Software Requirements Specification Documents
For Online Document (specific to NBA, NAAC related) Maintenance System

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Under the guidance of :
Dr. SMRITI KUMAR SINHA

SUBMITTED BY:
HRISHIKESH GOGOI
CSB19030

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ABSTRACT

In an information intensive project, the document maintenance and project maintenance are closely connected together. The project result is usually a number of documents describing the product to be developed, re-engineered or delivered. When the organization can define the output documents and necessary documents in different intermediate steps, the progress of the project can be tracked using the document maintenance system.

Specific tools and techniques for manipulating and communicating information on building projects have been developed, which are the core of this chapter. In the debate on the principles of document maintenance systems the concept of information handling will be explored.

1. INTRODUCTION

1.1 Purpose

The purpose of this document is to build a web based application for government authorities so as to maintain a common platform for sharing NAAC or NBA reports of institutions affiliated under them.

The objective of this process is as follows:

1) To develop a full stack website for government authorities to share notifications to the affiliated universities and in response to it the universities will be able to share their reports.
2) Also enhance the feature for feedback by the government officials for the universities.
3) The project should be very easy to use enabling even a novice person to use it.

1.2 Document Conventions

No document conventions are being used at this time.

1.3 Intended Audience and Reading Suggestions

Government authorities and institution representatives are the main target audience for this project.

This document is to be read by the development team and all other stakeholders of this web-app.

1.4 Project Scope

The name of the application is Online Document Maintnance System. The application will be headed by a single admin who intends to be the head of the government officials for the very sector. The admin will be able to create sub sectors under

him such as NAAC and NBA sector. The sub sectors will be again headed by different admins who will be in incharge of the given sectors respectively. The admins will be able to post notifications demanding reports to their affiliated universities and in response to it the universities will be able to share their reports in given specified places. Also enhance the feature for feedback by the government officials for the universities.

Also with this I will have to incorporate the file selection feature which can help to share important materials so that it can stay on the server for a long period of time.

2. OVERALL DESCRIPTION

2.1 Product Perspective

This application would be created with the motivation to simplify the task of universities and government officials to interact at a common platform to share reports and notifications. The application will be led by a single administrator who will be in charge of all government officials in the sector. The administrator is in a position to build sub-sectors under him, such as NAAC and NBA. Once again, the sub-sectors are headed by various managers, each responsible for the sectors. The admins can post notifications requesting reports to their affiliated universities and universities can share their reports in specific locations in response to these notifications. Additionally increase the feedback feature for university government officials.

2.2 Product Features

These are the features of our application :

- Upload files easily
- Set notifications
- Login features
- Send feedback
- Maintain documents
- Create sectors such as NBA, NAAC, etc.
- Create sector admins

Initially I am working on these following features. If time permits then we will focus on the following features such as public and private communication between universities and government officials and also some required features according to the need of the future.

2.3 Target Audience

This app is intended for Government authorities and institution representatives are the main target audience for this project.

This document is to be read by the development team and all other stakeholders of this web-app.

2.4 Addressing the problem

The main issue with our physical document maintenance system is that we either did not find or lost the required file. When a user is finished with a document, it is stored in a physical document maintenance system. The majority of users disregard the organizational rules for filing documents in the records center file rooms. Users have a tendency to hoard information once they have obtained the documents necessary for their activity. At the most, they will complete all of the records associated with a project at the end of the activity. There is no added value in request, receipt, and disposition systems for documents that are not accessible in file folders. Furthermore, the physical document maintenance system is paper-based, resulting in non-traceability, possible loss, and information inaccessibility. To address this issue, I plan to develop a web-based application that will allow me to store these documents digitally in a unified platform. This platform will be available to the government as well as affiliated institutions.

2.5 Deliverables

The end product will be a full stack web page with all the essential features that can be accommodated in it. This application would be developed with the goal of making it easier for universities and government officials to interact on a single platform to share reports and notifications. The application will be led by a single administrator who will oversee all government officials working in the sector. The administrator has the authority to create sub-sectors such as NAAC and NBA. Again, the

sub-sectors are led by different managers, each of whom is in charge of a specific sector. Administrators can send notifications to their affiliated universities requesting reports, and universities can share their reports in specific locations in response to these notifications. Additionally increase the feedback feature for university government officials.

2.6 Timeline

SRS Document preparation: (05-10) April.

- Revision of SRS Preparation of SE
- SRS Document creation

Database designing: (10-20) April.

- Revision of DB designing.
- Database design and diagrams design.

Design Document: (20-30) April.

- Design document preparation.

Frontend Coding: yet to be done

- Front end designing.
- Front end Coding
- Front end testing.

Backend Coding: yet to be done

- Backend designing.
- Backend coding
- Connecting with the front end.

Testing and Submission: yet to be done

- Testing
- Preparing for submission
- Submission.

2.7 Operating Environment

The web-app operates on any system irrelevant of the underlying operating system. The only requirement is a web-browser and internet connectivity.

2.8 Constraints

The system must be connected to the internet. Users must have a valid email id and an internet browser.

2.9 Project Model

The project will be carried out by using an iterative waterfall model. The iterative waterfall model provides feedback paths from every phase to its preceding phases The iterative waterfall model is a particular implementation of a software development life cycle (SDLC) that focuses on an initial, simplified implementation, which then progressively gains more complexity and a broader feature set until the final system is complete.

3. TECH STACK REQUIREMENTS

I plan to use the following technologies in my project :

3.1 HTML/CSS/JS

The HyperText Markup Language, or HTML is the standard markup language for documents designed to be displayed in a web browser.Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification. JavaScript is high-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions. I intend to use it for the frontend purpose.

3.2 Bootstrap

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and JavaScript-based design templates for typography, forms, buttons,

navigation, and other interface components. User Interface interacts with the smart contracts through bootstrap.

3.3 SQL

SQL stands for Structured Query Language. It is designed for managing data in a relational database management system (RDBMS). It is pronounced as S-Q-L or sometimes See-Qwell. SQL is a database language, it is used for database creation, deletion, fetching rows, and modifying rows, etc. Details and other files would be stored in the database.

3.4 PHP

PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages.PHP is a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP. PHP 7 is the latest stable release. I intend to use PHP for my API calls.

4. FUNCTIONAL REQUIREMENTS

4.1 Login Admin Accounts

This Feature will enable the overall admin to login to their own account so as to create the structure of the system.

4.2 Creating structure

This Feature will enable the admin to create their subsector admins after they have logged in using valid email and password. After this admin can assign sub sectors admins.

4.3 Creating Sub sector Admin Account

This Feature will enable the sub sector admins whose access was granted by the overall admin to create their accounts so that they can take charge of the sub sectors like NAAC, NBA, etc. The sub sector admins will have to sign up with their valid email id and a valid as per format password.

4.4 Sharing Notification

This Feature will enable both the overall admin and sub sector admins to share notifications as per their sectors.

4.5 Client Login

This Feature will enable the affiliated institutions to create their accounts in the specified domain sectors.

4.6 Submitting Reports

This Feature will enable the affiliated institutions to upload documents as-signed to them by the officials.

4.7 Checking Reports and Sharing Feedback

This Feature will enable both the overall admin as well as sector admins to download and check the reports and share feedback.

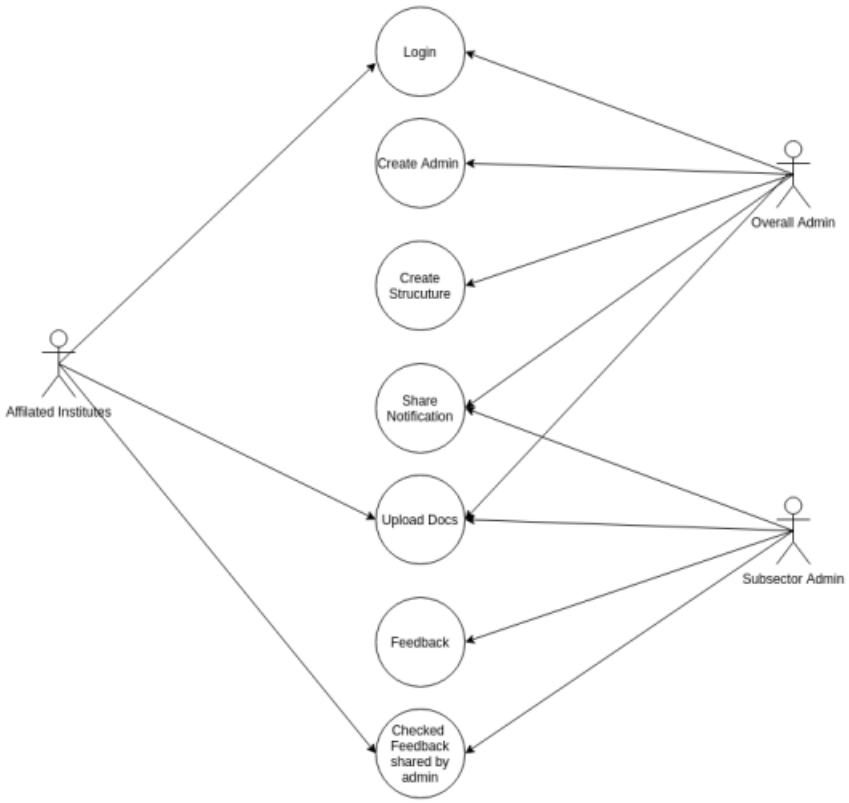
4.8 Viewing Feedback

This Feature will enable affiliated institutions to check the feedback shared with them.

4.9 Maintaining Reports

This Feature will enable the overall admin to maintain the reports of all the sectors under him/her. Each sector admin will be able to maintain reports of their particular domain keeping privacy among the domains. At the end, each institute can check their respective reports and feedback share with them.

4.10 Overall view



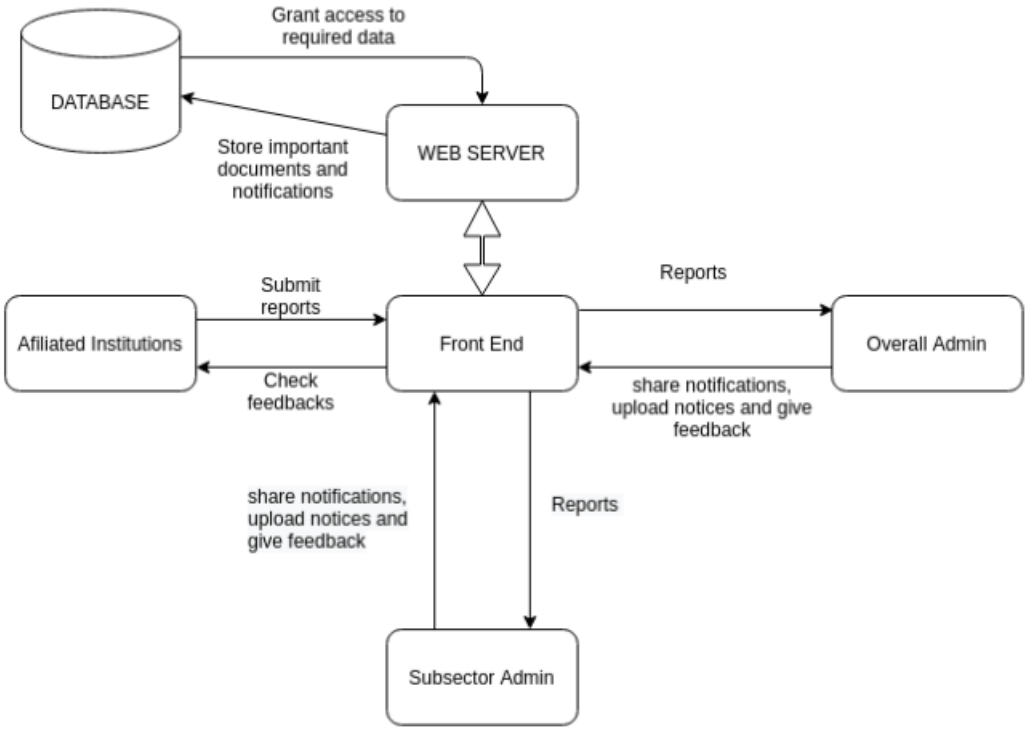
5. NON-FUNCTIONAL REQUIREMENTS

5.1 Performance Requirements

The steps involved to perform the implementation of the application is listed below :

5.1.1 Logical Structure of the application

Below is the diagrammatic representation of the working of the software. The implementation of the software should follow a similar structure, the tech stack that shall be used in each module is listed in the *tech stack requirement* section.



5.1.2 Normalization of Database

The basic objective of normalization is to reduce redundancy which means that information is to be stored only once. Storing information several times leads to wastage of storage space and increase in the total size of the data stored. If a database is not properly designed, it can give rise to modification anomalies. Modification anomalies arise when data is added to, changed, or deleted from a database table. Similarly, in traditional databases as well as improperly designed relational databases, data redundancy can be a problem. These can be eliminated by normalizing a database.Normalization is the process of breaking down a table into smaller tables. So that each table deals with a single theme. There are threedifferent kinds of modifications of anomalies and formulated the first, second and third normal forms (3NF) is considered sufficient for most practical purposes. It should be considered only after a thorough analysis and complete understanding of its implications.

5.1.3 Performance and Robustness

The performance of the application will depend on the fact of uploading files by multiple clients at a time. This is tackled using the concepts of multi-threading in the application.

5.1.4 Privacy and Security

- The data flow in the structure should be secure and less prone toattacks.
- Developers are advised to use end to end encryption between server side and client side.
- Inter App communication should be secure, other apps shouldn't be able to access the private data of the software.
- Data abstraction should be implemented.
- The developers may write the codes in an object-oriented manner as far as possible. However, the developers are free to write the code in whatsoever manner as per their choice and convenience.
- The software must not send data and information to any third party.
- Monthly security patches of the software should be provided by
- the developing organisation.

6. GOALS OF IMPLEMENTATION

- Improving end user productivity
- Implementing document management procedures and tools
- Providing a unanimous for the innovators to better share information
- Providing distributed environment for better integrity and immutability
- Providing accounting services to overall admin to create, delete and manage user accounts and maintain the data effectively
- Providing secure and reliable authentication services
- Manage all details of the author/user who have registered and send appropriate details about the intellectual property to the others.
- Providing services to control visibility of posts.

7. External Interface Requirements

7.1 Hardware Interfaces

Operating System : Windows, Mac, Ubuntu

Browser : By default, the generated project supports all modern browsers. Support for Internet Explorer 9, 10, and 11 requires polyfills.

Internet Connectivity : Yes

7.2 Communication Interfaces

The goal of this application would be to make it easier for universities and government officials to interact on a single platform to share reports and notifications. The application will be overseen by a single administrator who will be in charge of all government officials working in the sector. The administrator has the authority to establish sub-sectors like NAAC and NBA. Again, each sub-sector is led by a different manager, who is in charge of a specific sector. Administrators can send notifications requesting reports to their affiliated universities, and universities can share their reports in specific locations in response to these notifications. Additionally increase the feedback feature foruniversity government officials.