incremental release of an evolving product should contain its own scope statement as a subset of the long-term strategic product vision. You might provide a high-level summary of the major features the release contains or the significant functions that it performs.>

## References

<List any documents or other resources to which this SRS refers. Include hyperlinks to them if they are in a persistent location. These might include user interface style guides, contracts, standards, system requirements specifications, interface specifications, or the SRS for a related product. Provide enough information so that the reader can access each reference, including its title, author, version number, date, and source, storage location, or URL.>

# Overall Description

<This section presents a high-level overview of the product and the environment in which it will be used, the anticipated users, and known constraints, assumptions, and dependencies.>

## Product Perspective

<Describe the product's context and origin. Is it the next member of a growing product line, the next version of a mature system, a replacement for an existing application, or an entirely new product? If this SRS defines a component of a larger system, state how this software relates to the overall system and identify major interfaces between the two. Consider including visual models such as a context diagram or ecosystem map to show the product's relationship to other systems.>

## User Classes and Characteristics

<Identify the various user classes that you anticipate will use this product and describe their pertinent characteristics. Some requirements might pertain only to certain user classes. Identify the favored user classes. User classes represent a subset of the stakeholders described in the vision and scope document. User class descriptions are a reusable resource. If available, you can incorporate user class descriptions by simply pointing to them in a master user class catalog instead of duplicating information here.>

## Operating Environment

<Describe the environment in which the software will operate, including the hardware platform; operating systems and versions; geographical locations of users, servers, and databases; and organizations that host the related databases, servers, and websites. List any other software components or applications with which the system must peacefully coexist. If extensive technical infrastructure work needs to be performed in conjunction with developing the new system, consider creating a separate infrastructure requirements specification to detail that work.>

## Design and Implementation Constraints

<Describe any factors that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing or memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; programming language requirements or restrictions.>

## Assumptions and Dependencies

<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, reuse expectations, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors outside its control.>

# System Features

**3.1 User Registration**

**3.1.1 Description and Priority**

* **Description**: This feature enables guests to register for a new account. It is a high-priority feature as it is fundamental for user access and experience.
* **Priority**: High

**3.1.2 Stimulus/Response Sequences**

**Sequence 1 (User Registration):**

* **Stimulus**: A guest selects the "Register" option.
* **Response**: The system presents a registration form to gather user information.

**3.1.3 Functional Requirements**

**REQ-1: User Registration:**

* The system shall allow guests to create new accounts by providing personal information. The registration process should include validation of user data and email confirmation.

**3.2 User Login**

**3.2.1 Description and Priority**

* **Description**: This feature enables existing members to log in. It is a high-priority feature as it is fundamental for user access and experience.
* **Priority**: High

**3.2.2 Stimulus/Response Sequences**

**Sequence 1 (User Login):**

* **Stimulus**: A guest selects the "Login" option.
* **Response**: The system provides a login form for existing members to enter their credentials.

**Sequence 2 (Forgot Password):**

* **Stimulus**: A user clicks the "Forgot Password" link.
* **Response**: The system guides the user through a password recovery process.

**3.2.3 Functional Requirements**

**REQ-2: User Login:**

* The system shall authenticate existing members based on their provided credentials. Access to member-specific features is granted upon successful login.

**REQ-3: Forgot Password:**

* The system shall assist users who have forgotten their passwords in recovering their accounts. A password reset link shall be sent to the user's registered email.

**3.3 Search Products**

**3.3.1 Description and Priority**

* **Description**: This feature allows both guests and members to search for bakery products. It is a high-priority feature as it directly impacts the user experience.
* **Priority**: High

**3.3.2 Stimulus/Response Sequences**

**Sequence 1 (Search Products):**

* **Stimulus**: A guest or member initiates a search query.
* **Response**: The system displays a list of products matching the search criteria.

**3.3.3 Functional Requirements**

**REQ-4: Search Products:**

* The system shall enable users to search for products using keywords and categories.

**3.4 View Products**

**3.4.1 Description and Priority**

* **Description**: This feature allows both guests and members to view detailed information about bakery products. It is a high-priority feature as it directly impacts the user experience.
* **Priority**: High

**3.4.2 Stimulus/Response Sequences**

**Sequence 1 (View Product Details):**

* **Stimulus**: A guest or member selects a product to view its details.
* **Response**: The system displays detailed information about the selected product.

**3.4.3 Functional Requirements**

**REQ-7: View Product Details:**

* The system shall display detailed information about a product when a user selects it, including description, price, and available options.

**3.5 Place Order**

**3.5.1 Description and Priority**

* **Description**: This feature allows guests and members to place orders for bakery products. It is a high-priority feature as it is crucial for sales and revenue generation.
* **Priority**: High

**3.5.2 Stimulus/Response Sequences**

**Sequence 1 (Place Order):**

* **Stimulus**: A guest or member selects the "Order" option.
* **Response**: The system presents a form to collect order details.

**3.5.3 Functional Requirements**

**REQ-8: Place Order:**

* The system shall enable users to place orders by providing necessary order details, including product selection and quantity.

**REQ-9: Order Details:**

* The system shall display a summary of the order details before final submission for confirmation.

**REQ-12: Pre-order:**

* The system shall allow users to place pre-orders for products, which includes selecting a future delivery or pickup date.

**3.6 Payment Methods**

**3.6.1 Description and Priority**

* **Description**: This feature allows guests and members to complete payment transactions using various methods. It is a high-priority feature as it is crucial for sales and revenue generation.
* **Priority**: High

**3.6.2 Stimulus/Response Sequences**

**Sequence 1 (Choose Payment Method):**

* **Stimulus**: A guest or member selects a payment method (Internet banking, Cash, Gift).
* **Response**: The system processes the payment based on the selected method.

**3.6.3 Functional Requirements**

**REQ-10: Payment Methods:**

* The system shall provide multiple payment options, including Internet banking, Cash, and Gift vouchers.

**REQ-11: Payment Processing:**

* The system shall process payments securely and confirm the order once the payment is successful.

**REQ-13: Membership Benefits:**

* For logged-in members, the system shall provide additional benefits such as discounts based on their membership status.

**3.7 Provide Feedback**

**3.7.1 Description and Priority**

* **Description**: This feature enables members to provide feedback about their experience, including rating products, reporting issues, and requesting refunds. It is a medium-priority feature as it enhances user engagement and satisfaction.
* **Priority**: Medium

**3.7.2 Stimulus/Response Sequences**

**Sequence 1 (Provide Feedback):**

* **Stimulus**: A member selects the "Provide Feedback" option.
* **Response**: The system presents a feedback form to gather the member's comments, ratings, and any specific issues or refund requests.

**Sequence 2 (Rating):**

* **Stimulus**: A member opts to rate a product.
* **Response**: The system allows the member to give a rating and submit it.

**Sequence 3 (Report Issue):**

* **Stimulus**: A member selects the "Report" option within the feedback form.
* **Response**: The system captures the details of the issue being reported and submits it to the support team for review.

**Sequence 4 (Request Refund):**

* **Stimulus**: A member selects the "Request Refund" option within the feedback form.
* **Response**: The system gathers the necessary details for the refund request and submits it for processing.

**3.7.3 Functional Requirements**

**REQ-14: Provide Feedback:**

* The system shall allow members to provide feedback on their experience, including a text comment area for detailed feedback.

**REQ-15: Rating:**

* The system shall enable members to rate products on a predefined scale (e.g., 1 to 5 stars).

**REQ-16: Report Issue:**

* The system shall provide an option for members to report issues encountered with products or services, including capturing necessary details about the issue.

**REQ-17: Request Refund:**

* The system shall allow members to request refunds for products or services, capturing necessary information such as order number and reason for the refund.

### 3.8 Respond to Customer Inquiries

#### 3.8.1 Description and Priority

* **Description**: This feature allows customer care staff to respond to customer inquiries. It is a high-priority feature as it is essential for customer support and satisfaction.
* **Priority**: High

#### 3.8.2 Stimulus/Response Sequences

Sequence 1 (Respond to Inquiry):

* **Stimulus**: A customer care staff receives an inquiry from a customer.
* **Response**: The system displays the inquiry and provides an interface for the staff to respond.

#### 3.8.3 Functional Requirements

**REQ-18**: Respond to Inquiries:

* The system shall allow customer care staff to view and respond to customer inquiries through a dedicated interface.

### 3.9 Process Refunds

#### 3.9.1 Description and Priority

* **Description**: This feature allows customer care staff to process refunds for customers. It is a high-priority feature as it directly impacts customer satisfaction and trust.
* **Priority**: High

#### 3.9.2 Stimulus/Response Sequences

Sequence 1 (Process Refund):

* **Stimulus**: A customer care staff receives a refund request from a customer.
* **Response**: The system verifies the request and processes the refund, updating the customer's account accordingly.

#### 3.9.3 Functional Requirements

REQ-19: Process Refunds:

* The system shall allow customer care staff to verify and process refund requests, updating customer accounts and order statuses accordingly.

### 3.10 Handle Complaints

#### 3.10.1 Description and Priority

* **Description**: This feature allows customer care staff to handle customer complaints. It is a high-priority feature as it is critical for maintaining customer satisfaction and trust.
* **Priority**: High

#### 3. 10.2 Stimulus/Response Sequences

Sequence 1 (Handle Complaint):

* **Stimulus**: A customer care staff receives a complaint from a customer.
* **Response**: The system records the complaint and provides tools for the staff to address and resolve the issue.

#### 3. 10.3 Functional Requirements

REQ-20: Handle Complaints:

* The system shall allow customer care staff to record, address, and resolve customer complaints, ensuring proper follow-up and communication with the customer.

### 3.11 Product Management (Storekeeper)

#### 3.11.1 Description and Priority

* **Description**: This feature allows storekeepers to manage products, including adding, updating, and deleting products. It is a high-priority feature as it ensures the product catalog is accurate and up-to-date.
* **Priority**: High

#### 3.11.2 Stimulus/Response Sequences

Sequence 1 (Add Product):

* **Stimulus**: A storekeeper selects the "Add Product" option.
* **Response**: The system presents a form to gather product details and adds the new product to the catalog.

Sequence 2 (Update Product):

* **Stimulus**: A storekeeper selects a product to update.
* **Response**: The system presents the product details and allows the storekeeper to make changes.

Sequence 3 (Delete Product):

* **Stimulus**: A storekeeper selects a product to delete.
* **Response**: The system confirms the action and removes the product from the catalog.

#### 3.11.3 Functional Requirements

REQ-21: Add Product:

* The system shall allow storekeepers to add new products by providing necessary product details.

REQ-22: Update Product:

* The system shall allow storekeepers to update existing product details.

REQ-23: Delete Product:

* The system shall allow storekeepers to delete products from the catalog.

### 3.12 Manage Orders (Storekeeper)

#### 3.12.1 Description and Priority

* **Description**: This feature allows storekeepers to manage orders, including declining and confirming orders and creating delivery schedules. It is a high-priority feature as it ensures efficient order processing.
* **Priority**: High

#### 3.12.2 Stimulus/Response Sequences

Sequence 1 (Decline Order):

* **Stimulus**: A storekeeper selects an order to decline.
* **Response**: The system presents a confirmation prompt and updates the order status upon confirmation.

Sequence 2 (Confirm Order):

* **Stimulus**: A storekeeper selects an order to confirm.
* **Response**: The system updates the order status and allows the storekeeper to create a delivery schedule.

#### 3.12.3 Functional Requirements

REQ-24: Decline Order:

* The system shall allow storekeepers to decline orders, updating the order status and notifying the customer.

REQ-25: Confirm Order:

* The system shall allow storekeepers to confirm orders, updating the order status and enabling the creation of delivery schedules.

### 3.13 Manage Account (Administrator)

#### 3.13.1 Description and Priority

* **Description**: This feature allows administrators to manage user accounts, including creating, updating, and deleting accounts. It is a high-priority feature as it is essential for user management and security.
* **Priority**: High

#### 3.13.2 Stimulus/Response Sequences

Sequence 1 (Manage Account):

* **Stimulus**: An administrator selects a user account to manage.
* **Response**: The system provides options to create, update, or delete the account.

#### 3.13.3 Functional Requirements

REQ-26: Manage Account:

* The system shall allow administrators to create, update, and delete user accounts, ensuring proper user management and security.

### 3.14 Statistic Product (Administrator)

#### 3.14.1 Description and Priority

* **Description**: This feature allows administrators to view product statistics, including sales data and trends. It is a high-priority feature as it helps in strategic decision-making.
* **Priority**: High

#### 3.14.2 Stimulus/Response Sequences

Sequence 1 (View Product Statistics):

* **Stimulus**: An administrator selects the "Product Statistics" option.
* **Response**: The system displays various statistics and trends related to product sales.

#### 3.14.3 Functional Requirements

REQ-27: Statistic Product:

* The system shall provide administrators with detailed product statistics, including sales data and trends.

### 3.15 Generate Reports (Administrator)

#### 3.15.1 Description and Priority

* **Description**: This feature allows administrators to generate various reports related to sales, products, and user activity. It is a high-priority feature as it aids in monitoring and decision-making.
* **Priority**: High

#### 3.15.2 Stimulus/Response Sequences

Sequence 1 (Generate Report):

* **Stimulus**: An administrator selects the "Generate Report" option.
* **Response**: The system presents a form to select report criteria and generates the report based on the selected parameters.

#### 3.15.3 Functional Requirements

REQ-28: Generate Reports:

* The system shall allow administrators to generate reports based on various criteria, providing insights into sales, products, and user activity.

### 3.16 View Orders (Baker)

#### 3.16.1 Description and Priority

* **Description**: This feature allows bakers to view orders that need to be fulfilled. It is a high-priority feature as it ensures timely preparation of products.
* **Priority**: High

#### 3.16.2 Stimulus/Response Sequences

Sequence 1 (View Orders):

* **Stimulus**: A baker selects the "View Orders" option.
* **Response**: The system displays a list of orders that need to be fulfilled.

#### 3.16.3 Functional Requirements

REQ-29: View Orders:

* The system shall allow bakers to view a list of orders that need to be fulfilled, including details such as product, quantity, and delivery time.

### 3.17 Baking (Baker)

#### 3.17.1 Description and Priority

* **Description**: This feature allows bakers to mark the baking status of products. It is a high-priority feature as it tracks the preparation process.
* **Priority**: High

#### 3.17.2 Stimulus/Response Sequences

Sequence 1 (Update Baking Status):

* **Stimulus**: A baker updates the status of a product being baked.
* **Response**: The system records the updated status and notifies relevant staff.

#### 3.17.3 Functional Requirements

REQ-30: Baking:

* The system shall allow bakers to update the baking status of products, ensuring accurate tracking of the preparation process.

### 3.18 Update Order Status (Baker)

#### 3.18.1 Description and Priority

* **Description**: This feature allows bakers to update the status of orders they are working on. It is a high-priority feature as it keeps the order processing information current.
* **Priority**: High

#### 3.18.2 Stimulus/Response Sequences

Sequence 1 (Update Order Status):

* **Stimulus**: A baker updates the status of an order.
* **Response**: The system records the updated status and notifies relevant staff and customers.

#### 3.18.3 Functional Requirements

REQ-31: Update Order Status (Baker):

* The system shall allow bakers to update the status of orders, ensuring that order processing information is current and communicated to relevant parties.

### 3.19 Update Order Status (Transporter)

#### 3.19.1 Description and Priority

* **Description**: This feature allows transporters to update the status of orders during delivery. It is a high-priority feature as it ensures real-time tracking and transparency of the delivery process.
* **Priority**: High

#### 3.19.2 Stimulus/Response Sequences

Sequence 1 (Update Order Status During Delivery):

* **Stimulus**: A transporter updates the status of an order during delivery (e.g., "Out for Delivery," "Delivered").
* **Response**: The system records the updated status and notifies relevant staff and customers.

#### 3.19.3 Functional Requirements

REQ-32: Update Order Status (Transporter):

* The system shall allow transporters to update the status of orders during delivery, providing real-time updates to relevant staff and customers.

### 3.20 Tracking Order (Transporter)

#### 3.20.1 Description and Priority

* **Description**: This feature allows customers and staff to track the status and location of orders in transit. It is a high-priority feature as it enhances the customer experience by providing real-time updates.
* **Priority**: High

#### 3.20.2 Stimulus/Response Sequences

Sequence 1 (Track Order):

* **Stimulus**: A customer or staff member requests the current status and location of an order.
* **Response**: The system provides real-time updates on the order's status and location.

#### 3.20.3 Functional Requirements

REQ-33: Tracking Order:

* The system shall provide real-time tracking information for orders, including status updates and location data, to both customers and staff.

# Data Requirements

<This section describes various aspects of the data that the system will consume as inputs, process in some fashion, or create as outputs.>

## Logical Data Model

<A data model is a visual representation of the data objects and collections the system will process and the relationships between them. Include a data model for the business operations being addressed by the system, or a logical representation for the data that the system itself will manipulate. Data models are most commonly created as an entity-relationship diagram.>

## Data Dictionary

<The data dictionary defines the composition of data structures and the meaning, data type, length, format, and allowed values for the data elements that make up those structures. In many cases, you're better off storing the data dictionary as a separate artifact, rather than embedding it in the middle of an SRS. That also increases its reusability potential in other projects.>

## Reports

<If your application will generate any reports, identify them here and describe their characteristics. If a report must conform to a specific predefined layout you can specify that here as a constraint, perhaps with an example. Otherwise, focus on the logical descriptions of the report content, sort sequence, totaling levels, and so forth, deferring the detailed report layout to the design stage.>

## Data Acquisition, Integrity, Retention, and Disposal

<If relevant, describe how data is acquired and maintained. State any requirements regarding the need to protect the integrity of the system's data. Identify any specific techniques that are necessary, such as backups, checkpointing, mirroring, or data accuracy verification. State policies the system must enforce for either retaining or disposing of data, including temporary data, metadata, residual data (such as deleted records), cached data, local copies, archives, and interim backups.>

# External Interface Requirements

<This section provides information to ensure that the system will communicate properly with users and with external hardware or software elements.>

## User Interfaces

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed. Details of the user interface design should be documented in a separate user interface specification.>

## Software Interfaces

<Describe the connections between this product and other software components (identified by name and version), including other applications, databases, operating systems, tools, libraries, websites, and integrated commercial components. State the purpose, formats, and contents of the messages, data, and control values exchanged between the software components. Specify the mappings of input and output data between the systems and any translations that need to be made for the data to get from one system to the other. Describe the services needed by or from external software components and the nature of the intercomponent communications. Identify data that will be exchanged between or shared across software components. Specify nonfunctional requirements affecting the interface, such as service levels for responses times and frequencies, or security controls and restrictions.>

## Hardware Interfaces

<Describe the characteristics of each interface between the software and hardware (if any) components of the system. This description might include the supported device types, the data and control interactions between the software and the hardware, and the communication protocols to be used. List the inputs and outputs, their formats, their valid values or ranges, and any timing issues developers need to be aware of. If this information is extensive, consider creating a separate interface specification document.>

## Communications Interfaces

<State the requirements for any communication functions the product will use, including e-mail, Web browser, network protocols, and electronic forms. Define any pertinent message formatting. Specify communication security or encryption issues, data transfer rates, handshaking, and synchronization mechanisms. State any constraints around these interfaces, such as whether e-mail attachments are acceptable or not.>

# Quality Attributes

## Usability

<Specify any requirements regarding characteristics that will make the software appear to be “user-friendly.” Usability encompasses ease of use, ease of learning; memorability; error avoidance, handling, and recovery; efficiency of interactions; accessibility; and ergonomics. Sometimes these can conflict with each other, as with ease of use over ease of learning. Indicate any user interface design standards or guidelines to which the application must conform.>

## Performance

<State specific performance requirements for various system operations. If different functional requirements or features have different performance requirements, it's appropriate to specify those performance goals right with the corresponding functional requirements, rather than collecting them in this section.>

## Security

<Specify any requirements regarding security or privacy issues that restrict access to or use of the product. These could refer to physical, data, or software security. Security requirements often originate in business rules, so identify any security or privacy policies or regulations to which the product must conform. If these are documented in a business rules repository, just refer to them.>

## Safety

<Specify requirements that are concerned with possible loss, damage, or harm that could result from use of the product. Define any safeguards or actions that must be taken, as well as potentially dangerous actions that must be prevented. Identify any safety certifications, policies, or regulations to which the product must conform.>

## [Others as relevant]

<Create a separate section in the SRS for each additional product quality attribute to describe characteristics that will be important to either customers or developers. Possibilities include availability, efficiency, installability, integrity, interoperability, modifiability, portability, reliability, reusability, robustness, scalability, and verifiability. Write these to be specific, quantitative, and verifiable. Clarify the relative priorities for various attributes, such as security over performance.>

# Internationalization and Localization Requirements

<Internationalization and localization requirements ensure that the product will be suitable for use in nations, cultures, and geographic locations other than those in which it was created. Such requirements might address differences in: currency; formatting of dates, numbers, addresses, and telephone numbers; language, including national spelling conventions within the same language (such as American versus British English), symbols used, and character sets; given name and family name order; time zones; international regulations and laws; cultural and political issues; paper sizes used; weights and measures; electrical voltages and plug shapes; and many others.>

# Other Requirements

<Examples are: legal, regulatory or financial compliance, and standards requirements; requirements for product installation, configuration, startup, and shutdown; and logging, monitoring and audit trail requirements. Instead of just combining these all under "Other," add any new sections to the template that are pertinent to your project. Omit this section if all your requirements are accommodated in other sections. >

Appendix A: Glossary

<Define any specialized terms that a reader needs to know to understand the SRS, including acronyms and abbreviations. Spell out each acronym and provide its definition. Consider building a reusable enterprise-level glossary that spans multiple projects and incorporating by reference any terms that pertain to this project.>

Appendix B: Analysis Models

<This optional section includes or points to pertinent analysis models such as data flow diagrams, feature trees, state-transition diagrams, or entity-relationship diagrams. You might prefer to insert certain models into the relevant sections of the specification instead of collecting them at the end.>