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JUDUL: **SCHOOL STUDENT ACADEMIC MANAGEMENT SYSTEM (e-SSAM)**

SESI PENGAJIAN: **2006/2007**

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SCHOOL STUDENT ACADEMIC MANAGEMENT SYSTEM (e-SSAM)

NAPISAH BINTI HARUN

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2007

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DECLARATION

I hereby to declare that this project report entitled

School Student Academic Management System (e-SSAM)

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

STUDENT : _____ Date: 6/12/2007

(NAPISAH BINTI HARUN)

SUPERVISOR : _____ Date: 6/12/07

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DEDICATION

To my wonderful parents, Mdm Rugayah and Mr Harun, your love and support are my greatest inspiration.

To all my beloved friends, who always give me support and help.

To my Projek Sarjana Muda supervisor, Prof Madya Shahdan Bin Md Lani, for guidance and help.

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ABSTRACT

A systematic school academic management system is important to support the country development towards our country mission Wawasan 2020. School is an important place to learn how to be teenagers that full with a good vision, dedicated and success as the country leaders in the future. The existing school academic management system is using a manual system. The manual systems suffer some weaknesses to the school management. Such as, inefficient to manage data, repetition of many process, lost of data, waste of time, energy and cost. Therefore, e-School Student Academic Management System (e-SSAM) will be build. This system will make the process of data management become easier, the computation of examination mark, determination of student position in class and form and also produce report generation faster. Beside that, e-SSAM system will make the school management and administration more organized. e-SSAM also will give the advantages to teachers to manage student examination mark after each examination faster and efficiently. This system also capable of searching student information. e-SSAM will be build using the three combination of programming language like PHP, HTML and Javascript. Besides, MySQL have been chosen as a database. For the project development, V-Model has been use as a project methodology. Beside that, the database life cycle steps have been followed for the database development.

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ABSTRAK

Sistem pengurusan akademik sekolah yang lebih sistematik adalah penting untuk menyokong pembangunan negara ke arah membentuk negara maju menuju Wawasan 2020. Sekolah adalah merupakan tempat yang paling penting untuk menimba ilmu dan membentuk remaja yang berwawasan, berdedikasi dan berjaya sebagai pelapis pemimpin masa depan Negara. Sistem pengurusan akademik sekolah pada masa kini masih lagi tertumpu kepada penggunaan sistem secara manual. Penggunaan sistem secara manual akan mendatangkan banyak kelemahan kepada pihak sekolah. Antaranya ialah pengurusan data yang kurang cekap, pengulangan kebanyakan proses, kehilangan data, pembaziran masa, tenaga dan kos. Oleh hal yang demikian, e-School Student Academic Management System (e-SSAM) akan dibangunkan. Sistem ini akan memudahkan proses pengurusan data, pengiraan markah peperiksaan dengan lebih cepat, penentuan kedudukan pelajar dan juga proses pengeluaran laporan. Sistem ini akan memberikan kemudahan kepada pihak pengurusan dan pentadbiran sekolah khususnya untuk sekolah menengah. Sistem ini juga akan memudahkan para guru untuk menguruskan markah pelajar setelah sesuatu peperiksaan dengan lebih cepat dan cekap. Dengan adanya sistem ini maka proses carian data untuk maklumat pelajar dapat dilakukan dengan lebih cepat. e-SSAM akan dibangunkan dengan menggunakan gabungan bahasa pengaturcaraan seperti PHP, HTML dan Javascript. Manakala MySQL telah dijadikan pilihan bagi pangkalan data. Bagi pembangunan projek, metodologi V-Model digunakan manakala langkah-langkah dalam kitar hayat pembangunan pangkalan data (DBLC) telah diikuti untuk pembangunan pangkalan data.

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LIST OF ABBREVIATIONS

1NF	-	First Normal Form
2NF	-	Second Normal Form
3NF	-	Third Normal Form
DBMS	-	Database Management System
DFD	-	Data Flow Diagram
e-SSAM	-	e-School Student Academic Management
FK	-	Foreign Key
HTML	-	Hypertext Markup Language
ID	-	Identification
NIC	-	Network Interface Controller
PHP	-	Hypertext Processor
PK	-	Primary Key
PMR	-	Penilaian Menengah Rendah
PSM	-	Projek Sarjana Muda
RAM	-	Random Access Memory
RDBMS	-	Relational Database Management System
SPM	-	Sijil Pelajaran Malaysia
SSADM	-	Structured System Analysis and Design Method
SQL	-	Structured Query Language
UAT	-	User Acceptance Test

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CHAPTER I

INTRODUCTION

1.1 Project background

School is important places to produce a good student, who will be become quality citizen for the country. Therefore managing school effectively and efficiently needs more attention. Hence, a system to manage student academic for school is needed to be develop. e-School Student Academic Management System (e-SSAM) is been developed for education type especially for secondary school.

e-SSAM system is going to store student profiles like student personal information. Beside that, this system also will be managing student academic information like examination mark, student soft skill and also student activities such as co-curriculum.

The examination information will be divided into two parts which is for special examination like PMR and SPM and also other test. e-SSAM is flexible to any secondary school because of the function that allows user or administrator to make configuration for each school form, class and subject configuration.

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1.2 Problem statement

School administrator or teachers use manual techniques widely to compute examination mark and to produce grade, to calculate total mark and also to view statistic for student information. School management does not have specific system to produce result and generate report automatically but they always use Microsoft Excel to calculate the result. But the weaknesses for this software because the teacher have to key in the information about student for every time they need to compute the mark and define the grade.

First problem using this software is because it cannot make searching for student information. In case there is a problem to detect the student from each class because

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1.3 Objective

The main objective of e-SSAM system is to create a computerized system for effectively and efficient manage the academic performance of the students. The priority of the system is easy to use, simple yet able to keep information organized. Hopefully the system will act as the first step towards realizing the dream of becoming a paperless society. The objectives of this system are:-

- To register and manage the user and student.
  The first objective of e-SSAM system is to store the information about user who will use the system. The system also will store and manage student information. The student information includes student basic information, student examination result (student special examination result and also monthly test, mid-term test and test end of the year) and also student activities (co-curriculum and soft skills). e-SSAM not just register and manage user and student information but it is also have the capability to do the basic function like store, update, delete and print the information.

- Searching
  e-SSAM also able to search specific information like IC number and also student class.

- Determine student grade and position
  Another objective for e-SSAM is to determine the grade of a student examination score. Beside this, e-School Student Academic Management System also were count all the total marks for student examination result, calculate the percentage and determine student position in class and also for the whole class for each form.

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- To produce report

  Next objeetive is the system will produce report for student examination result which is for special result (PMR and SPM) and monthly test, mid-year test and also end of the year test. Beside that e-SSAM also will be generate statistic and bar graph to enable the headmaster or teacher to analyze student examination result faster and efficiently. This system also will produce line graph for student examination result for all test in a year. This line graph will view the statistic grade for each subject.

- To configure menu of the system

  The system will provide a function to enable user to make menu configuration for the system. This configuration will do by the user that has an authorization as an administrator. This configuration will allow the user to determine the total of form in the school, total of class for each form and also the subject for each form, class and student.

- To make data more secured.

  The make the data more security by user authentication level. This system will determine the access level for user which is 2 levels (level 1: Administration, Level 2: Teacher, Level 3: Headmaster).

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1.4 Scope

- Target user

  e-SSAM system will focus for the three level for users authentication which is level one (1) for administrator, level two (2) for teacher and level three (3) for headmaster. Student or other user who do not have the permission to access the system will not have authorization to do that. e-SSAM can only be access within the school area which is intranet.

- Record data

  e-SSAM system will record and store the data about user who will use the system. Beside that, the system also will record and store the data about student information. The student information includes the basic information of students and student academic performance which is their examination result , soft skill and also student activities in school (co-curriculum). Beside record the data, e-SSAM also will do the basic function like update, delete and print data.

- Determine student grade and position

  This system also will determine student examination grade, percentage, total marks and decide the position for each student in class and also for the overall class for each form.

- Produce report

  This system also will be able to produce report on student test. This system also will produce academic report for each student including personal information, examination result and soft skill. Beside that, the system also will produce and generate statistical report for student examination result based on class and form and lastly e-SSAM will generate line graph for statistic grade for each subject.

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- Configuration

  The last scope for e-SSAM is, it will allow the users who get the authorization as administrator to make configuration menu for the system. The configuration is to manage total of form for the school, manage class for each form, manage subject information that are suitable for each class, form or student and user also will be allow to make configuration for the report format that they want to produce.

1.5 Project significance

e-School Student Academic Management System (e-SSAM) that are going to develop are hoping to beneficial the school administrators.

Firstly, the significance from e-SSAM system is to estimate teacher time to produce report such as grade report, and percentage and also generate graph for student examination result. The other significant is e-SSAM also will produce statistic for each subject to know the improvement for subject or students. This is also will help the teacher to work faster and produce report quickly. Actually e-SSAM not only for certain school but for any secondary school because of the flexibility of the system to be configure according to school requirements.

Thirdly, significance is to manage student academic including examination result and student activities like co-curriculum easier and faster. The advantages for this project also teacher or school administration just need to key in student examination mark and e-SSAM will generate grade, average, total marks, position in class and also position in form.

Next significant from e-SSAM also gives the advantages to teacher, school administrator and headmaster to analyze student examination result based on the statistic like line graph. They will know exactly student academic improvement from time to

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time by observing the line graph. e-SSAM also will make data information more organized using a database that are going to be developed within the system. Using MySQL, the database will be more secured. User authentication through the login technique also provides extra security to the system. Lastly, this project will reduce the usage of paper in printing reports.

1.6 Expected output

e-School Student Academic Management System (e-SSAM) has an expected output that are going to figure out. The most important expected output and intelligence function is the e-SSAM wills allow the user make configuration for form, class, subject and also to formatted report.

Secondly e-SSAM also will be expected to store the data about student personal information, student examination result, soft skill and also student activities. Beside that, the system also will store the information about user that is going to use the system. e-SSAM expected to do the basic function of system which is to make modification of the data, delete the data and also to allow the user print the report from the data.

Moreover e-SSAM also will be expected have an intelligence function which is to define and decide the student position for each class and also for the whole class for each form. The other intelligence functions are the system will generate the grade, compute the total marks and also count percentage based on examination result that has been enter earlier by user. e-SSAM also will make the searching for student record more faster and easier using searching function that are going to be develop for this system.

Lastly e-SSAM also expect to allow the user who will use the system by user login form which is to ensure the security of the system that are registered earlier

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