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(HURUF BESAR)

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SCHOOL INFORMATION SYSTEM (SIS)

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DECLARATION

I hereby declare that this project report entitled

SCHOOL INFORMATION SYSTEM (SIS)

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ Date :
(HADZLI ZUL BIN HAMRAN)

SUPERVISOR : _____ Date :
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DEDICATION

To my beloved wife,

Zaireen Adlina binti Zain.

To my mother and father,

Rafidah binti Nawawi and Hamran bin Hassan.

To my son and daughter,

Ahmad Ziyad Naufal bin Hadzli Zul and Nurul Ainin Sofiya binti Hadzli Zul

Who inspired me with their love of learning, supporting and teaching.

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ABSTRACT

School Information System (SIS) is a web based application that developed to help school management manage their student's information, teacher's information, teaching and time table management. This application also allows the parent to access on-line their children information assessment and achievement. SIS used Rapid Application Development (RAD) as development methodology. Active Server Page (ASP) is a programming language that used to develop this application. The target users of this application are school staff such as teachers, administrator, students and parent. The main objective of the development this application is to solve problem that occurs from present system and manual method that being used. In addition, SIS is developing with security features such as using of password and user level access to the system. School management also can manage their students, teachers, subjects and examination information efficiently and effectively. The main added feature to this system is time table management. Online accesses allow user to access the application at anytime and anywhere as long as they are connected to the internet. Centralize and systematic data storage can reduce duplication of information and increase reusability of information.

ABSTRAK

School Information System (SIS) adalah aplikasi web yang dibangunkan untuk membantu pihak sekolah dalam menguruskan maklumat yang berkaitan dengan pelajar, guru, pengajaran serta pengurusan jadual waktu. Aplikasi ini juga membenarkan ibu bapa pelajar mencapai maklumat berkaitan pencapaian dan prestasi anak mereka secara atas talian. SIS menggunakan metodologi Pembangunan Aplikasi Pesat (RAD) di dalam pembangunannya. Bahasa pengaturcaraan yang di gunakan ialah Active Server Page (ASP) yang menyokong pembangunan aplikasi web. Sasaran pengguna aplikasi ini terdiri daripada kakitangan sekolah iaitu guru-guru, bahagian pentadbiran, pelajar dan juga ibu bapa pelajar. Objektif utama pembangunan aplikasi ini adalah untuk mengatasi masalah yang dihadapi oleh aplikasi sedia ada dan kaedah manual yang dipraktikkan. Sebagai nilai tambah, aplikasi ini dibangunkan dengan menerapkan ciri-ciri keselamatan seperti penggunaan katalaluan dan pengkelasan capaian pengguna mengikut tahap. Pihak pengurusan sekolah juga dapat menguruskan maklumat seperti maklumat pelajar, guru, matapelajaran dan peperiksaan dengan lebih efektif dan efisien. Tambah nilai yang utama yang terdapat pada sistem ini ialah pengurusan jadual waktu. Capaian secara atas talian membolehkan pengguna mencapai aplikasi ini pada bila-bila masa dan di mana sahaja asalkan mempunyai capaian internet. Kaedah penyimpanan data yang berpusat dan sistematik dapat mengurangkan masalah pertindihan maklumat dan dapat meningkatkan guna-sama maklumat.

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CHAPTER I

INTRODUCTION

1.1 Project Background

This project is based on analysis of current system, "Integrated Student Information System (ISIS)" and "Sistem Maklumat Murid (SMM)".

The ISIS was developed by DMH Software Sdn Bhd and it is license software. This system is used by some school in Melaka and one of them is SMK Telok Mas. This system is a client-based and was developed using Microsoft Access as interface and as database. This system is used to record student details, academic information, disciplinary details, co-curriculum and other else.

The SMM was developed by Ministry of Education. This system is allocated to entire school in Malaysia. This system is standalone and it's only used to record student details using upload and download file data mechanism. School administration will key-in all particular that have in the system and send the database to Pejabat Pendidikan Daerah (PPD) for merging in the main database. This system is more on gathering the students' information in Malaysia at one database.

The School Information System (SIS) is developed overcome issues that arise in the current system. This system is developed to manage the entire school information in a single system and using a centralized relational database management system. This system can give a lot of benefit to the school management.

One of the major issues faced by the existing information system is data inconsistency due to errors caused by multiple data entry involving multiple databases. This problem is totally eliminated with the use a single database. Another issue that didn't overcome with current system is time tabling. The new system that proposed will consider and overcome this issue.

The main purpose of this project is to bring schools close to the community, a web-based infrastructure would be introduce in school nationwide that will effectively connect the school, teacher, students, and parents. Its means, integrated web-based information system would be introduced to achieve the mission.

1.2 Problem Statement

Nowadays, information system is required in every organization. When we talk about school, they are a lot of important information that every schools must kept. On reality, some schools manage their information using a computer system. Some of them still using Microsoft Excel or Microsoft Word to store the information. For those schools that don't have computers, they still use a manual approaches paper, files. The thing happen because lack of budget, different management approaches, poor IT literate and other else.

Base on my early observation at SMK Telok Mas as my case study, the current system has several problem. There are:

i. Using a client-based architecture

The system was developed using client-based approach. Users must install it first before can use it. The worst thing is, the system can only be operating in a simple computer network environment, browsing the database through the computer network. User must map the database from the remote pc, before it can mapping to the centralized database. The problems arise when school management wants to implement dynamic IP (DHCP) concept, workgroup concept or virtual LAN (VLAN) concept. They can't browse the database.

ii. Data storage

In the real world, securing data is important. Data must store in the secured place, access by authorized user, can support large volume of data and can support large volume of concurrency. This thing doesn't have in the current system. Currently, ISIS and SMM was developed using Microsoft Access database. This type of database is not comprehensive enough. Microsoft Access is only simple database, not a full-fledged database management system. Microsoft Access is not meant to have multiple users at any given time.

iii. User access

Currently, ISIS and SMM can be accessed using school computers' only. Users, especially teachers can operate the system during working hours only. The main problem is they have a lot of work to do. Sometimes they don't have time to navigate the system during working hours. This problem is more critical during the exam week. All teachers are rushing to key-in their students mark.

iv. System not consider the current needs

Now, parents are more concern on their children activities in school likes attendance, time table, result and so on. Current system cannot give them this privilege. The system is developed only for administrative used, input the data, do some process if needed and then produce an outputs likes reports, statistics, listing and other else. Parents must wait for the children to bring back student performance card or 'report card' to view their children's performance. Parent also can't observer their children academic status, disciplinary, fees and also co-curriculum activities.

v. Class time tabling

Class time tabling is an important part. Currently, school management manage class time table using a manual approach. At the end of years of school session, time table committee will issue a checklist to the panel head of subject. Panel head of subject will identify and confirm whose will teach a subject and which class will be teaches. After that time table committee will key-in the information in the Microsoft Excel. They are problems arise; one of it is unbalance period for every each teacher. Another problem, when some of the teachers have an emergency, it is difficult to time table committee to find a replacement teacher.

1.3 Objective

i. Improve system security and database security.

Security is an important issue. Security can consist of system security and database security. Only authorize user can access the system. Accessing to the system is based on user level. Certain user level can only do certain thing. For database security, database administrator can create a user that can access the database and can grant what function that the user can access. These features are implemented for users that interact direct with the database.

ii. Automate or simplify workflow processes to reduce non-productive administrative task.

The system offers a systematic workflow process that will improve school management productivity. Systematic workflow process is important in order to govern user operate the system correctly. It also can help school management to manage, organize and disseminate records systematically

iii. Promote data re-usability to eliminate frequent data entry or re-entry.

Data consistency and reliability is important. User will enter the data through this system. System will store the data into the database with unique identification. This means that no duplication is allowed. User can retrieve the data again by using search method or other method that the system will provide.

iv. Centralize information and easy to access.

This system will offer a using of single database and web access of the information. User can access it from anywhere, any place and any time that they like. All the information will store and retrieve in one source its call database.

v. Class time tabling.

This system will offer a comprehensive class time tabling concept. This system also offers effective relief approach. This feature will give a lot of benefit to the management especially in managing time table.

1.4 Scope

i. School administrative, teachers, students, time table coordinator and parents are the target users of this system.

ii. Module for SIS:

a. Student information

The system is able to receive an input from a user to store student profiles, students' guardian profiles, co-curriculum activities.

b. Staff information

The system is able to receive an input from a user to store staff profiles and able to generate teachers' time table base on data that input in time table scheduling module.

c. Subject information

The system is able to register subject's information and can assign a subject to the classes. The system also can assign a subject to teachers whose teach that particular subject.

d. Time table schedule

The system is able to create a class time table base on subjects, classrooms or laboratories and teachers. System will preview the overall time table and overall contact hours per week for every teachers. User also can create an examination time table.

e. Result information

The system is able to retrieve input from teachers on their students' mark and able to generate the grade. The system also able to calculate students' result based on selected examination code.

f. Attendance information

The system is able to record students' attendance everyday and able to generate a warning letter to the student. This module is replaced of attendance book concept to computerize concept.

g. School administration

The system is able to record all the utilities information that will support the primary process. For example, subject code, class code, grade code and other else.

h. Security management

The system is able allow user to create their account for accessing the system. Administrator is allowing to assigning module and sub-module base on group level or individual.

1.5 Project Significant

School Information System (SIS) is developed to help schools organization including administrative and teachers to manage their resource, data and information in a proper way. It's also can help schools in term of dissemination of school information especially to the students' guardians.

Besides that, the system can improve working environment and make it efficient and effective. The centralized database concept can avoid data redundancy, data lost and other else. The centralized information concept can make information is reliable, trustable, consistence and up-to-date.

1.6 Expected Output

The project is expected to produce a comprehensive web based system. This system shall benefit five (5) groups of users' school administrative, teachers, time table coordinator, students and parents. The major key-points that system shall help the user are:

i. Centralized System

a. This system will be developing using a web based concept. On that point, user can access the system at anywhere and anytime as long as they have an internet connection.

b. This system will provide a user friendly interface and navigation. User will input the information once and use or navigate the information many.

ii. Centralized Database

This system will be using an enterprise database and used a single database. This centralized database concept, will increase accessibility, increase volume of concurrency, increase reliability, increase consistency, increase security and access control, robust and many else.

iii. Generating Report

User of this system can generate, preview and print a report from this system. All the reports will use the data from a single database.

1.7 Conclusion

This chapter contains the detail description of the propose project, School Information System (SIS). From this chapter, the problem faced by the school was identified and the main objective and the scope of the project were clearly defined. In this chapter, the possible solution is suggested.

Chapter 2 will discuss on the literature review and the methodology that will be used in this system.