Software Requirements Specification

for

Continues Integration Pipeline Implementation for Tech11Software

Prepared by

Aswin G SUGUNAN (29)

Jefin Jacob (3)

Nitin Suresh (5)
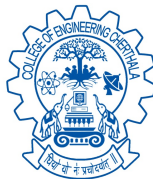
Vishnu Bose (39)

GUIDE :Mrs. Greeshma M G

Remarks of Guide :

Remarks of Project Coordinators:

Contents

Chapter 1

INTRODUCTION

Software development, as we know it today, is a demanding area of business with its fast-changing customer requirements, pressures of an ever shorter timeto- market, and unpredictability of market

1.1   Purpose

Online Voting are simple, attractive and ease to use. It reduces manual efforts and bulk of information can be handled easily.Online Voting System is a voting system by which any Voter can use his/her voting rights from anywhere in the region.

1.2   Document Conventions

As this document is to be viewed by different class of people, to avoid ambiguity and to keep a standard, it has been documented in ieee format. This document have been organized into different sections and each section have been thoroughly analyzed and is presented here.

1.3   Intended Audience and Reading Suggestions

This SRS is intended for the usage by various level of people, such as from a novice, who is skilled with only basic understanding of a computer to high level programmers. This document is created for the use of various people like developers, project managers, testers, users, documentation writers etc. This document gives a detail on what our proposed system is what does it do, how it is implemented, for what it can be used, advantages over the existing systems. This document also specifies the functional and non functional requirements required by the user.

As we already said, this document is created with the intention of understanding this project by people from different levels of qualification and expertise and of different category. For users they need to understand only the services provided to them, so in the srs , they only need to go through introduction, product functions, user documentation, user interfaces and other non functional requirements. Designers need to go only through the interface require-ments, product functions. Thus each category of people needs to proceed only through those section they require. This is achieved through well organizing of this document.

1.4   Product Scope

The scope of the system is that it will use the ID and password created by user to register him/her in the voting site, through this all the details of voter are saved in database. And it will act as the main security to the votes system.

1.5   References

[1]http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true &arnumber=6756265

[2]https://www.electionsonline.com/online-voting-system/

[3]http://www.scribd.com/doc/131737472/Online-Voting-System-SRS#scribd

[4]http://www.slideshare.net/snauriyal1994/online-voting-system-project

Chapter 2

OVERALL DESCRIPTION

2.1   Product Perspective

The software product is a standalone system.Before the election day the system will be used for general purposes such as viewing candidates profiles and past years election results. The system will be made up of two parts, one running visible directly to the administrator on the server machine and the other visible to the end users, in this case the voters, through web pages. The two users of the system, namely the voters and the Election Authority(EA) interact with the system in dierent ways. The election authority congures the whole system according to its needs on the server where the system is running. The voters cast their votes using the web interface provided. These votes are accepted by the system on the server.

2.2   Product Functions

On the EA side, the system can be used to create/update/delete the election details. The EA should be able to specify the dierent attributes it wants for posts/candidates of a particular election instance and voters. The system can function in two modes, namely Normal Interative Mode and Election mode. The system will be in Election Mode, for the purpose of vote polling on the Election Day. Normal Interactive Mode is for accepting registrations,campaigns and the system is available in this mode all te time except Election day.

2.3   User Classes and Characteristics

The users can be divided into two main classes:

The EA :Its primary objective is to conduct elections. The EA has to be a neutral party and should not have any gain/loss from the election results. The EA invites potential candidates to le their nomination for certain posts depending on certain constraints. As explained earlier, the EA decides the classes of voters eligible to vote for a certain post. They should have adequate experience of using a computer to be able to congure the election properly.

The Voters : The voters should have a basic knowledge of how to use a web browser and navigate through web pages. The voters should be aware that they have to keep their user-id and password condential.

2.4   Operating Environment

The server should have Java installed on the machine, along with Javas cryptographic packages. The election server runs on a http server, that is jsp enabled. The browsers through which the voters access the server should have minimal support for cookies and encrypted transactions.

2.5   Design and Implementation Constraints

Even though the system enables voters to poll their vote from any terminal connected to the Internet, the voters should initially contact the election administrators oce to authenticate themselves and establish their user-ids. This constraint is imposed to ensure that only the genuine person is allowed to vote in the elections. Also, it is assumed that only the EA has access to the server that hosts the election.

2.6   User Documentation

- The system users will be provided with a user manual such that they can be familiarized with the product beforehand.

2.7   Assumptions and Dependencies

User side assumptions and dependencies

- PC (Personal Computer) or workstation with GUI.

- A web browser with support for cookies

- Working Internet connection.

Server side assumptions and dependencies

- A web server with GUI, Java and an http server installed .

Chapter 3

EXTERNAL INTERFACE REQUIREMENTS

3.1 User Interfaces

Main Screen:

It will have a login screen. The page will have each category listed clearly, with the selected candidate listed underneath its respective heading. At the very bottom of the page the user should see the "Go Back" and "Submit" buttons.

- Welcome screen

- Creating the Voters Database

- Modify the voters databases

- Delete the Voters database

- Creating the Election Instance

- The Voting on the Voters end

3.2 Hardware Interfaces

As this application can be accessed via internet, only web server is required as a hardware interface to be able to run it. It is assumed that web server is in a secure environment with necessary firewall and network setting done.

3.3 Software Interfaces

The poll server runs on http server that is enabled to handle server pages. It uses a relational database to keep track of the polls, which it connects through standard database connectivity interfaces. In order to run the setup software, the environment needs to have a JVM running on it.

Operating System   : Windows XP

Programming Language   : JAVA/J2EE.

Java Version   : JDK 1.6 & above.

Chapter 4

SYSTEM FEATURES

4.1 Branded Voting Website

This system provides with an exclusive voting website for the election. The voting website is branded with bank logo and colors, is easy to use, works with all browsers, and looks professional. Authentication Methods are User name and passwords and a confirmation code.

4.2 Voter-Verified Audit Trail

Once the electronic ballot has been cast a printable receipt is provided to assure voters that their votes have been recorded as intended. Voter Verified Audit Trail an independent verification system for voting systems designed to allow voters to verify that their vote was correctly, to detect possible election fraud or malfunction, and to provide a means to audit the stored electronic results.

4.3 Functional Requirements

The following are the functional requirements of E-Co-Operative

REQ-1: Member Registration

In order to use the system the voters must register to system. This explains the registration process.

Normal flow of events:

1. Member enters the system homepage.

2. He clicks the "register now" button.

3. The system prompts the application form.

4. He fills in the necessary information related with him in the application form.

5. He sends the request for registration by using "send" button.

REQ-2: Approve Member

This describe how EA will approve the application form of voter and generate the new account to that voter Precondition.

Normal flow of events:

1. EA selects the online voter application form from list.

2. EA checks the information of the applicant a

3. If the the given information is correct

   (a) EA approves the form by pressing "Approve" buton.

   (b) EA generates the new online account to this new voter

   (c) EA prepares the username and password send to member via message.

4. if the given information is not correct EA will inform voter about misinformation via message

REQ-3:Update Voters

This describe how EA updates online voters

Normal flow of events:

1. The system checks online voters with respect to upcoming elections voters list.

2. If the voter exists in the list, the system updates the voter with respect to official the voter information.

3. If the voter does not exist in the list, the system deletes that voter from database.

REQ-4:Login/Logout

This describes how the members log into the system

Normal flow of events:

1. The user enters his login id and password

    (a) If the login and password is valid, a session is opened.

    (b) The OTP password as security.

    (c) The specific page of every user is loaded

    (d) If the login or password is not valid, the login screen is redisplayed with an error message.

2. The user click on the logout button.

    (a) The session is terminated.

    (b) The login screen is displayed.

REQ-5: Voting

1. Display Ballot Paper containing candidates names.

2. Click favorable candidates to register vote.

REQ-6: View Election Results

This describes the process of how the voters view the election results by using the system.

Normal flow of events:

1. He clicks on the election results link.

2. He presses click on button "show results".

3. The system displays the required information according to the selected choices.

REQ-7: Message Generation

This describes the process of how the messages are send to the members.

1. If the membership is verified by admin, then send username and password to the corresponding members mobile number.

2. Send OTP password as security to the corresponding members mobile number.

Chapter 5

OTHER NONFUNCTIONAL REQUIREMENTS

5.1   Performance Requirements

- System login/logout shall take less than 10 seconds.

- Searches shall return results within 10 seconds.

- System shall support simultaneous users.

- System shall give the user a user friendly interface.

5.2   Safety Requirements

- System use shall not cause any harm to human users.

5.3   Security Requirements

- System will use secured database.

- System utilizes OTP system for security.

5.4   Software Quality Attributes

- Maintainability.

- Any updates or defect fixes shall be able to be made on server-side.

- Computers only without any patches required by the user.

5.5   Business Rules

- Users should be able to see the list of candidate list and details.

- Only the administrator is capable of deleting the accounts of the users.

- Users should be able to access their accounts anytime.

Chapter 6

Other Requirements

To implement this system, we require a storage area in server side which requires investment. This requires the need of a high speed network as to support simultaneous users. As everything is done online, it gives security and removes the chances for corruption from outside. The system can be accessed from mobile systems also, giving the users the facility to register their vote from anywhere they require.

Chapter 7

Glossary

EA   : Election Authority

OTP   : One Time Password

OVS   :   Online Voting System

SRS   : Software Requirements Specification