**Software Requirements Specification**

**for**

**Fruit supply chain Management System**

**Version 1.0 approved**

**Prepared by :**

**1.Bhingaradiya Zalak R. 2.Bhensdadia Rahil R.**

**Computer Engineering Department, sem:4;C1**

**Date: 12/12/2019**

**Table of Contents**

[**Introduction**](#_1fob9te) **4**

[**Purpose**](#_3znysh7) **4**

[**Document Conventions**](#_2et92p0) **4**

[**Intended Audience and Reading Suggestions**](#_tyjcwt) **4**

[**Product Scope**](#_3dy6vkm) **5**

[**References**](#_1t3h5sf) **5**

[**Overall Description**](#_4d34og8) **5**

[**Product Perspective**](#_2s8eyo1) **5**

[**Product Functions**](#_17dp8vu) **6**

[**User Classes and Characteristics**](#_3rdcrjn) **6**

[**Operating Environment**](#_26in1rg) **7**

[**Design and Implementation Constraints**](#_lnxbz9) **7**

[**User Documentation**](#_35nkun2) **7**

[**Assumptions and Dependencies**](#_1ksv4uv) **7**

[**External Interface Requirements**](#_44sinio) **7**

[**User Interfaces**](#_2jxsxqh) **7**

[**Hardware Interfaces**](#_z337ya) **8**

[**Software Interfaces**](#_3j2qqm3) **8**

[**Communications Interfaces**](#_1y810tw) **9**

[**System Features**](#_4i7ojhp) **9**

[**System Feature 2 (and so on)**](#_3whwml4) **14**

[**Other Nonfunctional Requirements**](#_2bn6wsx) **14**

[**Performance Requirements**](#_qsh70q) **14**

[**Safety Requirements**](#_3as4poj) **14**

[**Security Requirements**](#_1pxezwc) **14**

[**Software Quality Attributes**](#_49x2ik5) **14**

[**Business Rules**](#_2p2csry) **14**

[**Other Requirements**](#_147n2zr) **15**

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

## Purpose

*<Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the scope of the product that is covered by this SRS, particularly if this SRS describes only part of the system or a single subsystem.>*

*The following SRS doc. Is about “Fruit Supply chain management system”.The system is specific to task related to the scheduling and undertaken of the supply processes by Large scale fruit supplying organization.*

*This project is a system for complete digital management system of the organization.*

## Document Conventions

*<Describe any standards or typographical conventions that were followed when writing this SRS, such as fonts or highlighting that have special significance. For example, state whether priorities for higher-level requirements are assumed to be inherited by detailed requirements, or whether every requirement statement is to have its own priority.>*

*The document doesn't follow any specific convention.*

## Intended Audience and Reading Suggestions

*<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers. Describe what the rest of this SRS contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>*

*The intended audience for this document are as follows:*

*1.System Designers*

*2.The Project Manager*

*3.The Software Developer*

*4.The Testing Department*

*5.The end user's*

*6.The training team*

*7.The software management team*

*Coming forward this document contains all the particulers collected from the clients requirement and all the required specifications for the completion of the project.*

*The Audience is suggested to follow the sequence of the document to get complete knowledge of the project. For time constraints reader is allowd to jump directly to concerned topic by reffering it from Table of content.*

## Product Scope

*<Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals. Relate the software to corporate goals or business strategies. If a separate vision and scope document is available, refer to it rather than duplicating its contents here.>*

*This purpose of the software is to provide rapid transmission and processing of supply chain data and decreasing the workload on the field managers.The software is designed in a way to be a handy tool for all the employes concerned with the process of supply chain of fruits in the organization.*

*The major impact of this software will be on the speed of interaction and processing of the organizations employee internally and also with the suppliers and clients.*

*This software will increase the productivity of all the resources by giving information at one glance to the decision makers and implementors .This will lead to decrease in product wastage and increase the profit margines of organization.This also lead the possibilities of higher returns to suppliers which are Farmers in our case.*

## References

*<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. Provide enough information so that the reader could access a copy of each reference, including title, author, version number, date, and source or location.>*

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

# Overall Description

## Product Perspective

*<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. A simple diagram that shows the major components of the overall system, subsystem interconnections, and external interfaces can be helpful.>*

*This project is a new self-contained product for the process of supply-chain management.This software arised from the need for integrating the technology and the data of the process for transparancy and its utilization.*

## Product Functions

*<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary (such as a bullet list) is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, is often effective.>*

*This product will provide all the required functionality to its end users.*

*The functionality for the field staff will be as follows:*

*-Function for registring to the platform*

*-secure login-logout with username and password*

*-place the supply request with date of supply*

*-display the list of supply sorted in order of dates*

*-send the edit request to administerator*

*The functions for administerators will be as follows:*

*-Register new administerator*

*-secure login-logout with username and password*

*-display the list of products available in the warehouse*

*-accept or reject the supply request for fruits with respect to storage availability and demand*

*-send notifications to all the other users*

*The functions for buyers is as follows:*

*-Register new buyer*

*-secure login-logout with username and password*

*-navigate through the list of availabel products*

*-select products and their quantity*

*-review the order*

*-place order*

## User Classes and Characteristics

*<Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the pertinent characteristics of each user class. Certain requirements may pertain only to certain user classes. Distinguish the most important user classes for this product from those who are less important to satisfy.>*

*1.Administeration staff*

*-this user has the highest previlages with respect to data access*

*2.Field Stff*

*-this user can generate requests for data additions and*

*3.Buyers*

## Operating Environment

*<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.>*

## Design and Implementation Constraints

*<Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer’s organization will be responsible for maintaining the delivered software).>*

## User Documentation

*<List the user documentation components (such as user manuals, on-line help, and tutorials) that will be delivered along with the software. Identify any known user documentation delivery formats or standards.>*

## Assumptions and Dependencies

*<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>*

# External Interface Requirements

## User Interfaces

*<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed. Details of the user interface design should be documented in a separate user interface specification.>*

*Standard layout on every page:*

*-every page will contain a menu option through which users can navigate to different pages like:*

*~dashboard*

*~log out*

*~history*

*~upcoming orders/tasks*

*~view profile*

*-there will be a dashboard for every user which will provide the activity to be performed at that day*

*Layout for field staff:*

*-the staff will be able to see the daily tasks with details required to perform that task*

*-for transport staff,the dashboard will display the list of collection or delivery assigned to them*

*-they can tickmark the task they have completed.*

*-the collection managers can generate collection request*

*-they can also generat the edit request for the previously generated requests.*

*-they can also have a look to history of the tasks they have completed.*

*Layout for buyers:*

*-the buyer will be able to look at the products without logging in but they need to login while placing order*

*-the buyers can select the fruits and quantity they want and specify the date of delivery and then click on buy button to process the order forward on completion the user will get a notification on the screen along with the order summory .*

*-this feature can also take a complete weeks scheduled order.*

*Layout for storage Administrators:*

*-the dashboard for admin.. will show the fruits in available inventory and their expirey dates and available space*

*-there will be a menu option to view the list of pending supply request which admon.. can accept or reject*

*-admin.. can also check the task of field staff remaining for the day*

## Hardware Interfaces

*<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware, and communication protocols to be used.>*

## Software Interfaces

*<Describe the connections between this product and other specific software components (name and version), including databases, operating systems, tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Refer to documents that describe detailed application programming interface protocols. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.>*

## Communications Interfaces

*<Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on. Define any pertinent message formatting. Identify any communication standards that will be used, such as FTP or HTTP. Specify any communication security or encryption issues, data transfer rates, and synchronization mechanisms.>*

# System Features

*<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>*

.

*<Don’t really say “System Feature 1.” State the feature name in just a few words.>*

4.1.1 Description and Priority

*<Provide a short description of the feature and indicate whether it is of High, Medium, or Low priority. You could also include specific priority component ratings, such as benefit, penalty, cost, and risk (each rated on a relative scale from a low of 1 to a high of 9).>*

4.1.2 Stimulus/Response Sequences

*<List the sequences of user actions and system responses that stimulate the behavior defined for this feature. These will correspond to the dialog elements associated with use cases.>*

4.1.3 Functional Requirements

*<Itemize the detailed functional requirements associated with this feature. These are the software capabilities that must be present in order for the user to carry out the services provided by the feature, or to execute the use case. Include how the product should respond to anticipated error conditions or invalid inputs. Requirements should be concise, complete, unambiguous, verifiable, and necessary. Use “TBD” as a placeholder to indicate when necessary information is not yet available.>*

*<Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.>*

REQ-1:

REQ-2:

R.1 Manage user .

Description: It includes all activities which can user perform.

R.1.1 User can login.

Input: Username and Password.

Output: Display the dashboard of his/her account.

R.1.2 User can logout.

Input: User selection.

Output: Logout from current page.

R.1.3 Display profile.

State: User is already logged in.

Input: User selection.

Output: Display profile of his/her account.

R.1.4 Register new user.

Description: User can create new account and can register him/her self by entering some necessary details.

Input: User selection and name,address,mo.no,create

password,email id.

Output: Log in page.

R.1.5 Edit Profile.

Description:Already registered users can edit it’s own profile.

R.1.5.1 Display current details.

Input: User selection.

Output: Display the current profile details.

R.1.5.2 Update details.

Input: Enter the details which he/she want to update.

Output: Updated details.

R.1.6 Delete User

Input: Userid or Username.

Output: Message of successfully deletion.

R.2 Mange order.

Description: Administrator and buyers can manage orders.

R.2.1 Make Orders.

Description:Buyers can place their orders according to date and

quantity according to availability.

Input: Fruit category, quantity, date of delivery.

Output:Display the page of the status of order.

R.2.2 Add or Cancel order.

Description: Buyer can add or cancel any order by only one

simple click.

Input: User selection.

Output: Appropriate message of confirmation or regrets to

the buyers and administrator both.

R.2.3 Check status of order.

Description: Buyers and admin both can check the current status of

orders.

Input: User selection and order id.

Output:Display the current status of order including necessary

details.

R.2.4 View history of orders.

Description:Buyers and admin both can see the history of orders.

Input: User selection.

Output:Display the history of orders.

R.3 Manage delivery.

Description:Admin can add the order’s delivery list which is delivered to

buyers by delivery-mens .both admin and delivery mens

can update the status of delivery.

R.3.1 Add new delivery.

Input: delivery details like destination,source,quantity.

Output: Receipt is display.

R.3.2 Cancel delivery.

Input: User selection.

Output: Display updated list of delivery.

R.3.3 Edit status of delivery.

Input: Enter details which you want to update.

Output: Get details of updated delivery receipt.

R.3.4 View delivery and history.

Input: User selection.

Output: Display list of deliveries.

R.4 Manage supply.

R.4.1 Add supply request.

Input: Fruit type,quantity,source,destination.

Output: Display appropriate message with order id.

R.4.2 cancel supply request.

Input: User selection.

Output: Display updated list of supply orders.

R.4.3 Edit supply details.

Input: Enter details which you want to update.

Output: Get details of updated order.

R.4.4 View order and history.

Input: User selection.

Output: Display list of orders.

R.5 Manage inventory.

R.5.1 view inventory.

Input:Admin selection.

Output:List of stored products and date wise quantity will be

displayed.

R.5.2 view available products.

Input:User selection.

Output:List of fruits with their quantity will be displayed which are

currently in the warehouse.

R.5.3 Add new inventory.

Input:New category details.

Output:Updated quantity list of warehouse inventory.

R.5.4 Add out stock.

Input:Order-id.

Output:The decremented(updated) list of products will be

displayed.

R.6 Manage transaction.

Description:All transactions handling of orders , supplies and bill

generation.

R.6.1 Add transaction.

Input: Details of transaction.

Output:display List of transactions according to date.

R.6.2 Cancel transaction.

Input:Transaction id.

Output:display updated list of transaction.

R.6.3 change status of transaction.

Input:Details which want to update.

Output:Updated status transaction list will be displayed.

R.6.4 view history.

Input:User selection.

Output:Display the history of transaction.

R.6.5 Generate bill

Input:Order id or supply id.

Output:Generated bill will be displayed.

## System Feature 2 (and so on)

# Other Nonfunctional Requirements

## Performance Requirements

*<If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.>*

## Safety Requirements

*<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product’s design or use. Define any safety certifications that must be satisfied.>*

## Security Requirements

*<Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements. Refer to any external policies or regulations containing security issues that affect the product. Define any security or privacy certifications that must be satisfied.>*

## Software Quality Attributes

*<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.>*

## Business Rules

*<List any operating principles about the product, such as which individuals or roles can perform which functions under specific circumstances. These are not functional requirements in themselves, but they may imply certain functional requirements to enforce the rules.>*

# Other Requirements

*<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>*

**Appendix A: Glossary**

*<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>*

**Appendix B: Analysis Models**

*<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams*.>

**Appendix C: To Be Determined List**

*<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>*