

**“SBPI GOMBAK’S MERIT-DEMERIT SYSTEM” (INTEGOMB’S MDS)**

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**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

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Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

**“SBPI GOMBAK’S MERIT-DEMERIT SYSTEM” (INTEGOMB’S MDS)**

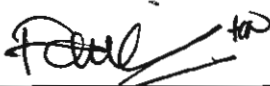
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This report is submitted in partial fulfillment of the requirements for the  
Bachelor of Computer Science (Software Development)

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA  
2011**

**DECLARATION**

I hereby declare that this project title name of  
**“SBPI GOMBAK’S MERIT-DEMERIT SYSTEM” (INTEGOMB’S MDS)**  
is written by me and is my own effort and there is no part has been plagiarized without  
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STUDENT :  Date: 7 July 2011  
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SUPERVISOR :  Date: 7-JUL-2011  
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## DEDICATION

To my God, Allah SWT...

To my greatest idol, Rasulullah SAW...

To my beloved parents, Nasaruddin B Hj Sulaiman and Halimahton Binti Abdul

Karim...

To my beloved brother and sisters...

To my supporting friends...

To my supervisor, Mr. Abdul Razak B Hussain

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I would like to acknowledge the following people for their kindnesses and supports during my research session for studies and system; and also for project development. My gratitude goes first to the Dean of *Fakulti Teknologi Maklumat dan Komunikasi (FTMK)*, Professor Dr. Shahrin Bin Shahib@Shahibuddin and all the lecturers. Thankful for their invaluable insight into the challenges of designing, deploying and supporting the system development process, especially Mr. Abdul Razak B Hussain as my supervisor of *Projek Sarjana Muda*. Also for all whose directions and efforts aided to the outcome of this study.

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## ABSTRACT

The manual merit-demerit system currently in use at *Sekolah Berasrama Penuh Integrasi* (SBPI) Gombak lacks the functionality to manage details about the student's contributions information in curriculum and co curriculum; and demerit points of misconducts. The new project aim is to computerized the manual merit-demerit system which is using a form. By following the project aim, "SBPI Gombak's Merit-Demerit System" (INTEGOMB's MDS) is developed to smoother the overall process flow. Using the Prototyping methodology, it uses Structured Query Language (MySQL) as the Database Management System (DBMS) and Hypertext Processor (PHP) as the interface. The proposed system is able to eliminate the redundant data problems, reduce space constraints for data storage, lessen errors in data capturing while increase users' accessibility and security. So, this project is develop to solve the encountered problems with enhance the existing manual form system's functionality.

## ABSTRAK

Sistem manual merit-demerit yang sedang digunakan di Sekolah Berasrama Penuh Integrasi (SBPI) Gombak mempunyai kekurangan fungsi untuk menguruskan butiran lengkap mengenai maklumat sumbangan pelajar dalam kurikulum dan ko kurikulum; dan mata kesalahan tingkahlaku. Tujuan projek baru ini adalah untuk menukar sistem manual yang hanya menggunakan borang kepada sistem berkomputer. Dengan berdasarkan kepada tujuan projek ini, “*SBPI Gombak’s Merit-Demerit System*” (*INTEGOMB’s MDS*) dibangunkan untuk melancarkan aliran proses sistem ini secara keseluruhan. Kaedah *Prototyping* sebagai metodologi, *Structured Query Language (MySQL)* sebagai sistem pengurusan data dan *Hypertext Processor (PHP)* sebagai antara muka telah digunakan. Sistem yang dicadangkan mampu mengurangkan masalah pertindihan data, mengurangkan masalah ruang penyimpanan data, mengurangkan kesalahan dalam merekod data disamping meningkatkan aksesibiliti pengguna dan tahap keselamatan sistem. Justeru, projek ini dibangunkan untuk menyelesaikan masalah-masalah yang dihadapi dengan meningkatkan fungsi sistem manual yang sedia ada.



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## LIST OF ABBREVIATIONS

<b>PSM I</b>	<i>Projek Sarjana Muda I</i>
<b>MDS</b>	Merit-Demerit System
<b>INTEGOMB's MDS</b>	INTEGOMB's Merit-Demerit System
<b>SBPI</b>	<i>Sekolah Berasrama Penuh Integrasi Gombak</i>
<b>INTEGOMB</b>	<i>Integrasi Gombak</i>
<b>UVMS</b>	UTeM's Vehicle Management System
<b>PPSPPA</b>	<i>Perbadanan Pengurusan Sisa Pepejal Dan Pembersihan Awam</i>
<b>WYSIWYG</b>	What You See Is What You Get
<b>IC</b>	Identification card
<b>ERD</b>	Entity Relationship Diagram
<b>JS</b>	JavaScript
<b>HTML</b>	Hyper Text Markup Language
<b>PHP</b>	Hyper Text Processor
<b>ICT</b>	Information and Communication Technology
<b>MySQL</b>	Structured Query Language
<b>ACL</b>	Access Control List
<b>IIS</b>	Internet Information Services
<b>PC</b>	Personal Computer
<b>UAT</b>	User Acceptance Test
<b>NIC</b>	Network Interface Card
<b>RAM</b>	Random Access Memory
<b>MB</b>	Mega Byte
<b>.txt</b>	File extension for text file
<b>.mp3</b>	File extension for audio file MPEG-1 Audio Layer-3

**LIST OF ATTACHMENTS**

<b>APPENDIX</b>	<b>TITLE</b>
A	Gantt Chart
B	User Manual
C	Test Description, Test Data and Test Result

## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

The merit-demerit system is introduced in Malaysia's education system especially for "*Sekolah Berasrama Penuh Integrasi*" (SBPI) since year of 2001. It was applied by all daily government schools. All the students will try the best to increase the points of merit and free from demerit points to determine the behavior printed on a behavior certificate for every end year of a school session. Although this system has been used for quite some time, but all the schools are still using paper forms to fill out the merit points of contributions in curriculum and co curriculum; and the demerit points of misconducts.

In the growing of modernized technology today, there are a lot of systems that have been developed to make an uncomplicated way to managing life. Nowadays, the online system has become the alternatives for teachers and students which are more maintainable and suitable to use anytime at anywhere as long as has the internet connection. Thus "SBPI Gombak's Merit-Demerit System" (INTEGOMB's MDS) is developed for them as a suggestion to smooth the flow process of existing system in the contributions of curriculum and co curriculum; and demerit points of misconducts using present technology.

By using the manual system, sometimes the process to get the form is quite long because the teachers need to queue up at the school office. The students that involve will give their name and identification card number to the teacher. If the student did not want to give their profile, the teacher needs to find the student's name from their class teacher. The form need to fill in with the name of student, identification card number, time, date, categorization of co curriculum or curriculum, name of misconduct action or contribution action with a suitable points of marks and the own teachers' name in the form before send it into the box. After divide the forms into categorization, it will send to the Academic teacher to verify all the actions and decide for the next procedures to all the students that involved.

When using a form, the information of merit and demerit cannot be kept properly and always contains data redundancy. Some of the teachers have been encountered many problems during searching and detecting status of their students' merit and demerit points. The teachers need to checking whether the points have been authorized or not by principal teachers and academic teachers.

## **1.2 Problem Statements**

There are always troubles when developing a system. A developer is required to recognize the problems occurred in the current system while determining the solutions. The problems that have been discovered during the implementation of existing system are:

### **i) Space constraints for data storage**

The use of merit-demerit book and form may cause the data storage to be not manageable. Some of the records may cause a redundant data at a simultaneous time. All the recorded forms and its maintenance need more space for data storage to make it tidy and unique for each data.

**ii) Errors in data capturing**

The insertion of merit-demerit points in manually can become a mistake at an immediate time. Sometimes teachers often make mistakes during the process of scoring points for students' contributions and behaviors.

**iii) Wasting time and long searching process**

By inserting the merit-demerit points using a form is a waste of time. The disciplinary school rules and laws cannot be displayed together in a form at the same time to easy managing the misconduct actions and contributions. The teachers need to wait for a queue to find and update merit-demerit points of students' if the mistaken inputs happen. The searching process to put the correct merit-demerit points of a student is become complex because the teacher need to reopen page by page of the disciplinary school rules and laws book at each time.

**iv) No security for accessibility and backup**

The manual book and form for merit-demerit point have no security for teachers' and students' accessibility at the specified time. The backup method also cannot be implemented if in case of fire or flood in the school.

**v) Lack of availability for authorize user**

The current system is not suitable to apply because it is not affordable for all whereas not fast to achieve the data. The forms can be only acquired from the school office. Sometimes, the tasks to record merit and demerit points can be delayed in case of unavailability of the forms; which is only can be obtained during office hours daily. The students also cannot check or view their collected merit-demerit points to improve the contributions and behaviors.

### 1.3 Objectives

The main objectives of this project is to develop INTEGOMB's MDS that combine six modules consist of Registration, Login, Merit (Add Evaluation, Update Evaluation, Delete Evaluation and Search Evaluation), Demerit (Add Category, Update Category, Delete Category, Update Category, Add Evaluation, Update Evaluation, Delete Evaluation and Search Evaluation), Certificate (View, Search and Print) and Report and Statistics (View, Search and Print) with a different user levels. The main objectives to achieve are:

**i) To develop computerized merit-demerit system**

With an online system, it will be a computerized system to store all essential data in it. Data can be added simultaneously without having a redundant data with another.

**ii) To reduce error handling**

All the mistaken inputs can be repair through the edit menu. Some of the forms also will be set with a suitable logic rules to avoid the wrong inputs from a user.

**iii) To simplicity the searching process and avoid wasting time**

By using the new system, user can easily search the related information through a student identification card number. All the users need not to reopen a disciplinary school rules and laws to fill in the required points for students' misconduct actions and contributions. All the points are already stated thru this system.

**iv) To provide accessibility and backup data from natural disaster**

This new system can easily and fastens accessible by the teacher and student at anywhere as long as there is an internet connection. The recorded and maintenance of all records and information can be made

anytime thru online even having a natural disaster such as fire or flood in the school.

**v) Improve availability of system**

The system is available to use at anywhere and anytime because it will develop as an online system without waiting the office hour to get the forms. All the processes can be done thru this system which is more ease of use and has a friendly environment to interact with a user.

## **1.4 Scopes**

The scope for this project is divided into two categories :

### **Users**

- i) Administrators
- ii) Staffs
- iii) Students

### **Modules**

The modules of new system are developing by following the required tasks. Some of the modules have sub-modules. INTEGOMB's MDS consists of six modules which are:

**i) Registration**

All users must be register account to use all the functions provided by the system on a specified access level. The administrators which are the discipline teacher and academic teacher will register for all users account. Once the registration is successful, the user can login and access the system. Besides that, users are able to make changes for their profiles.