



STUDENT MANAGEMENT SYSTEM  
(SMS)

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## ABSTRAK

Sistem Pengurusan Pelajar (SMS) adalah aplikasi perisian yang digunakan untuk mengurus maklumat pelajar dan data dalam sektor pendidikan. Sistem ini direka untuk sekolah rendah untuk membantu pentadbir dan guru-guru dalam pengurusan pelajar. Sistem Pengurusan Pelajar terdiri daripada empat modul termasuk Pendaftaran Guru, Maklumat pelajar dan ibu bapa, Keputusan Peperiksaan Pelajar, cadangan dan pemberitahuan melalui SMS. Guru-guru boleh menggunakan sistem ini untuk mendaftar maklumat murid dan ibu bapanya serta mengurus profil pelajar. Selain itu, guru boleh tengok prestasi keputusan pelajar melalui graf. Di samping itu, guru juga boleh menghantar keputusan pelajar kepada ibu bapa melalui Short Message Service (SMS). Bagi ibu bapa, mereka boleh login ke sistem dan melihat keputusan peperiksaan anak-anak mereka dan juga prestasi keputusan anaknya melalui graf juga. Sistem ini juga mempunyai satu ruang untuk ibu bapa dan guru-guru berkomunikasi. Oleh itu, dengan menggunakan sistem ini boleh memberi manfaat kepada pentadbir, guru-guru dan ibu bapa.

## ABSTRACT

Student Management System (SMS) is software application for the education that can be used to managed student information and data. This system is designed for primary school to help administrators and teachers in the management of students. Students Management System consists of four modules including Teachers, Students and Parents Profile, Student Exam Results, Comment Reply and SMS notification. Teachers can use this system to register information of student and managing parents and student profile. Teachers can view results of the students in graph format to know their performance. Besides that, teachers also can send the student results to parents through Short Message Service (SMS). For the parents, they can login to system and view their children examination results and also graph for know their performance. This system also provides a communication platform for parents and teachers. Thus, by using this system can benefits to administrators, teachers and parents.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Introduction**

In this 21<sup>st</sup> century, all is about technology. The schools and education nowadays also already changed. Not only for University and secondary school, primary school also must have their own management system. But the current management system primary school is already defined as old generation management system and it already cannot satisfy the user needed.

As a result, a system called Student Management System will be developing as an upgrade version of the old system or to replace manual system to solve problem that facing when was using the old system or manual system. Student Management System (SMS) is a software application for education that use to managed students information and data. Also known as student information system (SIS), student information management system (SIMS), or school management system (SMS).

This design of this system is web-based type, so the user also can directly use the system by connect to internet .The users of this system are given to three groups, which are administrators, teachers and parents. The functions of administrators and teachers are read, write and edit, while the parents their functions are only read and write. Through this system, administrators and teachers can manage all student data and information easily and the parents also can easily know their children performance easily.

Besides that, this system added new technologies, which are using the Web Service to send the SMS (*Short Message Service*). Through this Web Service, teachers can send the exam result to children parents, so the parents can know the exam or test result of their children. Another technologies is the system will auto generates warning letter also by checking the attendance of students.

This new system will replace the current system that is used in primary school and surely this system will improve the student management system of the school and efficiency of the job.

## **1.2 Problem Statement**

Using manual system to manage the students which are records all information and in the book or paper was causing the job of the teachers becomes more and troublesome. The record in the have a possibility missing or destroy when happen any accident. While now already have the school use the computer to manage the student information, but both of the systems they use are already out-dated. The system they use all are standalone and separately, one system only have one function. This was cause teacher harder to use all the system on the same time. The separately system without connection with each other also cause the same data and information the needed key in in every system. Besides that, the system that using also does not have the communicate platform for the parents to communicate with the parents. This will cause the interaction between teachers and parents become less.

Failed in test or scores dropped are causing the student were scared to telling their parents. Added some of the parents are busy with their own carrier, both of them may indifferent their child's results. Besides that, also have some student prevent their parents to know their test result, they may cheated their parents with multiple reason like teacher haven't given back the report card or others to avoid their parents know the result. This was causing the parents does not know their children exam or test results.

Every students learning ability are different, some of them are good, some of them weak. So the results that gets also different. As a teacher, they need to know every exam results of each student to know which subject is the weakness of students. But all the students results are record in the paper, teachers is harder to know the performance of the students if not through data or graphical image. This is because through the graph, teacher can know is that any improvement of students in term of the status, progress or performance.

### **1.3 Objectives**

- a) To design and develop a Student Management System for primary school.
- b) To include the function of students performance with graphical information and feedback platform for parents and teachers.
- c) To sends students results to their parents through SMS.

## **1.4 Scopes**

The main focus of this project is primary school and the target/user is the administrators, teacher and parents. The scope of the students years only focus on standard 1.

Student Management System is a prototype system and the content is using dummy data.

Device that used in this project are a set of computer and mobile phone. Computer is a local server that runs the system and database. Mobile Phone is a device that used to receive the notification or message from teachers.

Tools that used to build the interfaces and the database are PHP, HTML, JavaScript and PHP MyAdmin Database.

## **1.5 Studies Existing System**

This chapter is briefly explains about the descriptions, functions of existing student management system and do some comparison. The other aspects that will be discussed include the specification of hardware and software that will be used to develop the system.

Three existing system will be as a research at this report, which are “iSchool Management System”, “SchoolWorks Student Information System (SchoolWorks SIS)” and “TMS School Management System”.

### **1.5.1 iSchool Management System**

iSchool Management System is the system that using by SMJK Dindings, a school located in the Malaysian small town of Lumut, Perak. iSchool Management System is the flagship product[1] of iSchool Suite education products. It is school administration software and starts implemented since year 2001.

#### ***(a) System Description***

iSchool Management System was an integrated school management software system. These systems are using by the school to simplifying management tasks and manage student information. Which are gives school administrators and teachers the ability to easily and cost-effectively manage every aspect of data gathering and reporting[1].

iSchool Management Systems delivers real-time information[1]. Any information or data that are added or changed will be update and available to all users. This allows the administrators, teachers, parents and students to access the latest information and also the data.

This system also provides comprehensive functionality in a single application. It includes a full-featured, in order to meet all requirements which are individual login for teachers, students, parents and administrators. This system having more 20 different module[1] in the whole system, most school basically will purchase the Basic Module[1], Exam & e-Report Card, Library, Co-curriculum and student discipline[1] from starting. After that just added or purchase others module if needed.

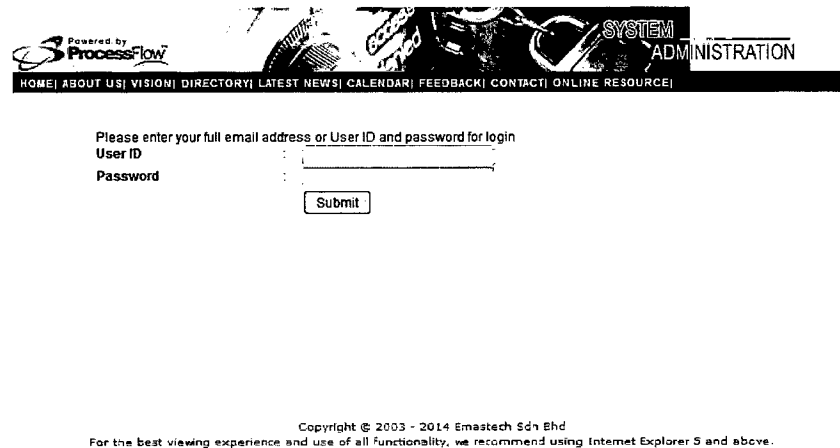
Besides that, to use this system, the school also needs to purchase the hardware Server. The sizes of server is depends number of students population, number of modules and number of user access the module.



### ***(b) Problem in Existing System***

iSchool Management System is a good system, but it is harder to use. Compare with other system, the progress to doing something is complicated. The user needs to take long time to learn and explore. This system also has another problem, which are the module system not in one package when purchased, the user needs to choose what type of module needed or required. For users who are not familiar or comprehend with this, they may face the problem when choosing the module. Besides that, home pages of the system are also not user friendly. The user needs to login first just to view the information, for the outsider user means who won't have the account but is interested and wants to know more about the system, they may not be able to view the information about the system.

### ***(c) Interfaces of SMS***



Powered by ProcessFlow

SYSTEM ADMINISTRATION

HOME | ABOUT US | VISION | DIRECTORY | LATEST NEWS | CALENDAR | FEEDBACK | CONTACT | ONLINE RESOURCE

Please enter your full email address or User ID and password for login

User ID

Password

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For the best viewing experience and use of all functionality, we recommend using Internet Explorer 5 and above.

**Figure 1. 1: Login page iSchool Management System**

Figure 1.1 shows the login page of iSchool Management System, the user needs to login first just to view the data/information.

### **1.5.2 SchoolWorks Student Information System (SchoolWorks SIS)**

SchoolWorks Student Information System (SchoolWorks SIS) is the system that used by American International School in Genoa (AISG). This developed by SchoolWorks from K-12 software market in year 2005.

#### ***(a) System Description***

SchoolWorks SIS is school administration software. This system was using the latest programming and database standards design by using the browser-based to manage student information. That means it (system) was allowed the Independent student data entry, stands as the key for the school that need to manage students information efficiently. The aim of this system is want to reduce the bottlenecks in the office.

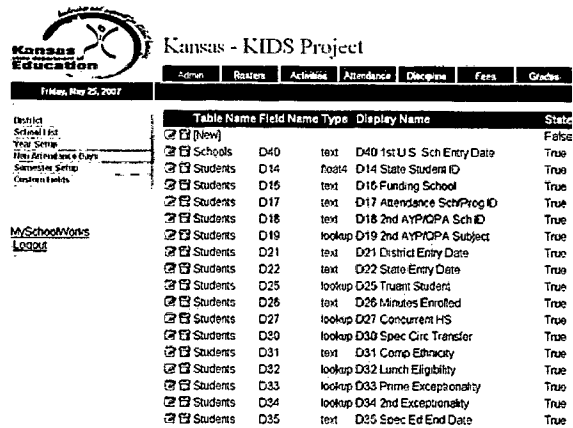
This system can completely tracking and managed student information and data. The complete student information was include student activities, daily attendance, period or classroom attendance, discipline, health and immunizations, grades, schedules, and more[2]. Through this system, the administrators are ability to efficiently manage the student information and data. The SchoolWorks SIS also have the standard report and allowed the custom reports to creation.

Besides administrators, parents also allowed to access to the system to access their children academic records.

#### ***(b) Problems in Existing System***

SchoolWorks Student Information System (SchoolWorks SIS) is a web application that driven by a single database. The system is easily to install and requirements for installation also standard. The main problem of this system is this system is a complex vertical application, the user need to take a several day to training for that system. It have a several level of irreducible complexity, compare with other system. This may waste a lot of time and cost for all administrators to complete all training.

(c) Interfaces of SchoolWorks SIS



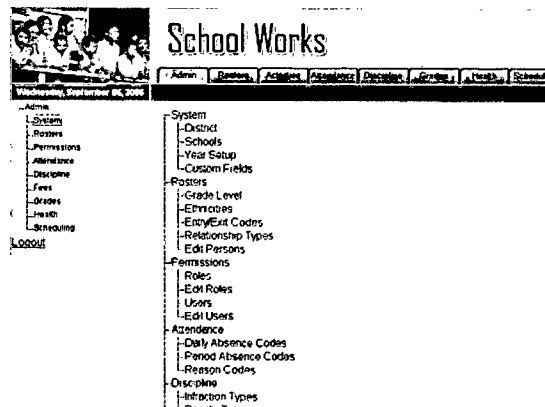
Kansas - KIDS Project

Admin Rosters Activities Attendance Discipline Fees Grades

Friday, May 25, 2007

Table Name	Field Name	Type	Display Name	State
<input checked="" type="checkbox"/> [New]				False
<input checked="" type="checkbox"/> Schools	D40	text	D40 1st US Sch Entry Date	True
<input checked="" type="checkbox"/> Students	D14	float	D14 State Student ID	True
<input checked="" type="checkbox"/> Students	D15	text	D15 Funding School	True
<input checked="" type="checkbox"/> Students	D17	text	D17 Attendance Sch/Prog ID	True
<input checked="" type="checkbox"/> Students	D18	text	D18 2nd AYP/OPA Sch ID	True
<input checked="" type="checkbox"/> Students	D19	lookup	D19 2nd AYP/OPA Subject	True
<input checked="" type="checkbox"/> Students	D21	text	D21 District Entry Date	True
<input checked="" type="checkbox"/> Students	D22	text	D22 State Entry Date	True
<input checked="" type="checkbox"/> Students	D25	lookup	D25 Truant Student	True
<input checked="" type="checkbox"/> Students	D26	text	D26 Minutes Enrolled	True
<input checked="" type="checkbox"/> Students	D27	lookup	D27 Concurrent HS	True
<input checked="" type="checkbox"/> Students	D30	lookup	D30 Spec Circ Transfer	True
<input checked="" type="checkbox"/> Students	D31	text	D31 Comp Ethnicity	True
<input checked="" type="checkbox"/> Students	D32	lookup	D32 Lunch Eligibility	True
<input checked="" type="checkbox"/> Students	D33	lookup	D33 Prime Exceptionality	True
<input checked="" type="checkbox"/> Students	D34	lookup	D34 2nd Exceptionality	True
<input checked="" type="checkbox"/> Students	D35	text	D35 Spec Ed End Date	True

Figure 1. 2: State Requirements for Student Information Systems



School Works

Admin Rosters Activities Attendance Discipline Grades Health Schedules

Wednesday, September 06, 2006

- Admin
  - System
  - Rosters
  - Permissions
  - Attendance
  - Discipline
  - Fees
  - Grades
  - Health
  - Scheduling
  - Logout
- System
  - District
  - Schools
  - Year Setup
  - Custom Fields
  - Rosters
    - Grade Level
    - Ethnicity
    - Entry/Exit Codes
    - Relationship Types
    - Edt Persons
  - Permissions
    - Roles
    - Edt Roles
    - Users
    - Edt Users
  - Attendance
    - Daily Absence Codes
    - Period Absence Codes
    - Reason Codes
  - Discipline
    - Infraction Types
    - Doneth Tunas

Figure 1. 3: Student Information System Admin for SchoolWorks SIS

### 1.5.3 TMS School Management System

TMS School Management System is the system that developed by The Media Shoppe Berhad (“TMS” or “the Company”). This TMS School Management System was have used by many school at Malaysia which call “Sistem Pengurusan Sekolah (SPS)”. So, SMK Taman Tun Dr. Ismail is one of the school use this system. SMK Taman Tun Dr. Ismail is located at Jalan Leong Yew Koh, Taman Tun Dr. Ismail, 60000 Kuala Lumpur, Wp Kuala Lumpur.

### *(a) System Description*

TMS School Management System is a web-based system[3] for administrators, teachers, parents and students[3]. The function of this system is helps to simplify daily operational tasks involved in registration management, exam management and so on. The combination of the powerful framework and carefully designed interfaces are let it easy to use and allows for an efficient management[3] and exchange of extensive data across an interactive platform[3].

The aim of TMS School Management System is to help schools improve the quality student management[3], increase student performance and better communicate with parents[3]. Besides that, this system also able to support multiple users and schools[3], enabling them to record, access reports[3], as well as managed their student and employee data, and performance records in real time[3].

TMS School Management System re given to two level, which are school level and minister level. Because this system is intended for schools in Malaysia, so we are only focus on school level[3], SMK Taman Tun Dr. Ismail is the school that using the school level TMS School Management System. The module are comprises Registration Management, Class Management, ECA Club Management[3], Marks Management, Financial & Human Resource Management[3], Access Control & Security Management, Disciplinary Management, Administration Management, Facility & Asset Management, Learning Management, Collaboration & Knowledge Management and Hostel Management Module.

### (b) Problems in Existing System

TMS School Management System is one of the good system has been found. The system are accessible through any type device browser, it also supports a lots of function which cover all information and management needed by school. The main problem of this system is this system is more to commercial sector, it did not truly focus on what needed by school. Besides that, it also focuses more on management for a secondary school compare with primary school. The most function that provide by this system is not so suitable to primary school.

### (d) Interfaces of SMS

The screenshot displays the web interface of the TMS School Management System (SPS) for SMK Taman Tun Dr. Ismail. The header includes the school's name and address. The navigation menu is located at the top. The main content area is organized into several columns: a login section on the left, a news section in the center, an announcement section on the right, and a links section at the bottom left. The footer provides technical details about the SPS system.

Figure 1. 4: Simple interface of TMS School Management System or SPS of SMK Taman Tun Dr. Ismail

### 1.5.4 Comparison within Existing System

**Table 1. 1: Comparison within Existing System**

<b>Description</b>	<b>Student Management System</b>	<b>iSchool Management System</b>	<b>SchoolWorks Student Information System (SchoolWorks SIS)</b>	<b>TMS School Management System – School Level</b>
<b>User group</b>	Parents, Teachers and Administrators	Administrators and Teachers	Administrators, and Parents	Administrators and Teachers
<b>Interaction platform between teachers and parents</b>	Yes	No	Yes	No
<b>Registration System</b>	Yes	No	No	Yes
<b>Automatic generate graph</b>	Yes	No	No	No
<b>Result send through SMS</b>	Yes	No	No	No
<b>System Type</b>	Web based	Web based	Web based	Web based

## **CHAPTER 2**

### **REPORT BODY**

#### **2.1 Introduction**

Report body is a reflecting of the structure outlined in the introduction. So in this chapter will explain the main four things in body report which are the user requirement, design description, development plan and testing plan. User requirement is specification of the requirements that user expects from software or system. Design description is the methodology that used and applied in this whole project. Next is development plan which are the Gantt chart that illustrates a project schedule from start to finish dates. Last is testing plan which are the part about how to testing and the testing result.

#### **2.2 User Requirement**

To understand and know more about the requirements and the function that needed by the user, a survey was be done to collect the opinion about the system. This survey was done to two group users which are parents and teachers.

### 2.2.1 Parent Survey Form

Parent survey form is the survey that done to 50 parents that came from three different states which are Tumpat Town at Kelantan, Kota Bharu which is capital of Kelantan and Gambang Town at Kuantan Pahang. Figure 2.1 is the survey form for parent which was using in this project.

<b>Parents Survey Form</b>	
<b># Please answer question below using ( ✓ ). Thank you.</b>	
1. Gender (Jantina)	
<input type="checkbox"/> Male (Lelaki)	<input type="checkbox"/> Female (Perempuan)
2. Race (Bangsa)	
<input type="checkbox"/> Malay (Melayu)	<input type="checkbox"/> Chinese (Cina)
<input type="checkbox"/> Indian (India)	<input type="checkbox"/> Other (Lain-lain): _____
3. Nationality (Kewarganegaraan)	
<input type="checkbox"/> Malaysian	<input type="checkbox"/> Others (Lain-lain): _____
4. Age (Umur)	
<input type="checkbox"/> Below 25 (25 ke bawah)	<input type="checkbox"/> 41-45
<input type="checkbox"/> 25-30	<input type="checkbox"/> 46-50
<input type="checkbox"/> 31-35	<input type="checkbox"/> 50 Above (50 ke atas)
<input type="checkbox"/> 36-40	
5. Children school (Sekolah anak)	
<input type="checkbox"/> Primary school (Sekolah Rendah)	<input type="checkbox"/> Secondary school (Sekolah Menengah)
6. Do you have internet connection? Adakah anda mempunyai sambungan internet?	
<input type="checkbox"/> Yes (Ya)	<input type="checkbox"/> No (Tidak)
7. Where did you access internet? Di manakah anda akses internet?	
<input type="checkbox"/> Home (Rumah)	<input type="checkbox"/> CyberCafe
<input type="checkbox"/> Office (Pejabat)	<input type="checkbox"/> Mobile
8. What communication method do you prefer? Apakah kaedah komunikasi yang anda pilih?	
<input type="checkbox"/> Phone call(panggilan telefon)	<input type="checkbox"/> Email
<input type="checkbox"/> SMS	<input type="checkbox"/> Meeting (Perjumpaan)