SE 201.3 - Systems Analysis and Design

Group Assignment

Feasibility Study Report

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

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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

   1.1. Overview of the Project 03

   1.2. Objectives of the Project 04

   1.3. Overview of Existing Resources 04

   1.4. Deliverables. 04

2. Feasibility Study

   2.1. Technical feasibility 05

   2.2. Economic feasibility 06

   2.3. Operational feasibility 06

   2.4. Schedule feasibility 07

3. Conclusion 07

1. Introduction

3.1. Overview of the Project

The student information system of CP/H/ Dhammaloka vidyalaya is the proposed system for manage student 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, Teachers) to retrieve data when required. And also, the system is capable of generating reports and relevant documents using stored data in the database.

Students' details are added to the system by specially assigned member from the staff (usually the role is held by data teacher in schools) who is responsible for creating new records, updating, and deleting on approval of top-level management, on the system. The required student data for regular processes and decision making of the school can be retrieved by the principal and members of school management board and the student data related to teaching and learning process can be retrieved by teachers that assigned for relevant subjects and classes.

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

3.2. Objectives of the Project

- Designing and developing a central database that contains students' data that required by the school.
- Developing a web portal that can be used to access the data from anywhere and from any device when required.
- Implementing suitable methods to secure the data from unauthorized access and to protect the privacy of students.
- Establishing features for creating, updating, and deleting records on the database with user-friendly interface.
- Establishing requested features in the system to generate reports and analytic documents (Tables, Graphs etc.) by manipulating data of the central database.
- Establishing features for generate templated documents (Student confirmation letters, result sheets issued from school etc.) that related to school's regular processes.

1.3. Overview of Existing Resources.

Physical resources.	Human resources.
• Fully featured computer unit with 10 PCs with internet access. • 1 Dedicated Desktop machine for school management section with internet access. • 2 Dedicated Laptops for school management section with internet access. • ADSL internet connection (ISP-SLT) Wi-fi enabled. • 1 Laser printer. • 1 Multi-functional printer.	• Specially assigned staff member for computer data and information related tasks. • 1 office assistance with computer literacy. • More than 15 members out of 21 of the staff are well trained to use computers and internet and rest are comfortable with smartphones.

1.4. 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. Feasibility Study

2.1. Technical feasibility

Proposed technologies to develop the system.

Technology/Software	Purpose
HTML/CSS/Java Script	Front end development
PHP	Server-side programming
MySQL	Relational database system

- The selected technologies are available freely and the team members are familiar with these technologies with prior experiences.

- As most of the data in manual system of the school are organized in tabular formats and relationships between them are easily recognizable the relational database model is suitable for the system considering the factors such as ease of migration into new system.

- As relational database model is proposed MySQL is suitable to develop the central database considering the features provided in MySQL for relational database related operations.

- PHP is suitable for server-side programming, as it is supported by many servers available for host the web portal and because of interoperability with MySQL databases using inbuilt classes and methods instead of using third party libraries.

- The initial testing and implementation can be done using local testing servers. (XAMPP, WAMPP)

- In the final stages of development process the implemented system will be transferred into suitable hosting space. The bandwidth and the disk space required for hosting the web portal is low because of the number of students and absence of multimedia content usage.

  Accordingly, the proposed system is technically feasible.

2.2. Economic feasibility

- In addition to any development cost as a web-based application main costs associated with the system are hosting cost and the cost for obtaining a domain. In terms of web hosting the bandwidth and the disk space required to host this system is minimum due to minimum usage of multimedia contents and containing less records in the database with compared to other web-based application based on the size of the organization. Accordingly, the cost of hosting is minimum.

- As the school management agreed to allocate funds for maintaining costs of the system from their annual budget, any problem will not be occurred in regarding hosting and domain renewal costs.

- As the selected technologies and software follow the freeware software standards any additional cost will be not applied on further operations of the system.

- As most of the student information related processes are done by the system the cost for maintaining books and stationaries can be reduced.

- As the system is accessible through the regular web browser nothing will be additionally cost as web browsers are freely available.

- Additional cost for data consumption will be added. But due to minimum usage of multimedia contents of the system, the data usage is minimum.

Considering all economical aspects, the proposed system is economically feasible.

2.3. Operational feasibility

- As the system is not required special technical knowledge than basic computer literacy, it is not required to hire any special employees.

- As there is a specially assigned staff member with good knowledge on computing to moderate the system related tasks no need to train every staff member.

- Since the school has adequate computer equipment and internet facilities the tasks can be continued with existing facilities.

- As the system is developed using user friendly GUIs by reducing the complexity anyone who get permission for use the system can easily learn how to work with the system.

Accordingly, the proposed system is operationally feasible.

2.4. Schedule feasibility

The school management staff expect to start their work with the system from 2021.05.21 depending on the size of the project and all other factors related to designing and implementation, the system can be delivered on deadline.

3. Conclusion

Considering the important factors under technical feasibility, economic feasibility, operational feasibility, and schedule feasibility the development and establishment of the student information system of CP/H/ Dhammaloka Vidyalaya is possible to be done under the currently available resources.