Personal Data Gathering and Managing System

Software Requirements Specification
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System Analysis & Design - IS2106

GROUP 39

Team – Phoenix Flyers

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1. Introduction

A groundbreaking personal data gathering and management system tailored for Grama Niladhari officers. It has regular updates and works as a user-friendly interface. VillageVision ensures the maintenance of accurate community records. Individuals have the ability to access and verify their own data stored in the central database. They also being able to report any discrepancies or submit new details through an online application. Grama Niladhari officers meticulously review and validate these submissions.System updating the main database with correct information. VillageVision stands as a vital tool in promoting transparency and efficiency in data management. The aim is to ultimately benefit every member of the community.

1.1 Purpose

- To enable village officials to maintain regularly updated and accurate community records.
- Provide individuals with access to their own stored data within the main database.
- Facilitate the reporting of any mistakes or submission of new details through an online application.
- Empower Village Officials to verify and validate submitted information for accuracy.
- Make sure that accurate data is quickly added to the primary database, improving the overall accuracy of the data.
- Promote accountability and openness in data management procedures.
- function as a useful instrument for effective and efficient collective record-keeping, which is advantageous to all community members.

1.2 Project scope

We hope to develop a personal data collection and management system specially for village officials and community members. And also we will implement that system through our village vision project. Simply, that is our project scope.Our aim is to create a user friendly platform to manage and update community records without any inconvenience and more accurately and reliability than manual way.It provides the best opportunities for community members. They are able to enter new information or updated information and allow access to their own stored data in a central database. And they allow you to report any inaccurate information. The project scope also includes the integration of robust validation processes to verify the accuracy of submitted data and the seamless updating of the main database with correct information. The project may involve training sessions and ongoing technical support to ensure the effective maintenance of the system.

1.3 Intended audience

- Grama Niladhari officers - They are responsible for maintaining community records.
- Villagers - They can view their details and let Gramaniladhari know if there are any problems, changes or new information.
- Government authorities or agencies - They are involved in community data management and governance processes.
- Technicians and developers - They are involved in the system's implementation and maintenance process.

1.4 Problems in current situations

- Lack of real-time communication channels results in delays in updating data when changes occur.
- The method of Contacting villagers via mobile phones is not a suitable method to collect data efficiently.

- It is a very risky way to use paper documents to store community information because details may be lost.
- Difficulty in maintaining the accuracy of community records due to manual data entry.
- Limited accessibility for villagers to update their own information.
- Manually inputting, updating and maintaining data takes too much time.
- Differences in data quality arising from varying levels of literacy and comprehension among villagers filling out forms.
- It is very difficult to coordinate efforts among multiple village officials in different areas.
- Better decision-making at the community level is difficult without a central data management system.

1.5 Advantages of new system

- Village officials facilitate direct personal relationships and communityparticipation between officials and villagers.
- Flexibility in data collection methods allows for adaptation to the specific needsand circumstances of each household.
- Lower initial cost and minimal technological infrastructure
- It involves hiring local workers to assist with data collection. It will also createnew job opportunities for the society.
- Improved data accuracy through direct observation and verification by GramaNiladari officers.

2. Functional Requirements

Functional requirements are the functionalities and services that the system is expected to provide. These functionalities depend on the type of software and the user type. These requirements define the system's functionalities. Here are the functional requirements in the VillageVision system.

- **User Authentication**

  Grama Niladhari officers and community members must be able to log in securely to access the system.

- **Data Entry**

  Grama Niladhari officers should be able to enter and update community data. It includes demographic information, property details and social welfare status.

- **Data Access**

  Community members should be able to access their personal data stored in the system securely.

- **Reporting Module**

  Users should be able to contribute new information or report errors through a reporting module.

  Which should include a process for Grama Niladhari personnel to validate and verify the information.

- **Real-time Updates**

  The system should provide real-time updates to ensure that data is always current and accurate.

- **Data Validation**

  Robust validation processes must be in place to verify the accuracy of submitted data before integration into the main database.

3. Non-functional Requirements

Nonfunctional requirements are the properties and constraints for the proposed system. These requirements are known as the nice to have features. In a system these nonfunctional requirements are more critical than the functional requirements. Following are the nonfunctional requirements that we hope to add to our VillageVision system.

- **The system shall be able to have security.**

  Security is more important in this system because we have to store personal data and prevent unauthorized access.

- **The system shall be able to have a user-friendly interface**.

  This is more important because users can do their tasks easily. And also it is more helpful to inspire people to use this system.

- **The system shall be able to have good performance.**

  This is more important to handle a large volume of data.

- **This system shall be able to have reliability.**

  Here, the system has stored personal information. So reliability is a must in this system.

- **The system shall be able to have accessibility.**

  The system should be accessible to relevant users without any problems, conforming to accessibility standards.

- **The system shall be able to have scalability.**

  This system should be scalable for accommodating future developments, growth and expansion.

4. Tools and Technologies expected to be used

- We expected to use Next.JS as our main framework.

- We decided to use HTML, CSS, Tailwind CSS, JavaScript to develop the userinterface.

- We decided to use MySQL and MongoDB to develop the database of this system.