

Software Requirements Specification for Hand Up Housing Website

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1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed overview of the **Hand Up Housing** website software. This document outlines the functionalities of the system, user interactions, and expectations of the software in terms of performance and usability. This document will give a clear understanding of the specifications and expectations for the development process.

1.2 Scope

The Hand Up Housing website is designed to serve members of Madison County, specifically social workers and administrators, who will use the platform to manage and access housing information. The website will allow for easy entry, modification, and deletion of housing records into a filterable database. The system is intended for use within the organization and by authorized personnel.

This website will be accessed via the domain “HUHconnectmadco.com” and will be hosted by the service Google Cloud Platform. It is intended to be run on a desktop/laptop PC on Windows OS. The preferred browser type is Firefox.

1.3 Definitions, Acronyms, and Abbreviations

- **Database:** A structured collection of housing information.
- **CRUD:** Create, Read, Update, and Delete functionalities for managing housing records.
- **Admin:** Administrator role with full access to all functionalities of the system.

- **Social Worker:** A user role with read-only access to filter housing information.
- **Volunteer:** A user role with limited access to create and update records.
- **Filter:** Functionality that allows users to sort and search housing records by specified criteria.
- **Interface:** The manner in which users interact with the system, including the design and elements that allow them to communicate with the software.

1.4 References

- Madison County Housing Data Standards (From Hand Up Housing)
- [W3C Web Content Accessibility Guidelines](#)
- [Database Management Best Practices](#)

1.5 Overview

This software system provides a streamlined solution for managing housing data across Madison County. The website allows administrators and volunteers to update housing information in a centralized database, while social workers can filter the database to quickly find appropriate housing for clients. Administrators are responsible for regulating users and their respective roles.

2. General Description

2.1 Product Perspective

The Hand Up Housing website is a web-based application that functions as a housing management tool for the Hand Up Housing organization. It allows authorized users to input and retrieve housing data, simplifying the process of finding available housing units for those in need.

The Hand Up Housing system is envisioned as part of a larger ecosystem of social service software. It supports the organization's housing needs but is also designed for future compatibility with regional housing data systems, allowing for seamless data sharing across counties.

2.2 Product Features

- **Create, Read, Update, and Delete (CRUD)** functionalities for managing housing records.
- **Filter and search functionality** for finding specific housing units based on user-defined criteria such as location, price, and availability.
- **User roles and permissions** that control access to certain features (e.g., Admin, Volunteer, Social Worker).
- **Secure login** to ensure that only authorized personnel can access the system.
- **Administrative interface** for overseeing user authentication, role-based access control, and property data management.

2.3 User Needs

- **Administrators:** Need full access to manage all housing records, update system settings, and oversee user activities.
- **Volunteers:** Need the ability to enter new housing records and update existing entries.
- **Social Workers:** Need a user-friendly interface to filter housing data and quickly find suitable options for their clients.

2.4 Constraints

- The availability of accurate and up-to-date housing data is dependent on manual data entry.
- The system must comply with security standards to only allow authorized users access to the site and user permissions (pertinent to the type of user).
- The administrator is required to regularly audit and maintain user accounts and property data to ensure accuracy, compliance, and system integrity.

3. Specific Requirements

3.1 External Interfaces

- **User Interface (UI):** The system will have a web-based interface that is accessible via standard web browsers. It must be intuitive and easy to navigate for users with varying levels of technical expertise.
- **Database Interface:** The system will interact with an SQLite relational database to store and retrieve housing information. It must support CRUD operations and allow for efficient data querying and filtering.
- **Administrator Interface:** The system will provide a web-based administrative interface designed for administrators to manage user accounts, property data, and system settings. The interface should allow for efficient monitoring, reporting, and configuration.
- **Authentication System:** The system will integrate with a user authentication system to ensure secure access for different user roles. A 2FA system will be used for user logins to strengthen security.

3.2 Functional Requirements

- The software must provide **CRUD functionality** for housing records, allowing users to create, read, update, and delete entries in the database.
- The system must include **filter and search functionality**, enabling social workers to search for housing units based on criteria like location, size, price, and availability.

- The system should allow **role-based access control** so that different user roles (Admin, Volunteer, Social Worker) can perform appropriate actions.

3.3 Non-Functional Requirements

- **Security:** The system must implement secure login mechanisms and data encryption to protect sensitive information.
- **Usability:** The UI must be simple and user-friendly, providing quick access to key functionalities for non-technical users.
- **Reliability:** The system must provide consistent access to up-to-date housing data, with minimal downtime.
- **Performance:** The system must be able to process queries quickly, even with large amounts of housing data.

3.4 Performance Requirements

- The system should handle queries within 2 seconds for databases containing up to 10,000 housing records.
- The website should load within 3 seconds under normal operating conditions.

3.5 Design Constraints

- The system must be built using a modern web development framework (**Django**) in the Python programming language, supporting scalability.

- The system must be compatible with standard web browsers (Chrome, Firefox, Edge) and should be responsive for use on mobile devices.

4. Additional Requirements

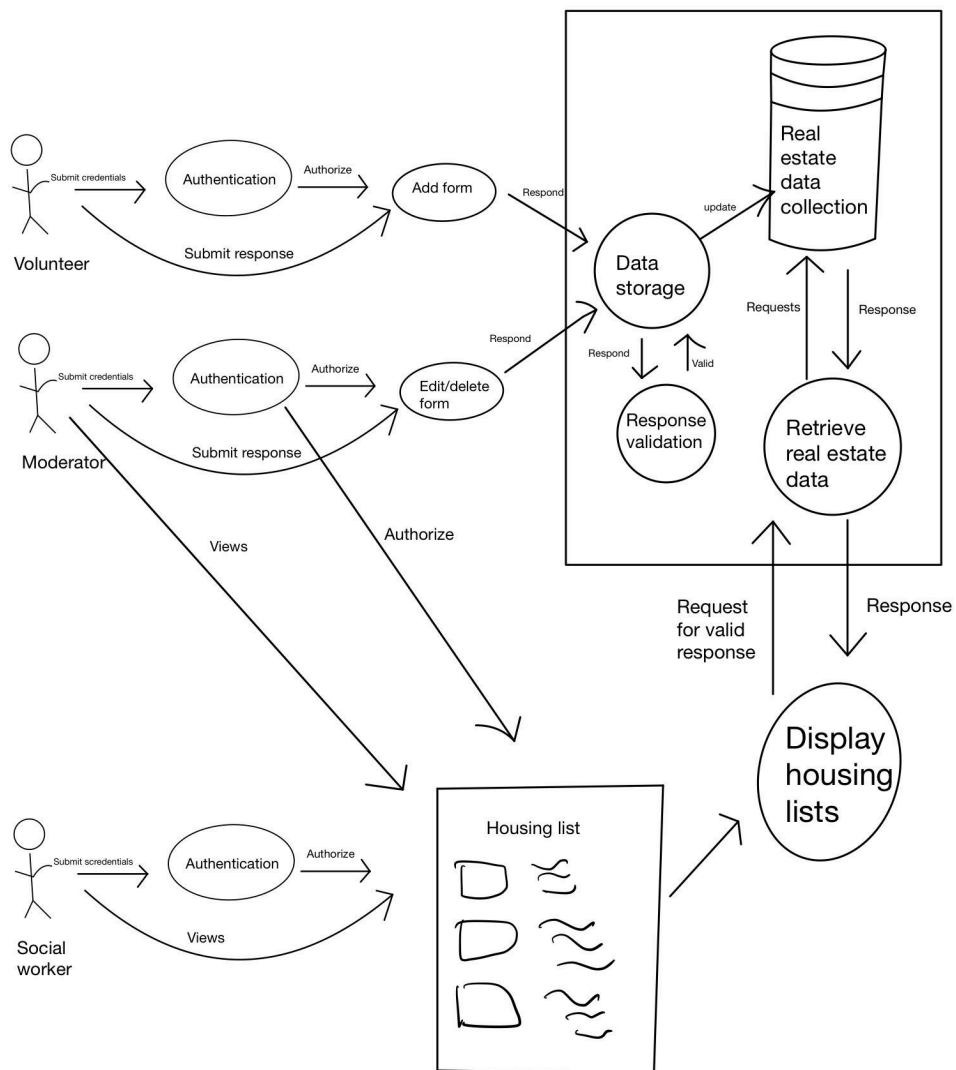
4.1 Attributes

- **Maintainability:** The system should be modular, allowing for easy updates and maintenance without significant downtime.
- **Extensibility:** The system should be designed with future features in mind, allowing for easy expansion of functionalities.
- **Data Integrity:** The system must ensure data accuracy and consistency, especially when multiple users are accessing or modifying the database.

4.2 Future Considerations

- Potential enhancements include **mobile app development** to provide access on mobile devices, improved **report generation** for housing data, and additional **filters** for more granular housing searches.
- Implementing **automated data import** from external sources, such as housing registries, could reduce manual data entry efforts

4.3 Data Flow Diagram



5. Appendices

5.1 Glossary

- **CRUD:** Create, Read, Update, and Delete operations in a database.
- **Role-based Access Control:** Security principle that allows or restricts access to resources based on the user's role within the system.
- **SQLite:** A lightweight, serverless, open-source relational database management system that stores data in a single file.

5.2 References

- Madison County Housing Data Standards
- W3C Web Content Accessibility Guidelines

5.3 Other Relevant Material

- Data entry guidelines for volunteers