SE 201.3 - Systems Analysis and Design

Group Assignment

Requirement Document
**Designing the student information system of
CP/H/ Dhammaloka Vidyalaya, Badupola, Ginigathhena**

Submission Date: March 19, 2021

Group Members

1. 18101 - A.M.N.M. ABEYKOON

2. 18207 - G.P.S.A. KRIYANJI

3. 18209 - W.A.O.K.W. ARACHCHI

4. 18407 - W.H.D. CHARUKA

5. 18426 - M.D.A. SUBHASIRI

6. 18427 - J.S. HALLOLUWA

TABLE OF CONTENTS

1. Introduction

The student information system of CP/H/ Dhammaloka vidyalaya is the proposed system for manage students related data. The system is proposed to develop as web-based application that contains central database and a web portal that allows authorized stakeholders (School management staff and Teachers) to retrieve data when required. And also, the system is capable of generating reports and relevant documents using stored data in the database.

The main expectation of this document is presenting the requirements that were identified during the requirement gathering phase and the methods used to gather those requirements. Accordingly, the requirements were mentioned under three categories as business requirements, user requirements, and system requirements in further sections in this document.

Summary

Institute	CP/H/ Dhammaloka Vidyalaya, Badupola, Ginigathhena (Central Province)
School type	2
No of students	150
Staff	21
Tentative date to launch the system	2021.05.01
Proposed budget	25000LKR
Deliverables.	A web-based software system with a central database and web portal that allows stakeholders to access and maintain students' data from anywhere through internet and from any device using specially designed GUIs each task.

2. Requirements Elicitation Methodology

As the number of staff members in the institute is limited in to 22 and as not all the staff members are not involving with the system the number of stakeholders is less. Selecting key users of the system and interviewing them for gathering relevant information and requirements was identified as the best way for the selected scenario in comparison to other requirement elicitation methodologies.

Considering the above factors, the interview method was selected as the requirements elicitation technique. Accordingly, a series of interviews were conducted via zoom platform. The interview details are mentioned below. Collected requirements are listed in further sections of this document.

NAME	POSITION	PURPOSE OF INTERVIEW	MEETING
Mrs. P.H.M. Mangalika	Principal	Strategic vision for new student information management system.	Tue, March 9 8.00-10.00 A.M
Mr. A.V.R. Jayasekara	Deputy Principal	Current problems with existing manual system and expected solutions.	Mon, March 9 10.00-12.00 P.M
Mrs. Sasika Abeykoon	Sectional Head	Current problems with existing manual system and expected solutions.	Wed, March 10 8.00-9.30 A.M
Mrs. V.H. Wimalasooriya	Proposed System Admin	Data initiating and managing processes.	Wed, March 10 9.00-12.00 P.M
Mrs. Vindya de Silva	Teacher	System usage and data retrieval process processes.	Fri, March 12 8.00-9.00 A.M
Mrs. W.H. Madumali	Teacher	System usage and data retrieval process processes.	Fri, March 12 10.00-11.00 A.M

3. Requirements

3.1.   Business Requirements

- Reduce paper works.

- Shorten student details processing time.

- Enhance the efficiency in daily tasks that associated with student information.

- Lessen the access time to student data.

- Reduce the time spent on student-related tasks.

3.2.   User Requirements

- Add new students to the system.

- Update student details.

- Upload and change student profile pictures.

- Generate student lists.

- Generate statistic reports based on available records.

- Print student profiles.

- Create mail merges.

- Create excel documents from existing student data.

- Maintain special information about students (health status, special needs, etc.)

- Manage the student state whether an active student or school leaver.

- Retrieve relevant student data in an emergency case.

4. System Requirements

4.1.   Functional Requirements

- The system should restrict changing of consistent data of students.

- The system should have functionalities for filter student records.

- The system should notify system admin about incomplete student data, if exists.

- The system should auto-update students' grade annually.

- The system should allow school management to save student photo for identification purposes.

- Include the facility of generating excel documents with student details.

- The system should have facilities to generate student statistic reports based on available records.

- The system should have feature for retrieve most important information that required in emergency case.

- The system should have the ability of generating printable documents.

4.2.   Non-Functional Requirements

- The system will have low data usage.

- The system should have a simple UI design.

- The system should be able to access the data from any device (Laptop, Desktop, and Smartphone)

- The system will be accessible to web users and mobile users.

- The system should allow managing user privileges.

- The system must restrict unauthorized access.

- The system should view relevant data quickly.

- The data should be updated and real-time.

5. Requirement Analysis

According to gathered requirements a brief idea was taken how would be the final system perform and what are the functionalities it should consists with. Accordingly, the system requirements were identified under few categories as mentioned below.

Functional Requirements	
Data insertion and management	• The system should restrict changing of consistent data of students. • The system should notify system admin about incomplete student data, if exists. • The system should auto-update students' grade annually. • The system should allow school management to save student photo for identification purposes.
Data manipulation	• The system should have functionalities for filter student records. • The system should have feature for retrieve most important information that required in emergency case.
Document Management	• Include the facility of generating excel documents with student details. • The system should have facilities to generate student statistic reports based on available records. • The system should have the ability of generating printable documents.

Nonfunctional Requirements	
Operational	• The system should have a simple UI design. • The system should be able to access the data from any device (Laptop, Desktop, and Smartphone) • The system will be accessible to web users and mobile users.
Performance	• The system will have low data usage. • The system should view relevant data quickly. • The data should be updated and real-time.
Security	• The system should allow managing user privileges. • The system must restrict unauthorized access.

6. Conclusion

Considering the acquired requirements, the essential features and processes that should be included in the system were identified. In designing phase, the factors that identified can be used as a reference for verify and validate the design of the system by considering the following categories of requirements.

Functional Requirements
Data insertion and management
Data manipulation
Document Management

Nonfunctional Requirements
Operational
Performance
Security