

Team Alpha

SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

Project: Alpha Solutions – Cloud-Based Inventory Management System (IMS)

1. INTRODUCTION:

1.1 Purpose:

The purpose of this document is to define the software requirements for the Alpha Solutions Inventory Management System (IMS). It provides details of the functional, non-functional and system requirements necessary to design, develop and deploy the system. This document will serve as a reference for developers, testers, stakeholders and users.

1.2 Scope:

Alpha Solutions IMS is a cloud-based inventory management system designed for small businesses and e-commerce sellers. The system will allow users to:

- Manage and track products and categories in real time.
- Monitor stock levels, quantity, pricing and profit.
- Provide analytics dashboards for decision-making.
- Enable secure role-based access for users and administrators.
- The system will be accessible via a responsive web application and hosted on the cloud.

1.3 Definitions, Acronyms, and Abbreviations:

- **IMS:** Inventory Management System
- **UI/UX:** User Interface/User Experience
- **MVP:** Minimum Viable Product
- **Admin:** System Administrator
- **SME:** Small and Medium Enterprises

1.4 References:

- Project Charter – Alpha Solutions IMS
- Business Case – Alpha Solutions IMS
- Project Plan – Alpha Solutions IMS

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1.5 Overview:

The Alpha Solutions IMS will provide a centralized cloud solution to replace manual inventory management processes, reduce errors, improve operational efficiency and support business scalability.

2. OVERALL DESCRIPTION:

2.1 Product Perspective:

The IMS will be a standalone web application hosted on a cloud server. It will not integrate with external accounting or e-commerce platforms in its first release.

2.2 Product Functions:

- Dashboard with real-time product summaries.
- Product and category management (add/edit/delete/view).
- Role-based authentication and profile management.
- Admin panel for system configuration.
- Analytics module for stock, value and profit reports.
- Contact & support module.

2.3 User Classes and Characteristics:

- **Admin Users:** Configure and manage the system.
- **Business Owners:** Track overall inventory, profits, and stock trends.
- **Inventory Managers:** Add/edit/manage products and categories.
- **End Users:** Limited role-based access to update stock levels.

2.4 Operating Environment:

- Web-based application (accessible on browsers: Chrome, Edge, Firefox, Safari).
- Hosted on a cloud platform (e.g., Vercel).
- Minimum device: Laptop/Desktop with internet connectivity.

2.5 Design and Implementation Constraints:

- Must be developed using free tools (budget capped at PKR 15,000).
- Cloud-based only (no offline support in first release).
- Development timeline: 4 months (July–October 2025).

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2.6 User Documentation:

- Deployment guide
- User manual (how to log in, manage products, view reports)
- FAQs and support information

3. SPECIFIC REQUIREMENTS:

3.1 Functional Requirements

- The system shall allow users to log in with secure authentication.
- The system shall provide a dashboard with total products, quantity, value and profit.
- The system shall allow users to add, edit, delete and view products.
- The system shall support category creation and management.
- The system shall generate stock reports in real time.
- The system shall allow role-based access (Admin, Manager, Staff).
- The system shall allow users to contact support via a form.

3.2 Non-Functional Requirements:

- The system shall maintain an uptime of 99.5% during the first 6 months.
- The system shall be responsive and accessible on major devices/browsers.
- The system shall protect data using HTTPS and secure authentication.
- The system shall handle at least 100 concurrent users.

3.3 Interface Requirements:

- **User Interface:** Responsive, modern UI with dashboard & forms.
- **Hardware Interface:** Standard laptop/desktop, internet-enabled.
- **Software Interface:** Cloud-hosted database, authentication service.
- **Communications Interface:** Web-based via HTTPS.

4. SYSTEM MODELS:

- **Use Case Diagrams:** (Login, Manage Products, Generate Reports, Manage Categories).

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- **Entity Relationship Diagram (ERD):** Products, Categories, Users, Roles.
- **Other Models:** Workflow diagram (Admin/Manager/Staff interactions).

5. APPENDICES:

Glossary:

- **Inventory:** Stock of products/items managed by a business.
- **Category:** Classification of products (e.g., electronics, apparel).
- **Analytics:** Reports/insights generated based on stock data.

Supporting Information:

- This SRS is based on inputs from the Project Plan, Business Case and Project Charter documents.