SOFTWARE REQUIREMENT SPECIFICATIONS

FOR

JAAGRITI :
A VILLAGE AWARENESS SYSTEM
(Version 1.0)

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1. INTRODUCTION

1.1 PURPOSE

The purpose of this document is to record the requirements for the design and requirements of the product which is ‘Jagriti’ an online web portal to increase the awareness of the farmers, villagers and people living in rural areas of India. There are innumerable stories where villagers aren't aware of the various privileges, programs, beneficial policies because of lack of information in the region. To serve the people for the same, this document procures all the details of the functional and non-functional requirements for the production of this online web portal to be used by programmers, future contributors, testers and designers alike. This document will also serve as the basis of acceptance testing by the user.

1.2 SCOPE:

Our project involves people from different walks of life who are provided with various functionalities, such as -

1.2.1 Villager Membership - every visitor on the website is needed for a membership option to provide them information on developments in agriculture, policies, market scenarios and other government aided programs etc. catering to needs of men and women separately as well.

1.2.2 Bloggers - users can submit various blogs, articles and updates which might be useful for the people in general, hence expanding the scope of the project audience to the general masses

1.2.3 Grievances and Feedback to Departments - a portal will be provided to voice out the grievances to respective public government departments

1.2.4 Volunteers - they will be registered to get connected with various non-governmental organizations working in the upliftment and , write blogs and disseminate useful information to villagers

1.3 DEFINITIONS, ACRONYMS AND ABBREVIATIONS:

Term	Definition

SRS	Software Requirements Specification
User	Villager/Blogger/Volunteer who will be accessing the website and have been given various functionalities
Admin/Administrator	System administrator who is given specific permission for managing and controlling the system
Web-Portal	A web application which present various functionalities to owner

1.4 REFERENCES:

The major reference of this online web portal for villagers, farmers and people residing in rural areas are -
[1]http://farmer.gov.in/,
[2]https://fee.org/articles/how-to-help-indian-farmers/
[3]https://villageinfo.in/
[4]https://www.mapsofindia.com/my-india/india/village-knowledge-center-an-initiative-for-rural-development

1.5 OVERVIEW:

The remainder of the document contains two major portions. The intended audience for this document are project members, system analysts, software developers, testers, documentation specialists, designers, system architects, people detecting bugs and the user/customer of this system who might want to contribute or develop this project.
The next part provides an overview of the system functionality and system interaction with other systems. It also introduces different types of stakeholders and their interaction with the system. Furthermore, it mentions the system constraints and assumptions about the product.
The next unit provides the requirements specification in detailed terms and a description of the different system interfaces. Different specification techniques are used in order to specify the functional requirements more precisely for different audiences as well as non-specific requirements for the product.

2. THE OVERALL DESCRIPTION:

This section gives background information about specific requirements of the web based villager management System ‘Jagriti’ service to be developed in brief. Although we will not describe every requirement in detail, this section describes the factors that affect the final product.

2.1 PRODUCT PERSPECTIVE :

This product or the online web-portal is eventually intended for the common masses. Product will be deployed to web site and all users of the product will access it through the website. Website will be main user interface where users can operate all the provided functionality.

However, this web site will be only a part of a larger system. There will be cloud server where all the user data is kept and all the execution is done. Website will only be the interface for the user data and the execution of provided functionalities. To use product, users are required to register through the web interface. Whenever a new user registered, all the required data will be created in the database and a predefined workspace will be assigned for the user. Later, user will be able to login and logout the system anytime he wants. Since every operation that user perform reflected to our database, user will find his workspace however he leaves last time.

2.2 PRODUCT FUNCTIONS:

Our product encompasses multitude of functions which are combined together to achieve one single aim which is to spread awareness among the villagers and handle their grievances at the same time. The various functions are as follows -

1. Registration of villagers and volunteers to the website
2. Verification of personal details of the registered people
3. Easy logging in and logging out by the users
4. Linking of volunteers to their respective NGOs
5. Writing of blogs by the volunteers
6. Choosing to save their blogs as drafts or publishing them
7. Reading of blogs by the villagers and commenting them
8. Viewing comments on their blog by the volunteers and either approving them or discarding them
9. Easily typing out of grievances by the villagers.
10. Receiving of grievances by the department and taking necessary steps

2.3 USER CHARACTERISTICS:

There are certain constraints which the users' expertise, knowledge etc should conform to for this product to work.

1. The villager is expected to be internet literate and be able to use a search engine. Basic knowledge would suffice.

2. The volunteer is expected to be internet literate and be able to write informative blogs. He/she is expected to be windows literate and be able to use buttons, pull down menus and similar tools.

2.4 CONSTRAINTS :

The various constraints that need to be taken care of while carrying out the execution/production of the web portal -

1. Response Time and Throughput time - the response time of the product should be less since it is essential for good user experience
2. Government Policies - policies of the government restrict the expansion/dissemination of certain information on the internet due to security and moral intentions;
3. Technological constraints - Dependency of internet availability in rural areas, division of bandwidth and lack of appropriate computer network mechanisms inhibit the reachability of this web-based portal;
4. User constraints - Decreased number of web-page impressions/decreased number of users due to unavailability of electricity, cyber-cafes and connectivity issues or Unexpected increase in the number of concurrent user requests during peak transaction period;

2.5 ASSUMPTIONS AND DEPENDENCIES:

Our product relies on the inter-operationality and API availability of various government departments since the 'Grievances Section' would require information from these departments. The product would also submit the received complaints or feedbacks to respective governments which is highly dependent on whether public departments would be open to receiving such information or not.
Since our product focuses on rural people, it is assumed that most of the villagers will have access to the website and that they are literate enough to gain benefit out of the website.

2.6 APPORTIONING OF REQUIREMENTS:

In the case that the project is delayed, there are some requirements that could be transferred to the next version of the application. These include improving the appeal and design of the web application. Improving navigationality and providing additional features such as Google Maps connectivity with the website can be taken up at a later stage.

3. SPECIFIC REQUIREMENTS:

3.1 EXTERNAL INTERFACE REQUIREMENTS

3.1.1 USER INTERFACE REQUIREMENTS

A first-time user should see the login page when he/she opens the application. If the user has not registered, he/she should be able to do that on the login page.

If the user is not a first-time user, a villager should be able to see all the blogs directly when the application is opened. At the top of the page, there should be a tab for writing out a grievance. The villager can either open a blog to read or click on the grievance tab. If he/she clicks on a blog, the blog should be displayed in its entirety and below it, there should be an option to comment. If he clicks on the grievance tab, a form should be displayed for him/her to fill.

If the user is a volunteer, he/she should be directed to a page where he/she can view all his blogs, enabling him/her to edit them. There should be tab to add new blogs as well.

3.1.2 SOFTWARE INTERFACE REQUIREMENTS

The web portal communicates with the database in order to get the blogs and the grievances. The communication between the database and the web portal consists of operation concerning both reading and modifying the data.

3.1.3 HARDWARE INTERFACE REQUIREMENTS

Since the web portal does not have any designated hardware, it does not have any direct hardware interfaces. The hardware connection to the database server is managed by the underlying operating system on the web server.

3.1.4 COMMUNICATION INTERFACE REQUIREMENTS

The communication between the different parts of the system is important since they depend on each other. However, in what way the communication is achieved is not important for the system and is therefore handled by the underlying operating systems for the web portal.

3.2 FUNCTIONS

REQ 1: The system shall provide a terminal that supports previous command viewing

REQ 2: The system shall provide a terminal that supports basic WINDOWS commands execution.
REQ 3: The system shall provide a terminal that supports available commands list demonstration.

3.3 PERFORMANCE REQUIREMENTS

Since this software is going to web – based, it does require a powerful server machine with high band internet access. Server machine should have a powerful CPU and high speed internet access so that it can handle multiple users at the same time.
Another performance requirement is the storage space. Higher storage space means more user and bigger workspace per user so higher the storage, better the performance.
Performance requirement by the user side is, web application should be developed as a lightweight web app so that it can work on almost any platform even with slower internet connections. Expected number of simultaneous user should be at least 100. System should be able to deal with 100 users at the same time.
Also database of the system should handle at least a thousand of users at any periods.

3.4 DESIGN AND IMPLEMENTATION CONSTRAINTS

The information of all the users must be stored in a database that is accessible by the Jaagriti. The Web system is running all 24 hours a day. The users access the Web based address Book system from any computer that has Internet browsing capabilities and an Internet connection. The users must have their correct usernames and passwords to enter into the system.

3.5 NON-FUNCTIONAL REQUIREMENTS:

Adaptability - This software is adaptable by all users.

Availability- The software is easily available to all through the internet.

Correctness- The results of the function are pure and accurate to the best knowledge of the developer.

Maintainability- After the deployment of the project if any error occurs then it can be easily maintained by the software developer.

Portability- The software can be deployed at either mobile phones, laptops or computers and can be accessed using web browsers.

Reliability- The performance of the software is good which increases the reliability of the software.

Reusability- The data and record that are saved in the database can be reused if needed.

Robustness- If there is any error in any window or module then it does not affect the remaining part of the software.

Testability- The software can be tested at all times which will help in its maintenance as well.

Productivity- This software will produce every desired result with accuracy.

Timelines- The time limit is very important. It will save much time and provide fast accessing.

Cost effective- This software is less in cost and bearable by any organization.