Software Engineering Mini Project

Farmers Buddy

Software Requirements Specifications

Version 1.0

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1. Introduction

1.1 Purpose

India is an agricultural country. There is a need to inculcate scientific agricultural practices among our farmers. Farmers buddy is an online portal which aims to provide the farmers and agricultural students of India, with a platform to access and share information regarding various agricultural practices and schemes.

1.2 Scope

Farmers Buddy is an online web portal which offers the following features -

- Individual profile management for all kinds of users with secure access to data 24x7.
- Information about various government loan and insurance schemes to farmers
- Information about present crop prices in major Indian markets(Mandi)
- Private firms and Multinational companies can upload the products offered by them.
- Information about trainings held for farmers and also request for training
- Officers can access various reports related to farmers details
- Farmers/Students can get their queries answered by Agricultural Officers
- Details of Soil/Crop/Location/Fertilizer analysis will be made available to Farmers

1.3 Definitions acronyms and Abbreviations:

- **Personal Details** : The details of farmer or student such as Name, address, Phone number, Date of Birth, etc
- **HTML** : Hypertext Mark-up Language is a mark-up language used to design static web pages.
- **J2EE** : Java 2 Enterprise Edition is a programming platform—part of the Java Platform—for developing and running distributed multitier architecture Java applications, based largely on modular software components running on an application server.
- **MySQL**: MySQL is an open-source database management system of Sun Microsystems that delivers a flexible and cost-effective database platform to build robust on demand business applications
- **Apache Tomcat** : Apache Tomcat is a Web-Server along with an application container that supports the J2EE standards.

- **HTTP** : Hypertext Transfer Protocol is a transaction oriented client/server protocol between web browser & a Web Server.
- **HTTPS** : Secure Hypertext Transfer Protocol is a HTTP over SSL (secure socket layer).
- **JSP:** Java Server Pages used to create dynamic web-content
- **Admin :** Refers to administrator of the system.

1.4 References:

- IEEE SRS Format - http://en.wikipedia.org/wiki/Software_Requirements_Specification
- CT Arrington. *Enterprise Java with UML*. OMG Press.
- Grady Booch, James Rumbaugh and Ivar Jacobson. *The Unified Modeling Language Reference Manual, Second Edition*. Addison-Wesley

1.5 Technologies:

- ✓ J2EE: Application Architecture
- ✓ MySQL : Database
- ✓ Apache Tomcat: Web Server
- ✓ Rational : Design Tool
- ✓ AJAX: Webpage Development
- ✓ Eclipse : development tool
- ✓ iBATIS : ORM solution
- ✓ log4j : logging
- ✓ JASPER: Report Generation
- ✓ Struts 2 : J2EE framework

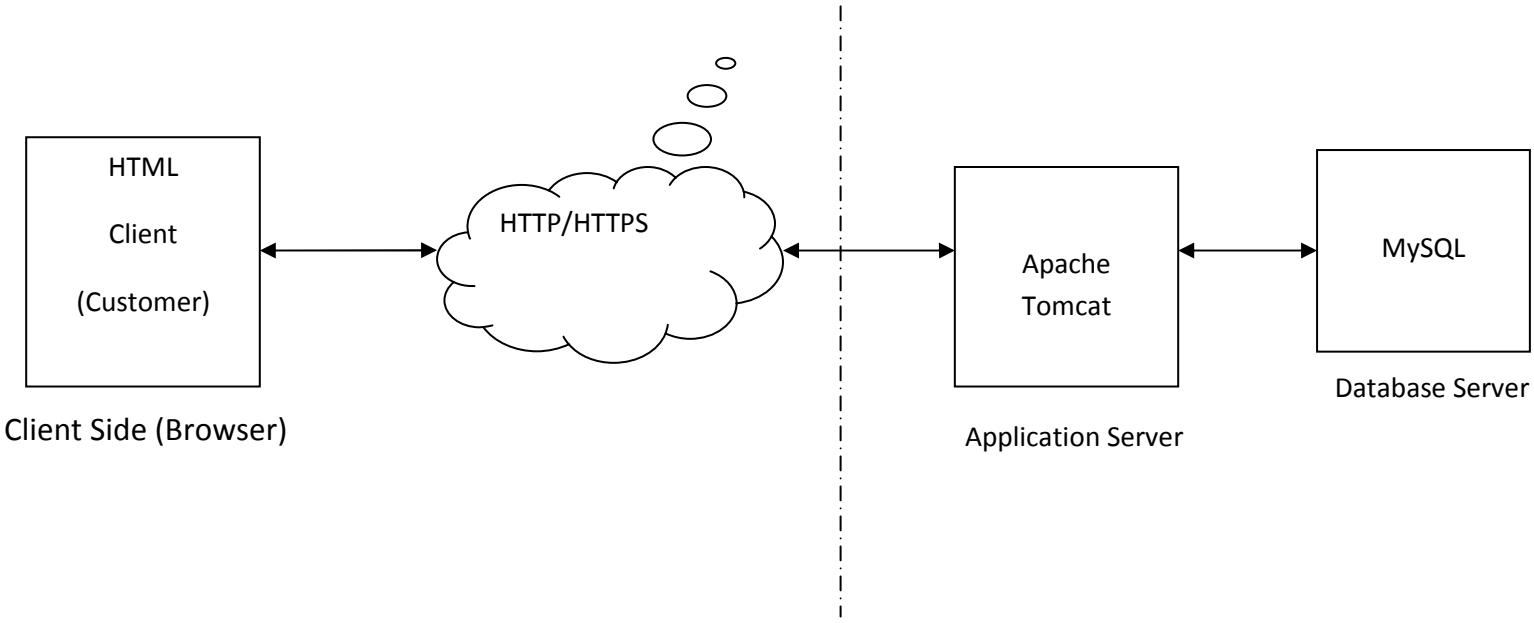
1.6 Overview:

SRS will include two main sections:

- Overall Description will describe major components of the system, interconnection and external interfaces.
- Specific Requirements will describe the functions of actors, their role in the system and constraints.

2. Overall Description

2.1 Product Perspective



The web pages (HTML) on the client-side provide the Graphical User Interface(GUI) to the end user. Communication between customer and server is provided through HTTP/HTTPS protocols.

On the server side Apache Tomcat application server is for J2EE and MySQL database is for storing the information.

2.2 Software Interface

- End User : Web browser(any), Operating System(any)
- Web Server: Apache Tomcat application server , Operating System(LINUX / Windows)
- Database Server : MySQL, Operating system(LINUX / Windows)

2.3 Product Functions

- Farmer is kept up to date about various products, schemes and market prices
- Farmer, general public or students can contact the local officer for any information
- The students can get real time data regarding agricultural practices.

2.4 User characteristics

In general, all users know how to operate a computer and browse internet. Users have access to computer and internet. Specifically, the various user roles are -

1. Administrator : He is responsible for the proper working of the entire system. He adds agricultural officers and generated reports

2. Agricultural Officer : He adds/updates various details needed for the farmer

3. Farmer/Student : Makes use of the information provided by the portal

- ✓ Officers and administrators have received sufficient training in uploading data and maintaining system.

2.5 Constraints:

- ✓ The whole system is on a single server only.
- ✓ Only HTTP / HTTPS connections are supported.