
Software Requirements Specification

Project: SystemBakey

Document file

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1	INTRODUCTION	5
1.1	Purpose	5
1.2	Scope.....	5
1.3	Personnel involved	5
1.4	Definitions, acronyms and abbreviations	6
1.5	References	6
1.6	Resume.....	6
1.7	Product outlook.....	6
1.8	Product functionality	7
1.9	User characteristics	7
1.10	Restrictions.....	7
1.11	Assumptions and dependencies	7
1.12	Specific Requirements.....	8
1.13	Common interface requirements	8
1.13.1	User Interfaces	8
1.13.2	Hardware interfaces and Software interfaces	9
1.13.3	Communication interfaces	9
1.13.4	Inventory Management.....	9
1.13.5	Sales Management.....	9
1.13.6	Supplier Management.....	9
1.13.7	Customer Management	9
1.13.8	Billing and Reporting.....	9
1.13.9	System Configuration	10
1.14	Non-functional requirements	10
1.14.1	Performance requirements	10
1.14.2	Security	10
1.14.3	Reliability	10
1.14.4	Availability	10
1.14.5	Maintainability	10
1.14.6	Portability	10



Introduction

This document is a Software Requirements Specification for the Bakery Management System. This specification has been structured based on the guidelines given by the IEEE standard Recommended Practice for Software Requirements Specifications ANSI/IEEE 830, 1998.

1.1 Purpose

The purpose of this document is to define the requirements for the Bakery Management System, which will be used to manage and record inventory, sales, suppliers, customers, and billing processes in a bakery.

1.2 Scope

Identification of the product(s) to be developed by name. The product to be developed is the Bakery Management System (SystemBakery). This system is intended to facilitate the management of bakery operations, providing specific functionalities for bakery owners, staff, and administrators.

1.3 Personnel involved

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1.4 Definitions, acronyms and abbreviations

Name	Description
SRS	Software Requirements Specification
User	Refers to bakery owners, staff, and administrators
GUI	Graphical User Interface.
JSON	JavaScript Object Notation
SystemBakery	Bakery Management System

1.5 References

Tittle	References
Standard IEEE 830 - 1998	IEEE

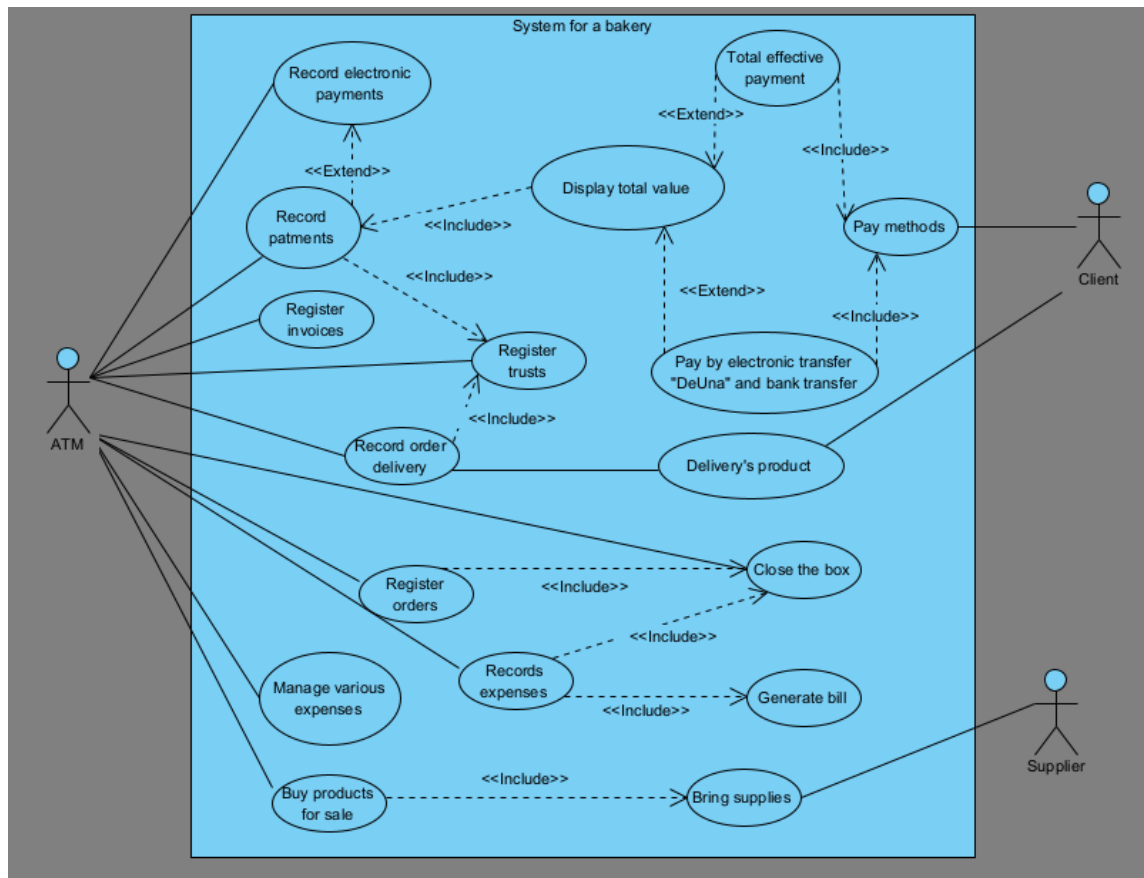
1.6 Resume

This Software Requirements Specification (SRS) document for the Bakery Management System (SystemBakery) is structured to provide a detailed description of the functional and non-functional requirements of the system. Each section of the document addresses different aspects of the system, from an overview of the product to the specific technical details necessary for its implementation. The first section introduces the system and provides an overview of the resource specification. The second section provides a general description of the system, outlining the main functions it must perform, associated data, and the factors, restrictions, assumptions, and dependencies that affect its development. The third section defines in detail the requirements that the system must satisfy.

1.7 Product outlook

The Bakery Management System (SystemBakery) is an application designed to facilitate the efficient and centralized management of a bakery's operations. It enables bakery owners and staff to manage inventory, sales, suppliers, customers, and billing processes through a user-friendly interface.

1.8 Product functionality



1.9 User characteristics

Type of User	Role	Activities
Bakery Owner	Manager	Overall management of the system, including inventory and sales oversight.
Staff	Operator	Daily operations such as managing stock, processing sales, and generating bills.
Administrator	Supervisor	System configuration, user management, and oversight of data integrity.

1.10 Restrictions

- The system must be available at all times, except during scheduled maintenance windows.
- Must comply with data security and privacy policies.

1.11 Assumptions and dependencies

It is assumed that all users have access to the Internet and that the bakery's infrastructure supports the load of concurrent users. The computers on which the system will be run must meet the minimum requirements to ensure proper operation. Specific requirements

1.12 Specific Requirements

Requirement number	RF01
Requirement name	User authentication
Type	Requirement
Requirement source	Problem Owner
Requirement priority	High/Essential
Requirement description	Users must identify themselves to access the system.

Requirement number	RF02
Requirement name	Consult information.
Type	Requirement
Requirement source	Problem Owner
Requirement priority	High/Essential
Requirement description	The system will offer the user information about the component they require, the products and the purchases made.

Requirement number	RF03
Requirement name	Register products and suppliers
Type	Requirement
Requirement source	Problem Owner
Requirement priority	High/Essential
Requirement description	The new products added and the new suppliers who deliver the products to us will be entered into the system.

Requirement number	RF04
Requirement name	Save sales
Type	Requirement ñ
Requirement source	Problem Owner
Requirement priority	High/Essential
Requirement description	When a product is sold to the customer, the system will register it taking it from the product database, reducing its quantity, in addition to placing the name of the buyer or final consumer with the value delivered on the invoice.

1.13 Common interface requirements

1.13.1 User Interfaces

The user interface shall consist of a simple graphical user interface (GUI) with forms for entering product information, buttons for saving and generating reports, and basic configuration options. The format of the reports generated will be in JSON format for inventory and billing purposes.

Hardware interfaces
For the proposed system it will not be necessary to have such demanding computers, basic features will be required such as:

- Mouse
- Keyboard
- Minimum 2 gb ram memory
- Processor of 1.66 GHz or higher

1.13.2 Hardware interfaces and Software interfaces

- Operating System: Windows XP or higher
- Mouse
- Keyboard
- Minimum 2 GB RAM
- Processor of 1.66 GHz or higher

1.13.3 Communication interfaces

Standard protocols such as HTTP/HTTPS shall be used for web communications. The application must handle communication errors, such as timeouts or unexpected server responses, to ensure a seamless user experience.

Functional Requirements

1.13.4 Inventory Management

The system must allow staff to add new products to the inventory, including product name, price, and quantity.
The system must validate data to ensure that the price and quantity are numerical and within valid ranges.
The system should automatically save inventory updates to avoid data loss.
The system must allow staff to modify product information and update quantities as necessary.
The system should display the total quantity and value of the stock.

1.13.5 Sales Management

The system must allow staff to process sales transactions by selecting products and entering quantities.
The system should validate the availability of stock before confirming a sale.
The system must automatically update the inventory after a sale is confirmed.
The system should generate a bill for each transaction, including product details, total amount, consumer name, and payment type.

1.13.6 Supplier Management

The system should allow staff to add new suppliers, including contact information.
The system must allow the modification of supplier details.
The system should enable the deletion of suppliers when necessary.

1.13.7 Customer Management

The system should allow staff to register new customers, including personal information.
It must be possible to edit and update existing customer information.
The system should enable the deletion of customers when necessary, with an option to archive their information.

1.13.8 Billing and Reporting

The system should generate detailed bills for each sale, including the customer's name, payment type, and purchased items.
The system must store all bills in a JSON file for record-keeping.
The system should allow staff to view and print bills as needed.

The system must generate reports on sales, inventory, and supplier transactions.

1.13.9 System Configuration

There should be a configuration interface where the administrator can adjust system settings, such as inventory thresholds and user roles.

Options should be provided to customize report formats, including the inclusion of bakery logos or additional information.

1.14 Non-functional requirements

1.14.1 Performance requirements

- The system must efficiently handle a high volume of transactions during peak hours.

1.14.2 Security

- The system must use a secure authentication mechanism based on passwords and usernames to ensure that only authorized users can access the system.
- The system must control access to data and functionalities based on user roles.

1.14.3 Reliability

- A data backup and recovery system must be implemented to ensure the integrity and availability of information in case of system failures.

1.14.4 Availability

- The system must be available 24/7, except for scheduled maintenance windows, which will be carried out during periods of low activity.

1.14.5 Maintainability

- The system must have clear and updatable documentation to facilitate maintenance operations.

1.14.6 Portability

- The system will be deployed on the Windows platform.