**Software Requirements Specification**

**for**

**Home Inventory Manager**

**Name: Dependra Basnet Course Name:RDBMS**

**ID: 2213986060 Course code: CA116**

**Course Teacher: Shavani Gautam**

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# Introduction

## Purpose

A Home Inventory Manager is a digital tool that meticulously catalogs an individual's possessions within their home. Its purpose is twofold. Firstly, it simplifies the process of substantiating ownership and estimating the value of items in case of theft or damage, aiding in recovery. Secondly, it streamlines organization, financial management, estate planning, and even helps with tracking warranties. In essence, it serves as an indispensable assistant for efficiently managing one's home-based possessions.

## Document Conventions

While writing the document for our Home Inventory Manager, I used clear fonts and styles to make it easy to read. I organized the requirements in a way that makes sense, with the most important ones coming first. I also marked the really important parts to catch everyone's attention. This makes my document easy to understand and helps the team work better on the Home Inventory Manager project.

## Intended Audience

The Home Inventory Manager is designed to assist users in efficiently managing and cataloging their personal belongings within their homes. This software is envisioned to simplify the comprehensive process of recording, organizing, and tracking items, which is invaluable for various purposes, including insurance claims, estate planning, moving, and general home management.

## Project Scope

The Home Inventory Manager is designed to assist users in efficiently managing and cataloging their personal belongings within their homes. This software is envisioned to simplify the comprehensive process of recording, organizing, and tracking items, which is invaluable for various purposes, including insurance claims, estate planning, moving, and general home management. In terms of future scope, the project will aim to expand its capabilities by integrating AI-driven features for item recognition , enhancing data security through advanced encryption methods, and facilitating seamless data synchronization across multiple devices to meet the evolving needs of users.

# Overall Description

## Product Perspective

The Home Inventory Manager is to help people keep track of their stuff at home easily. Imagine it as a stand-alone tool with special connections to these other systems, making it great for managing your things and getting ready for unexpected events.

## Product Features

The Home Inventory Manager product offers a robust set of features, including inventory cataloging, asset organization, document management, data security, insurance integration, reporting, notifications, and mobile access. Users can efficiently catalog and manage their possessions, documents, and assets. Reports and notifications keep users informed, while mobile access ensures convenience.

## User Classes and Characteristics

The Home Inventory Manager's user classes encompass Novice, Regular, and Advanced Users, differing in technical proficiency, usage frequency, and education. The primary focus lies on these three classes, who utilize the software for varying levels of inventory management. User play a crucial role in ensuring data protection.

## Operating Environment

The operating environment for a home inventory system includes the hardware, such as a computer or smartphone with storage space and potentially a barcode scanner, and the software, which should be compatible with your device's operating system. A reliable internet connection may be needed for cloud-based systems, and security measures like strong passwords and backups are important to protect your data.

## Design and Implementation Constraints

Designing of the Home Inventory Manager facing constraints due to regulatory compliance requirements, including data privacy regulations. The use of MySQL for data management limits database technology choices. Adherence to the organization's design conventions and programming standards is crucial, as the customer's organization will maintain the software.

# System Features

Functional requirements for the Home Inventory Manager are categorized into key system features. These include user registration, asset cataloging, inventory organization, documentation management, security, insurance integration, reporting, notifications, and mobile access. These features collectively deliver a comprehensive solution for efficient home inventory management.

## System Feature 1

3.1.1 Description and Priority

The functional priorities for the Home Inventory Manager system features are categorized into three levels. High-priority features include User Registration and Authentication, Asset Cataloging, Documentation Management, Security and Data Protection, and Mobile Access.

3.1.2 Stimulus/Response Sequences

User actions and system responses in the Home Inventory Manager are as follows: For user registration, users sign up and confirm emails. Asset cataloging involves adding, editing, and categorizing assets. Documentation management allows attachment and retrieval of documents. Security includes login and password changes. Insurance integration handles policy import and claim creation. Reporting generates insights, while notifications notify and prompt acknowledgment. Mobile access enables usage via mobile devices.

3.1.3 Functional Requirements

User Registration and Authentication:

**1. Provide user registration form**

A user registration form is an online form where individuals provide their personal details (e.g., name, email, password) to create user accounts. This information is stored for authentication and personalization purposes.

**2. Implement email verification**

Email verification is a security process where a confirmation link is sent to a user's email address after registration. By clicking the link, users confirm their email's validity and activate their accounts, enhancing security and reducing fraudulent registrations.

**3. Enable password reset**

Password reset allows users who have forgotten their passwords to regain access to their accounts. It typically involves a secure process of verifying identity and generating a new password or allowing users to set a new password, enhancing account recovery.

**4. Allow adding, editing, and categorizing assets**

This feature permits users to include, modify, and classify their assets within a system, such as digital files, properties, or inventory, enabling better organization and management of these resources. It enhances user control and accessibility to assets for various purposes.

**5. Enable document upload and retrieval**

Enabling document upload and retrieval allows users to securely upload and access digital files or documents within a system. This feature simplifies document management, storage, and retrieval, offering convenient access to important information or files.

**6. Securely store user credentials**

Enabling document upload and retrieval allows users to securely upload and access digital files or documents within a system. This feature simplifies document management, storage, and retrieval, offering convenient access to important information or files.

**7. Send notifications based on user schedules**

Sending notifications based on user schedules involves a system automatically delivering messages or alerts at specified times or dates set by users, enhancing personalized and timely communication. This feature is valuable for reminders, appointments, or updates tailored to individual preferences and needs.

**8. Provide a responsive mobile designs**

Responsive mobile design ensures that a website or app adapts to various screen sizes and devices, delivering an optimal user experience regardless of the platform. It enhances accessibility and usability for mobile users, contributing to a broader audience reach.

## User Interfaces

The Home Inventory Manager's user interface is designed with logical components to ensure a user-friendly experience. For user registration, an intuitive form captures user details, and email verification enhances user security. Asset cataloging features include comprehensive asset entry and categorization interfaces. Document management provides simple document attachment and viewing options. The login page and password change process are user-friendly and secure. The system also enables policy import and claim creation for insurance integration. For reporting and analytics, users can easily generate reports and access notifications. A responsive design guarantees accessibility on mobile devices, while a mobile app is available for those who prefer it. These logical characteristics adhere to GUI standards and responsive design practices for a seamless user experience.

## Hardware Interfaces

The Home Inventory Manager supports various hardware components such as desktops, laptops, smartphones, and tablets. Data interactions are through user inputs and remote data retrieval, utilizing standard communication protocols.

## Software Interfaces

The Home Inventory Manager interfaces with the following software components: MySQL for data storage, compatible with standard SQL communication. It operates on Windows, macOS, Linux, iOS, and Android. Data communication includes asset information, user profiles, and authentication tokens. Communication services entail data retrieval, storage, and modification. Detailed API protocols for data exchange will be documented separately. Shared data includes asset details, user credentials, and authentication tokens. The integration mechanism should conform to SQL standards, ensuring seamless data transfer between the software and the database.

## Communications Interfaces

The Home Inventory Manager necessitates various communication functions. It must be capable of sending email notifications to users for alerts and reminders using SMTP, securing email content with encryption. Web browser access via responsive web design is crucial, requiring support for HTTP/HTTPS standards to protect data during transfer. Adequate data transfer rates will ensure responsive performance, while synchronization mechanisms guarantee the consistency of user data across devices, ultimately delivering a secure and efficient communication system.

# Other Nonfunctional Requirements

## Performance Requirements

Performance requirements for the Home Inventory Manager are established to optimize the user experience and operational efficiency. Firstly, data retrieval, a fundamental operation, must occur within 2 seconds. This rapid response ensures that users can access their asset information swiftly, enhancing their ability to manage their inventory efficiently. Secondly, data synchronization across various devices is crucial, and the system must maintain a latency of under 5 seconds to ensure real-time updates. This is essential for users who access and manage their assets on multiple platforms. Finally, report generation should be completed in less than 10 seconds, enabling users to obtain valuable asset insights promptly.

## Safety Requirements

I've listed requirements that deal with potential safety risks or harm connected to our product's use. I've also set up safety measures and actions to avoid accidents. We made sure to follow external rules and policies regarding safety.

## Security Requirements

The Home Inventory Manager places a strong emphasis on security and privacy. It mandates user authentication with robust password policies and encryption for all data transfers, preserving the privacy of user information. User access control is a priority to restrict unauthorized access.

# Other Requirements

The Home Inventory Manager must comply with internationalization requirements, ensuring multi-language support, date formats, and currency display. Additionally, adherence to copyright and intellectual property laws is imperative.

**Appendix A: Glossary**

Glossary:

1. SRS - Software Requirements Specification: A document outlining the functional and non-functional requirements for a software product.

2. API - Application Programming Interface: A set of rules and protocols for building and interacting with software applications.

3. SQL - Structured Query Language: A programming language used for managing and querying relational databases.

4. SMTP - Simple Mail Transfer Protocol: A communication protocol for sending electronic mail between servers.

5. HTTP/HTTPS - Hypertext Transfer Protocol/Secure: Protocols for data transfer and communication between web clients and servers.

6. GDPR - General Data Protection Regulation: European Union regulation for data protection and privacy.

7. HIPAA - Health Insurance Portability and Accountability Act: U.S. legislation for healthcare data protection.

8. ISO 27001 - International Organization for Standardization 27001: A standard for information security management systems.

9. SOC 2 - Service Organization Control 2: A framework for data security and privacy.

10. UI - User Interface: The graphical and functional components of the software that users interact with.