

Software Requirements Specification for Recipe Management System

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Software Requirements Specification for Recipe Management System	1
1. Introduction	3
1.1 Purpose	3
1.2 Scope	3
1.3 Definitions and Acronyms	3
1.4 References	3
2. Overall Description	3
2.1 Product Perspective	3
2.2 Product Functions	3
2.3 User Classes and Characteristics	4
2.4 Operating Environment	4
2.5 Constraints	4
3. Functional Requirements	4
4. Non-Functional Requirements	5

1. Introduction

1.1 Purpose

The purpose of this document is to outline the requirements for the Recipe Management System (DishDash). The objective is to provide a comprehensive system capable of automating recipe costing, unit conversions, and quotation generation for gastronomy students and culinary professionals.

1.2 Scope

DishDash will facilitate recipe creation and management, automatic cost calculations, unit conversions, and professional quotation generation for clients. It will support ingredient catalog management, profit margin calculations, client quotation requests, and event calendar integration.

1.3 Definitions and Acronyms

- **RMS:** Recipe Management System
- **DishDash:** Name of the RMS.
- **CRUD:** Create, Read, Update, Delete
- **UI/UX:** User Interface/User Experience
- **PDF:** Portable Document Format
- **OAuth:** Open Authorization protocol
- **IVA:** Value Added Tax (Impuesto al Valor Agregado)

1.4 References

- IEEE Std 830-1998: IEEE Recommended Practice for Software Requirements Specifications
- Google OAuth 2.0 Documentation

2. Overall Description

2.1 Product Perspective

DishDash is a standalone web-based system designed to eliminate manual calculation errors and streamline recipe management for gastronomy students. It addresses operational inefficiencies in recipe costing, ingredient management, and client quotation generation.

2.2 Product Functions

The main functions of the RMS include:

- Recipe creation and management with photo uploads
- Intelligent unit conversion and recipe scaling
- Centralized ingredient catalog with supplier management
- Automated cost calculation with configurable profit margins

- Client quotation generation and management
- Interactive calendar for event scheduling
- Role-based authentication (Chef/Client)

2.3 User Classes and Characteristics

- **Chef/Gastronomy Student:** Primary users who create recipes, manage ingredients, calculate costs, and generate quotations. Technical proficiency: Basic to intermediate.
- **Clients:** Secondary users who submit quotation requests and view their request history. Technical proficiency: Basic.

2.4 Operating Environment

- **Platform:** Web-based application accessible via modern browsers (Chrome, Safari, Edge)
- **Technologies:** HTML5, CSS3, JavaScript, MongoDB, Node JS, Express, third party services (APIs).
- **Authentication:** Google OAuth integration

2.5 Constraints

- Internet connection required for Google OAuth.
- PDF generation capability required.
- Database must support concurrent user access.
- Must handle ingredient density variations for accurate conversions.

3. Functional Requirements

FR-1. The system must allow users to authenticate using Google OAuth and be assigned a role (Chef or Client) with appropriate dashboard access.

FR-2. The system must maintain a centralized ingredient catalog with properties (density, equivalences, conversions), unit prices, and supplier information that can be manually updated.

FR-3. The system must allow chef to create, view, edit, and delete recipes with name, description, yield, ingredient lists (with multiple unit options), step-by-step instructions, photos, and category classification (starter, main course, dessert, beverage).

FR-4. The system must provide search and filter functionality for recipes by ingredient or category.

FR-5. The system must automatically convert between metric and imperial units, considering ingredient-specific density, and provide a conversion table for common ingredients.

FR-6. The system must scale recipe quantities proportionally when the number of portions changes, with dynamic yield recalculation.

FR-7. The system must calculate total recipe cost and cost per portion based on ingredient quantities and prices.

FR-8. The system must allow users to set configurable profit margins (per recipe or globally) and automatically suggest selling prices (cost + margin).

FR-9. The system must allow cost comparison when substituting ingredients or suppliers.

F-10. The system must allow chefs to create personalized client quotations by selecting multiple recipes, calculating total cost, taxes (IVA), and discounts automatically.

FR-11. The system must generate professional PDF quotations for download and allow quotation status tracking (pending, approved, completed).

FR-12. The system must maintain a searchable quotation history and provide quotation and client management panels in the Chef Dashboard.

FR-13. The system must allow chefs to view incoming quotation requests and respond with accept/reject decisions, proposed pricing, menu modifications, and availability confirmation.

FR-14. The system must provide a quotation request form for clients to submit detailed requests including event type, guest count, date/time, location, contact information, dietary restrictions, cuisine type, budget range, and additional notes.

FR-15. The system must allow clients to view their complete quotation request history with status updates.

FR-16. The system must include an interactive calendar interface where users can view and manage events, orders, and quotations by date.

FR-17. The system must support custom event creation (meetings, deliveries, restocking) and link quotations/recipes to specific calendar dates.

FR-18. The system must send notifications for upcoming events and deadlines, with visual distinctions for event types using colors or icons.

4. Non-Functional Requirements

NFR-1. Performance

NFR-1.1: The system shall load pages within 5 seconds under normal network conditions.

NFR-1.2: The system shall support at least 50 concurrent users.

NFR-1.3: Unit conversions and cost calculations shall execute in less than 1 second.

NFR-2. Usability

NFR-2.1: The interface shall be intuitive for users with basic technical skills.

NFR-2.2: The system shall provide clear error messages and input validation.

NFR-2.3: The system shall be accessible on desktop and tablet devices.

NFR-3. Reliability

NFR-3.1: The system shall have 99% uptime during business hours.

NFR-3.2: Data shall be automatically backed up daily.

NFR-3.3: The system shall handle calculation errors gracefully without data loss.

NFR-4. Security

NFR-4.1: All user authentication shall use Google OAuth 2.0 protocol.

NFR-4.2: User sessions shall expire after 24 hours of inactivity.

NFR-4.3: Role-based access control shall restrict features based on user type.

NFR-4.4: Sensitive data shall be encrypted in transit and at rest.

NFR-5. Maintainability

NFR-5.1: Code shall follow modular architecture principles with separation of concerns.

NFR-5.2: The system shall use standardized coding conventions.

NFR-5.3: Database schema shall support easy extension for new ingredient properties.