**SOFTWARE REQUIREMENTS SPECIFICATION**

1. **Introduction:**

A **software requirements specification** (SRS) is a description of a [software system](https://en.wikipedia.org/wiki/Software_system) to be developed, laying out [functional](https://en.wikipedia.org/wiki/Functional_requirement) and [non-functional requirements](https://en.wikipedia.org/wiki/Non-functional_requirements), and may include a set of [use cases](https://en.wikipedia.org/wiki/Use_case) that describe interactions the users will have with the software.

A basic purpose of the SRS is to bridge this communication gap between client and the developer so they have a shared vision of the software being built. An SRS establishes the basis for agreement between the client and the supplier on what the software product will do. SRS provides a reference for validation of the final product. A high-quality SRS is a prerequisite to high-quality software and also reduces the development cost.

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete “iAgro” by defining the problem statement in detail. The detailed requirements of “iAgro” are provided in this document.

* 1. **Purpose:**

This Document includes software requirements for the “iAgro” Project. The purpose of this document is to detail the user requirements for all the functionality in “iAgro”. This document is meant to serve as a guide to the developers and users. The purpose of the requirement document is to specify and provide all the information required to design, develop and test the system. This document ensures that the person reading the document understands what she/he is looking for.

* 1. **Scope:**

The main objective of developing “iAgro” application is to help farmers by providing all kinds agriculture related information in the website. “iAgro” is farmer management website application which helps farmers to give best-practice farming processes. It helps farmers to improve their productivity and profitability. It enables farmers to sell their products online and farmers can purchase tools and seeds directly from seller. Farmers can view labours profile and they can hire labours.

* 1. **Definitions, Acronyms and Abbreviations:**
* **SRS:** Software Requirements System
* **OS:** Operating System
* **PHP:** PHP: Hypertext Preprocessor
* **GUI:** Graphical User Interface
* **PC:** Personal Computer
* **MB:** Mega Bytes
* **RAM:** Random Access Memory
* **MySQL:** MySQL database Server
  1. **References:**
* [www.w3schools.com](http://www.w3schools.com)
* [www.tutorialspoint.com](http://www.tutorialspoint.com)
* [www.stackoverflow.com](http://www.stackoverflow.com)
* www.highcharts.com
* Web Database Applications with PHP and MySQL By Hugh E. Williams, ‎David Lane
* An integrated approach to Software Engineering By Pankaj Jalote
  1. **Overview:**

This SRS will allow for a complete understanding of what is to be expected of the “iAgro” web application to be constructed. The clear understanding of the “iAgro” System and its functionality will allow for end users and will be used for the development of the future stages of the project. This system helps us to manage the records according to his requirements.

1. **Overall description:**

This section of the SRS describes all general factors of the product and its requirements.

* 1. **Product Perspective:**

In this project the farmers can sell their products online and the buyer can purchase the seeds and products through online. Buyer can send purchase request to check the quality of the product. The Payments will be received from the seller once the product delivered to the seller. The customers can buy products and equipments in this project. The article and blogs section helps farmers to improve their productivity and profitability. Administrator can view and print all kinds of reports.

* 1. **Product Features**:

This product has following features:

* The farmers can sell their productions online and the buyer can purchase various agricultural products online. Buyer can send purchase request to check the quality of the product.
* After collecting all the farm produce from the farmers, it should be sold to the wholesaler/retailer. This module covers these entries and the charge details also should be entered. The Payments will be received from the wholesaler/retailer once the product delivered to them.
* There are 4 types of users: Customer, Farmers, Workers, and Administrator. The login id and password must be required to login the system.
* The article and blog section helps farmers to improve their productivity and profitability.
* Administrator can view and print all kinds of reports.
  1. **User classes and characteristics:**

There are 4 kinds of users for the proposed system.

* **Administrators:**

Administrators are the ones who can add or administer the categories for the products, and administers the all website information’s. Administrator has full privilege of the website.

* **Sellers:**

Sellers are the farmers and they can sell their productions through online after the registration. After the registration the farmers can login to the system by entering login id and password.

* **Customer:**

Customers can buy products through online. The customer can send purchase request to check the quality of the products.

* **Worker:**

Workers can receive various work requests from multiple farmers and they can also reject or approve a request depending upon their interest.

* 1. **Design and implementation constraints:**
* The developed system should run under any platform (Unix, Linux, Mac, Windows etc.) that contains a web browser which supports PHP, JavaScript and AJAX.
* Internet connectivity is required to send mails.
* The user who is accessing the system should be authorized.
  1. **Assumptions and Dependencies:**
* The users should have basic knowledge of the computers. They must be trained well to handle the features provided by this system.
* Some of the details are required to be entered by the user and may not be generated automatically.
* Administrator is created in the system already.
* Roles and tasks are predefined.

1. **Specific requirements:**
   1. **External Interface Requirements:**
      1. **User Interfaces:**

Each part of the user interface intends to be as user friendly as possible. The fonts and buttons used will be intended to be very fast and easy to load on web pages. The pages will be kept light in space so that it won’t take a long time for the page to load.

* + 1. **Hardware Interfaces:**
* **Operating System:** Unix, Linux, Mac, Windows etc.
* **Processor:** Pentium or Higher.
* **RAM:** 312MB or Higher.
* 14”monitor
* Keyboard and mouse
  + 1. **Software Interfaces:**
* **Development tool:** PHP : Hypertext Preprocessor, JavaScript, Ajax
* **Scripting server:** Apache server
* **Data Base server:** MySQL
* **IDE:** Adobe Dreamweaver CS6.0
  + 1. **Communication Interfaces:**

Internet connection is required.

* 1. **Functional Requirements:**
     1. **Login module:**

In this module, the customer, seller, worker and the admin can login to the system by entering login id and password. The system opens main account page after the login.

* + 1. **Customer module:**

The customer can register to the website by entering profile details. The customer can purchase products which are uploaded by administrator. They can also send purchase request for purchasing farm produce which is uploaded by farmers. After quality test and price quotation, the customer can approve or reject the purchase request.

* + 1. **Seller module:**

The farmers are the sellers where they can sell their productions online. The system will display farm produces in the main page of the website.

* + 1. **Worker module:**

This module is for labours where they can register by entering their profile and experience details. The farmers can hire farm labourers in this module.

* + 1. **Dashboard module:**

Dashboard module is for administrator and employees. In the dashboard module, admin has complete settings of the website. Employees can manage all kinds of records.

* + 1. **Article module:**

In the article module, employees or admin can post news and blogs. This article module is helpful for farmers. The farmers can view the article by browsing article menu.

* + 1. **Category module:**

In this module, the administrator can create different types of categories. The system has three types of categories: i.e. Farm Produce, Agricultural Machinery & Tools, and Article types.

* + 1. **Location module:**

This is the master page where admin can add country, state, city.

* + 1. **Products module:**

This website sells two kinds of products. Admin or employees can sell products directly and it has another option where farmers can sell their productions online.

* + 1. **Billing Report:**

The system generates billing after purchasing the product. The system calculates total cost automatically. In the billing report, it displays customer contact details, billing details, and purchased product information.

* 1. **Document conventions:**

The format of this SRS is simple. Bold face and indentation is used on general topics and or specific points of interest. The remainder of the document will be written using the standard font. New Times Roman

* 1. **Intended users and Reading suggestions:**

This document is intended for software developers, document writers and for general discussions on the implementation decisions regarding the software.

* 1. **System features:**

The coding is done with following characteristics in mind:

* Ease of design to code translation
* Code efficiency
* Memory efficiency
* Response time
* Maintainability
* Security
* Simple ease to understand code
* Efficient and consistent logic

1. **Other non-functional Requirements:**
   1. **Performance Requirements:**

Performance requirements define acceptable response times for system functionality.

* The system is supposed to be having good memory space and RAM should be Above 256 MB preferably.
* The sound card and graphics card will have to be of good quality and capacity.
* The load time for user interface screens shall take no longer than three seconds.
* The log in information shall be verified within three seconds.
* Queries shall return results within three seconds.
  1. **Safety Requirements:**
* In case the customer forget their password, they can recover the password in the Forgot Password panel
* The password stores in the database in the format of encrypted password.
  1. **Security Requirements:**
* Only authenticated users can access this system.
  1. **Software quality attributes:**
* **Reliability:**

This system is designed to have very simple database just to cater the exact need of “iAgro”. It is tested for all the constraints at development stage.

* **Availability:**

This system will only available till the system on which it is installed is running.

* **Security:**

This system is provided with authentication without which no user can pass. So only the legitimate users are allowed to use the application. If the legitimate users share the authentication information then the system is open to outsiders.

* **Maintainability:**

There is maintenance required for the website. The database is provided by the Administrator as well as the end-use.

* **Portability:**

The system works anywhere with the internet connection.

1. **Other requirements:**

None