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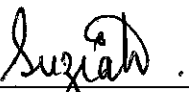

School Disciplinary and Counseling System

by

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Approved by,

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Dr Suzian Binti Sulaiman

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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

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NURUL ALYA BINTI OSMAN

ABSTRACT

The objective of the system is basically to monitor students' behavior, identify students with disciplinary and study problems, to manage the counseling session effectively and also to make parents aware about their children in school.

The problem with current method is that it is not effective in managing disciplinary cases and also the counseling session for problematic students. So, the study focuses on managing the behavior of school students using an interactive web-based application for a better school environment and,

In order to develop this system, the prototyping based methodology has been chosen and there is a Gantt chart provided to illustrate the system schedule. The Gantt chart is used in planning and tracking the system development.

From the findings based on the data gathering processes, it is believed that this system is in need for school to handle and manage the information effectively.

ACKNOWLEDGEMENT

I would like to convey my sincere and deepest gratitude to Dr Suziah Binti Sulaiman for her guidance and ideas during the development of the system. I also want to thank my friends and families who have given me courage and support me along the process.

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CHAPTER 1: INTRODUCTION

1.1   Background

School Disciplinary and Counseling System (SDCS) is a system derived from a project done by a former student of Universiti Teknologi Petronas in 2002, Arfaishah Bin Mohd Arih. The system was named School Registration and Information System (SRIS), which is a web application system. There were 3 phases in the project, which are:

    a. Student Information System.

    b. Teacher, staff, academics, examination information.

    c. Disciplinary and counseling system.

In his project, he only focused on the first phase, which is the student information system. He stated that the objective of his project is enable parents to view their children's achievement in school. He also made a recommendation to proceed the project to the later phase and also to improve the interface of the system to attract users to access the system.

There are so many disciplinary problems involving teenagers, especially students nowadays. From bullying to so many social problems, teenage students often get involved, which will lead to another serious problem when they are much older. For example, when children are picked on by bullies, whether physically or mentally, many feel the need to suffer in silence for fear that speaking up will provoke further torture. And the bully will keep on doing it because there is no action is being taken. But bullying is not a problem that usually just takes care of itself. Action needs to be taken.

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Children can be taught to assert themselves effectively. This is where this system is useful. It will be used to record the social or disciplinary problem such as bullying, skipping classes, vandalisms, name-calling and so on so that action can be taken. One of the actions that can be taken is to provide counseling for students who are involved in disciplinary problems.

Other than that, in every school, there are always students who hardly excel in their studies. They need guidance to help them along the education journey. Counseling is an approach to helping student succeed at school and overcome personal and interpersonal problems. Using this system, students will be assigned to specific teacher, by the school itself. These assigned teachers will then supervise and provide relevant guidance to help students in their studies.

This system will be used to promote administrative and management excellence in the education system. Information Technology will be used to promote greater efficiency in administration and communication and to enable the principals to be more effective in managing the school. This system will involve transforming current methods towards adoption of new systems and practices.

1.2   Problem Statement

In many western schools, counseling system often acts as a tool to help their students in their academic journey. Counseling system usually focuses on new students and also students that are facing with problems in their studies. The aim of the disciplinary and counseling system is to help students to excel in their education by providing them with an advisor to guide them in their academic and also in their behavior. These advisors are expected to helps students in developing good social behaviour and discipline other than just guiding them in their academic performance. Both students and teachers are also expected to conduct meetings regularly in order to keep track of the progress and achievement during the counseling period. The meeting between teachers and parents are also necessary in order to keep parents aware of their children's problems and academic performance. However, problems always occur during the communication period, either between students and advisors or even between both students and advisors with parents.

1.3   Objectives and Scope of Study

1.3.1   Objectives:

The objective of this project is to assist the school to:

- Monitor students' behavior in school.
- Identify students with disciplinary problems.
- Identify students with study problems.
- Make parents aware of their children's behaviour all the time.

1.3.2   Scope of Study

This study focuses on managing the behavior of school students using an interactive web-based application for a better school environment. It is circulating the students' records of discipline problem. It is also a convenient system that is to be used by teachers and also parents who are concern about their children education progress.

Using SDCS, teachers and parents can monitor the students' behavior in school and they can provide counseling to reduce the problem. They also can organize Parent-Teacher Conference in order to overcome the problem.

The lists of functions that will be developed in this system are:

- Disciplinary Center
  - Disciplinary List
  - Student's Info
- Counseling Center
  - Student's Counseling
  - Teacher-Student Counseling
  - Parent-Teacher Conference

- Administrative Center
  - Counselors' List
  - Maintaining Disciplinary List
  - Maintaining Student's Info

CHAPTER 2: LITERATURE REVIEW

2.1   Disciplinary Problem in Schools

In the article entitled Lessons To Help Overcome Social Ills by Datuk Dr. Syed Othman Alhabshi, he stated that the concern for moral degradation and social ills that have been expressed by none other than our Prime Minister and other leaders is very real indeed (Alhabshi, 2006). There are so many social problems faced by teenagers, which are still in school. Some of the problems are bullying, social problems and so on.

2.1.1   Bullying

There's no doubt about it. In almost all schools, there will be bullies. Most children will either be bullied or see their friends suffer as victims of bullies. From hair-pulling, name-calling, pushing to asking for money, children do all sorts of things to each other.

However, there are also happy endings. Some bullies have stopped their naughty behavior and become friends with their schoolmates.

Ask any child what a bully looks like, and he or she is likely to describe someone who is bigger and stronger. Yet, while bullies certainly are known for their ability to overpower others physically, mental bullying can be just as damaging to children. When children are picked on by bullies, whether physically or mentally, many feel the need to suffer in silence for fear that speaking up will provoke further torture. But bullying is not a problem that usually just takes care of itself.

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2.1.2 Social Problems

Nowadays, there are many social problems that are faced by teenagers. One of them is problem that is related to sex. Zainah Anuar, in her article written in the **New Straits Times, dated 16 Mar 2007, said that** teenagers, whether Asians or Westerners, have the same raging hormones in their bodies. Many are curious about sex and many experiments. Many teenage girls are coerced into sex by their boyfriends (Anwar, 2007). Nowadays, we can see teenagers around us, not only dressed in improper attire but they also behave in rude ways. They seem to forget their culture and religion. For them, freedom and happiness must be their first aims. Their tradition culture and religion should be left behind because they only restrain them from achieving total freedom in their life.

2.2 Benefits of Counseling

Many studies have shown that the earlier the intervention, the better chance positive change will occur and be long lasting. Students will often decide in primary school if they like school and whether they enjoy learning. With a school counseling program, counselors work proactively as a team with other teachers and parents to create a caring atmosphere whereby children's needs are met through prevention and early identification.

Counseling can help to develop students' career awareness as a lifelong process of forming basic values, attitudes and interests regarding their future world of work. There are many benefits of counseling. Some of them are:
- Peace of mind
- Improved self-esteem
- More satisfaction out of life
- Personal growth

2.3 Using Open-Source Application

In this project, a web-based system will be developed to improve the management of school information and also to make school students get used to IT where they can do quizzes and exercise on-line. The system will be purely develop using Open Source technology, which consists of Open Source web programming language (PHP), Open Source database (MySQL), and also Open Source Web Server (Apache). The relevance of using Open Source technologies is to minimize the development cost and also minimize the adoption cost when the system completed soon.

Web-based system is known to be easily develop and can also be scalable. The Open Source community had also been actively researching on new solution to increase security. The project also has the aim to prove that Open Source and web-based driven system can be a powerful tool in executing everyday works. What's more, web-based system enables the system to be applied globally via the system network, be it intranet or even extranet.

2.4 Web-Based Application at Its Best

The Internet is the worldwide, publicly accessible network of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol (IP). It is a "network of networks" that consists of millions of smaller domestic, academic, business, and government networks, which together carry various information and services, such as electronic mail, online chat, file transfer, and the interlinked web pages and other documents of the World Wide Web. In her paper "Learning from the Web: Are Students Ready or Not", Azza Arif stated that web-based education system facilitates lecturer-students communication quite effectively, releasing the restriction of the classroom or the office and allowing accessibility to anyone from anywhere at anytime, a world-wide-web indeed (Arif, 2001).

2.5   Why Open Source?

The world of open-source software is nowadays a model of development, which widely spread of software with huge success and extent. Wheeler, in his article, stated that Open Source could be defined as programs whose licenses gives users the freedom to run the program for any purpose, to study and modify any program, and to distribute copies of either the original or modified program (without having to pay royalties to previous developers) (Wheeler, 2005). Any Open Source software can be released under some license so that the users may have the certain of right. For example, GNU General Public License (GPL) is one of the most popular open source licenses among Open Source developer. Most people tend to called "GPL software" to indicate the open source software.

There are several advantages that could be defined in applying the Open Source. Aethia Technology, an Open Source solution provider, stated that there are three major advantages by applying this Open Source. The quality of the software will be kept excellent because the developer might do more testing towards the software. This takes the software to high standards of reliability, stability, efficiency, flexibility and security.

The second advantage is saving. By using the open source, the developer or user can freely use and distribute without any licensed fee and restriction of use. This means that the user might save the cost due to the absence of user and renewal license fees and a greater simplicity in managing software. Open Source also offers installation without any number of limitations.

The third advantage is support. As many developers might use the software, the number of user manual may increase. It also might increase the information reachable on websites, newsgroup and mailing-lists that are all available in the Internet. The world of open-source is also very diverse and well-constructed and there are often many options choosing particular software.

2.6   PHP in Web World

Frank Deppenmeier, in his article stated that there are interesting alternatives to PHP such as ASP, JSP or Perl. While each of these languages has differences in syntax and structure, when it comes down to it, they can all produce the same results (Deppenmeier, 2002).

However, there are some strong advantages that underline putting PHP in favour. The first advantage is PHP is open source, which made it freely available as developers always work to improve, add to and find bugs in program. Using PHP, it is quicker and cheaper to find the cause of the bug, submit it to the maintainers and then carry on.

Second advantage is the tight integration between PHP and MySQL, as the system will be developed using MySQL as the database option. There are lots of PHP tools to manage and maintain MySQL databases. Furthermore, the feature set is complete compared to other databases.

The other advantage is the stability and compatibility of PHP that runs stable on a range of operating systems including most flavours of UNIX, Windows and Macs and integrates well with most popular servers including IIS and apache.

2.7   MySQL as the Database

According to Shop-Script WebAsyst Glossary, MySQL is an open source relational database management system (RDBMS) that uses Structured Query Language (SQL), the most popular language for adding, accessing, and processing data in a database. Because it is open source, anyone can download MySQL and tailor it to their needs in accordance with the general public license. MySQL is noted mainly for its speed, reliability, and flexibility.

MySQL database provides a more lean and flexible alternative. The MySQL code is efficiently optimized for speed. Because the core code having been written and maintained by a single programmer, it is more accurate. In his article on "Migrating from Microsoft SQL Server and Access to MySQL", Mike Hillyer stated that an independent study by Ziff Davis found MySQL to be one of the top performers in a group that included DB2, Oracle, ASE, and SQL Server 2000. MySQL is used by a variety of corporations that demand performance and stability including Yahoo!, Slashdot, Cisco, and Sabre. MySQL can help achieve the highest performance possible with your available hardware, helping to cut costs by increasing time between server upgrades (Hillyer, 2001)

CHAPTER 3: METHODOLOGY

3.1 Research Methodology

The methodology chosen for developing this system is the prototyping-based methodology, which performs the analysis, design and implementation phases concurrently. All these three phases will be performed repeatedly in a cycle until the system is completed.

A basic analysis and design will be performed and work will immediately begin on a system prototype, a program that provides a minimal amount of features. The first prototype is usually the first part of the system that the user will use. The feedback from the users will be used to reanalyze, redesign, and reimplement a second prototype that provides a few more features. This process continues in a cycle until the analysts, users, and sponsor agree that the prototype provides enough functionality to be installed and used.

The key advantage of a prototyping-based methodology is that it very quickly provides a system for the users to interact with, even if it is not initially ready to be used. Prototyping reassures the users that the project team is working on the system and the approach helps to more quickly refine real requirements. Rather than attempting to understand system specification materials, users can interact with the prototype to better understand what it can and cannot do.

3.1.1 Planning

In this first phase, brainstorming and problem identification will be done. The clear objective will be derived from the problem that had been identified. Multiple solutions will be tested and researched. Literature review will be done. In this project, the problem statement and also the scope of study had been clearly stated in Chapter 1. The objectives had also been stated within the same chapter. And during this phase, the project timeline and milestone had also been develop according to the duration that had been stated out by the Final Year Project Committee.

3.1.2 Analysis

The requirements gathering process takes as its input the goals identified in the high-level requirements section of the project plan. Each goal will be refined into a set of one or more requirements. These requirements define the major functions of the system, define operational data areas and reference data areas, and define the initial data entities. Major functions include critical processes to be managed, as well as mission critical inputs, outputs and reports. A user class hierarchy is developed and associated with these major functions, data areas, and data entities. Each of these definitions is termed a Requirement. Requirements are identified by unique requirement identifiers and, at minimum, contain a requirement title and textual description

3.1.3 Design

In this Design phase, the initial concept and storyboard of the whole SDCS system will be drawn. The design phase will correspond with the user feedback on each module that will be developed throughout the procedure. The design phase will be the first phase of the iterative phase of the prototyping methodology. During this phase, the main module in the system will be identified and the selected targeted audience will be listed.

The design phase will be run through out the project duration, because of the nature of this methodology. During this phase, the tools that are needed to be used in developing the system were identified. The best tools were selected in order to ease the development. The tools are expected to help cut the development time, while providing minimal cost.

3.1.4 Implementation

The Implementation phase is one of the time-consuming phases, whereby all the code-generating, programming and system-upgrading will be done. Using the module and also the story-board that were defined previously in the Design phase, the generation and development of the system can be started. Because of the nature of the iterative methodology, the development phase will also be influenced by the changing design phase.

The development also will be modularized, with an early prototype being develop at first. The prototype will be developed according to the percentage of the complete system, which means that the prototype can be use, however in a limited functionality. The development will also be depending on the feedback that will be received from the target user during the user review phase.

3.1.5 Test

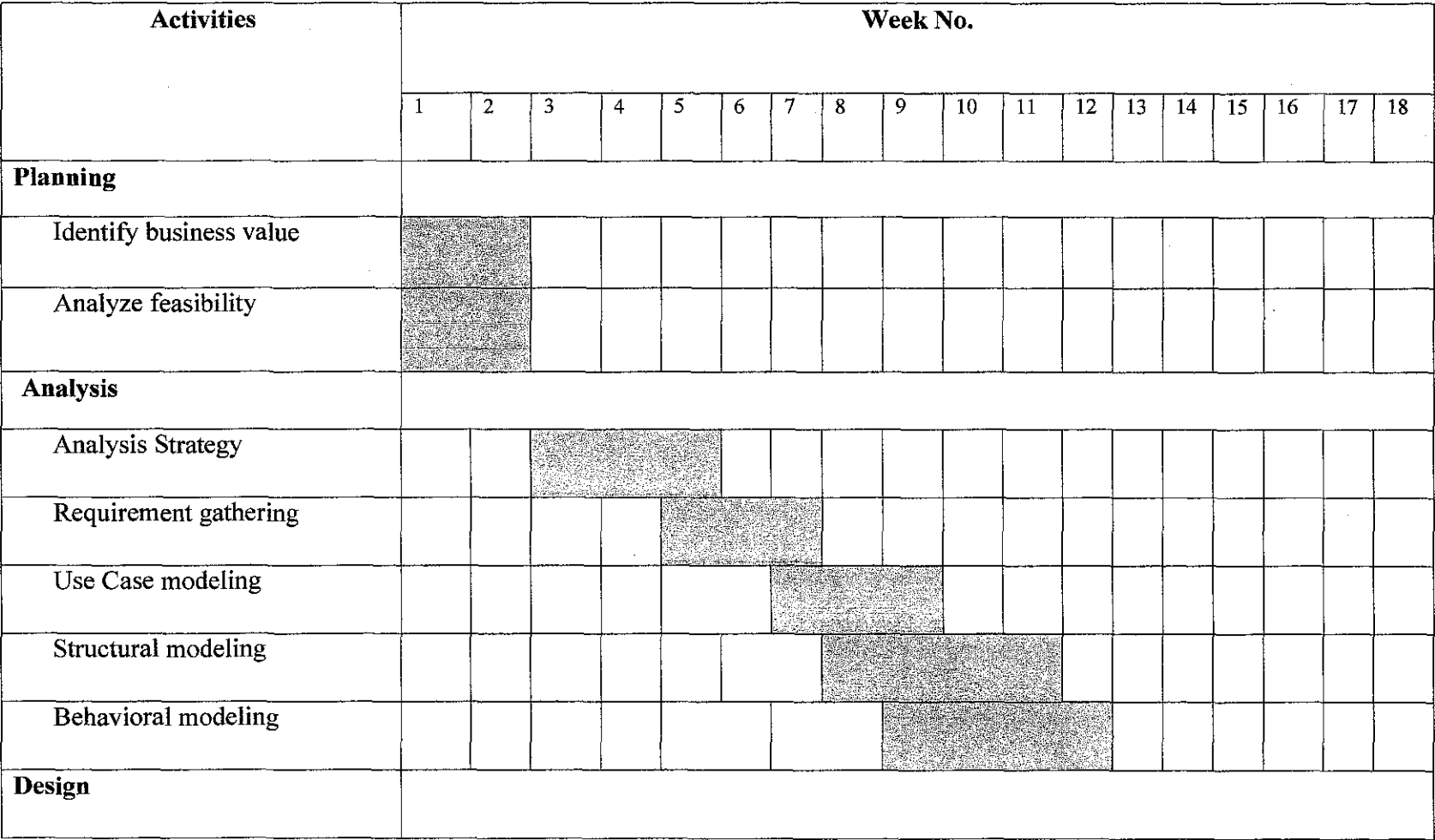During this phase, the target audience that had been defined and categorized during the Design phase will be ask to test the prototype that had been develop. The prototype will be made available to the intended user. The users will be expected to perform the usage of the system. The test will be conducted in the user own environments, which can help the system blend in with the environment of each target user.

3.1.6 User Review

In this phase, the feedback from the user will be collected, in order to further develop and enhance the usability of the system. During the test session, the user will be provided with survey form, which they can use to make comments and provide suggestions for the betterment of the system. The survey will then be collected and analyze, further turn into an easy to view tabular and graphical form. The result that will be achieved in this phase will help the Design and Implementation phases.

3.1.7 Installation

Installation will be done after all the module had been complete, which means the installation is the last phase after all the feedback and user review for each prototype had been completed. Installation will not be about prototype anymore, but it will be the phase whereby the real product, in this case, the finished SDCS system will be officially completed and launch. There will be no more iterative process after the installation had been commenced. Nonetheless, there will still be minor updates in order to keep the system stable and reliable with any current situation. As all users should know, support is a critical issue when developing a system.

Activities	Week No.																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Planning																		
Identify business value	▓	▓																
Analyze feasibility	▓	▓																
Analysis																		
Analysis Strategy			▓	▓														
Requirement gathering					▓	▓												
Use Case modeling							▓	▓										
Structural modeling								▓	▓									
Behavioral modeling									▓	▓								
Design																		

Task																			
System design					▓	▓													
Network architecture design						▓	▓												
Database Design							▓	▓											
Interface design								▓	▓										
Implementation																			
System development					▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓			
Test																▓	▓		
Installation																▓	▓		
Support plan																▓	▓	▓	
Project Management	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	

3.2 Tools

There are many tools that can be used to develop web-based system but in order to develop a good and interactive system, a number of quality tools are needed. Therefore, the project will utilize the best tools for the best possible outcome during the development phase of SDCS. The tools were selected after a study and survey on various tools use in developing web-based system. The following is the list of selected tools that will be used during the development process of the system.

3.2.1 Adobe Macromedia Dreamweaver 8

Macromedia Dreamweaver is a web development tool, created by Macromedia (now Adobe Systems), which is currently in version 8. Initial versions of the application served as simple WYSIWYG HTML editors but more recent versions have incorporated notable support for many other web technologies such as CSS, JavaScript, and various server-side scripting frameworks, such as Active Server Pages (ASP), ASP.NET, ColdFusion, JavaServer Pages (JSP), PHP, and more.

Adobe Macromedia incorporates dynamic content creation tools into Dreamweaver. In the spirit of HTML WYSIWYG tools, it allows users to connect to databases, such as MySQL and Microsoft Access, to filter and display content using scripting technologies. Because of the variety of functions available in Dreamweaver and also the ease of use of this application in contrary with other Web Editor available today, this tool had been selected as one of the tools that will be used in the development stage. Dreamweaver also provides management tool that can manage the connection between the web files and also the server, which can ease the publishing of the website. Dreamweaver is also known to be compatible with Windows-based and also Mac-based operating system.

3.2.2 phpMyAdmin

phpMyAdmin is a popular, powerful web-based interface for administering MySQL databases. It is open source, written in PHP, and is among the better tools available for working with MySQL databases.Currently, phpMyAdmin can create and drop databases, create, drop or alter tables, delete, edit or add fields, execute any SQL statement, and manage keys on fields. It is an Open Source project develops by the phpMyAdmin team. Because of the nature that the application is develop using PHP scripting, the application is surely platform-independent, in which it can be install on any type of operating system, provided a web server is present. Another advantage of phpMyAdmin is that it allows you to easily transfer or backup a database from one server to another. Furthermore, being a web-based MySQL administration tool, phpMyAdmin ensure you that administrable process of MySQL can be done remotely, anytime, anywhere, regardless what platform are you on.

System	Windows NT COMPAQ 5.1 build 2600
Build Date	May 2 2007 19:17:46
Configure Command	cscript /nologo configure.js "--enable-snapshot-build" "--with-gd=shared"
Server API	Apache 2.0 Handler
Virtual Directory Support	enabled
Configuration File (php.ini) Path	C:\WINDOWS
Loaded Configuration File	D:\xampp\apache\bin\php.ini
PHP API	20041225
PHP Extension	20060613
Zend Extension	220060519
Debug Build	no
Thread Safety	enabled
Zend Memory Manager	enabled
IPv6 Support	enabled
Registered PHP Streams	php, file, data, http, ftp, compress.zlib, https, ftps, zip
Registered Stream Socket Transports	tcp, udp, ssl, sslv3, sslv2, tls
Registered Stream Filters	convert.iconv.*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.*, consumed, zlib.*

Figure 1: PHP Configuration

mysql

MySQL Support	enabled
Active Persistent Links	0
Active Links	0
Client API version	5.0.41

Directive	Local Value	Master Value
mysql.allow_persistent	On	On
mysql.connect_timeout	60	60
mysql.default_host	no value	no value
mysql.default_password	no value	no value
mysql.default_port	no value	no value
mysql.default_socket	no value	no value
mysql.default_user	no value	no value
mysql.max_links	Unlimited	Unlimited
mysql.max_persistent	Unlimited	Unlimited
mysql.trace_mode	Off	Off

Figure 2: MySQL Configuration

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3.2.3 Web Server

Web server is important in order to develop a web-based online system or application such as SDCS. SDCS will be developed in a secure system, running Windows XP Professional SP2 with Avast Anti Virus. The web server application that will be used is based on Apache Web Server v2.0.55. The PHP module that will be used is from the version 4.4.0, while the MySQL server is running on version 4.1. Most of these applications are from the latest version to ensure reliability, availability and security.

The hardware specification of the system that will be used in developing SDCS is also important. The development will be done using a decent system, on an AMD Athlon64 X2 Dual Core Processor 4200+ with 512K L2 cache. The system boot up with 1 Gigabyte of 400MHz DDR-SDRAM. With a capacity of minimum 250 Gigabyte hard disk drive, the system will not run out of space for development purposes.

3.2.4 Adobe Photoshop CS2 with Adobe ImageReady

Adobe Photoshop is a graphics editor developed and published by Adobe Systems, with the latest version being v9.0 or known as Adobe Photoshop CS2, a second version under the Creative Suite (CS) package. Photoshop is the leading industry standard for professional photo editing, graphic design, and digital imaging. Photoshop offers more non-destructive ways of working than any other photo editor, and Adobe is always adding enhancements to help get the job done faster and with less frustration.

Although the application was primarily designed to edit images for paper-based printing, Photoshop is used increasingly to produce images for the World Wide Web. Recent versions bundle a related application, Adobe ImageReady, to provide a more specialized set of tools for this purpose. Because of this, Adobe Photoshop with ImageReady is the perfect tool in developing user interface and graphical elements for SDCS web-based system.

Chapter 4: RESULT AND DISCUSSION

For the requirement gathering and analysis, there are two sets of questions that have been used to analyze the feasibility of the system. The first set is intended to gather information using questionnaires method and the second set is using the structured interview method of data gathering.

The questionnaires were given in order to investigate if there is a need for the system which is School Disciplinary and Counseling System. After the result has been analyzed, the results shown that there is a need for the system and then the interview was done in order to capture the information on what are the feature that the intended users want to be provided by the system.

Below are the sets of questions that have been used in data gathering process.

4.1 Data Gathering Analysis

4.1.1 Questionnaires

1. Have you ever heard about Disciplinary and Counseling System?

   a. Yes

   b. No

2. If you were given a system to monitor all the disciplinary problems and counseling session for students with problems, will you make use of it?

   a. Yes

   b. No

3. In your opinion, will the system be useful to the school?

   a. Yes

   b. No

4. Do you think the system will help the teachers and parents to monitor the students' behavior in school?

   a. Yes

   b. No

5. Do you think the system is practical enough to be applied in all school in Malaysia?

   a. Yes

   b. No

Figure 3: Questionnaires

The analyses of the data gathering using questionnaires are as follow:
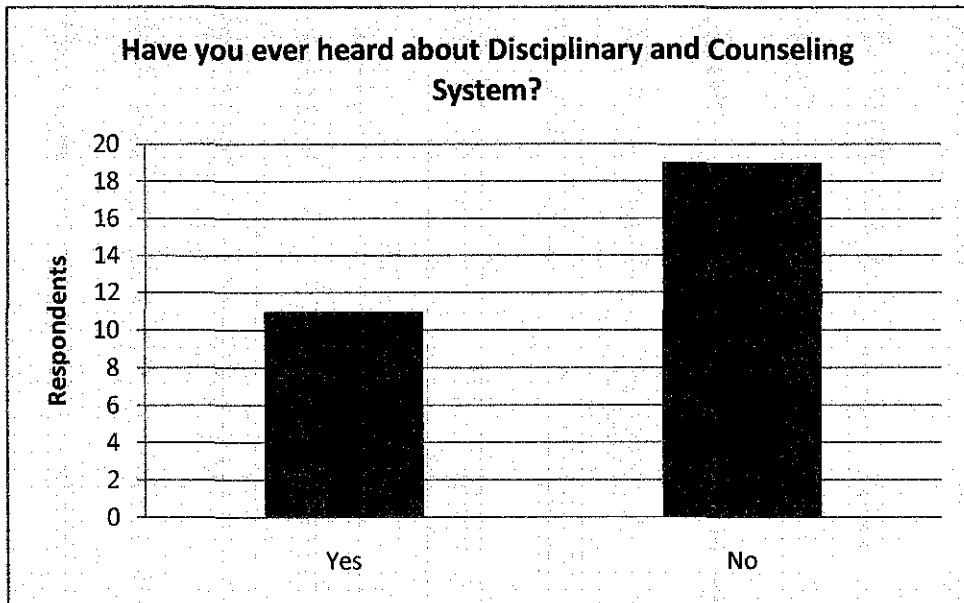
Figure 4: Awareness of the system

Based on the bar chart above, we can see that from thirty respondents, only eleven of them were aware of this kind of system. They may come across this kind of system from article and the Internet.

On the other hand, there are about nineteen respondents, which is 63% of them were unaware of this kind of system. This is not unexpected as this kind of system is only popular and has been used in western country like United State of America and also Britain.
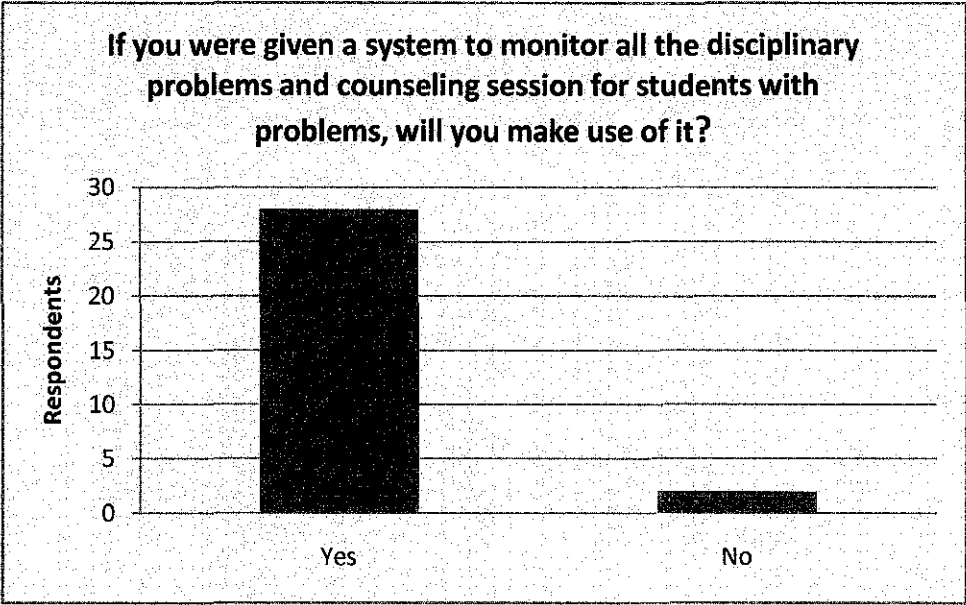
Figure 5: Willingness to use the system

From Figure 4 above, we can see that almost twenty-eight respondents are willing to use this system if they were given such system. It is very convincing that this system is somewhat will be a success because of the willingness of the respondents about using the system that will be applied by the schools.
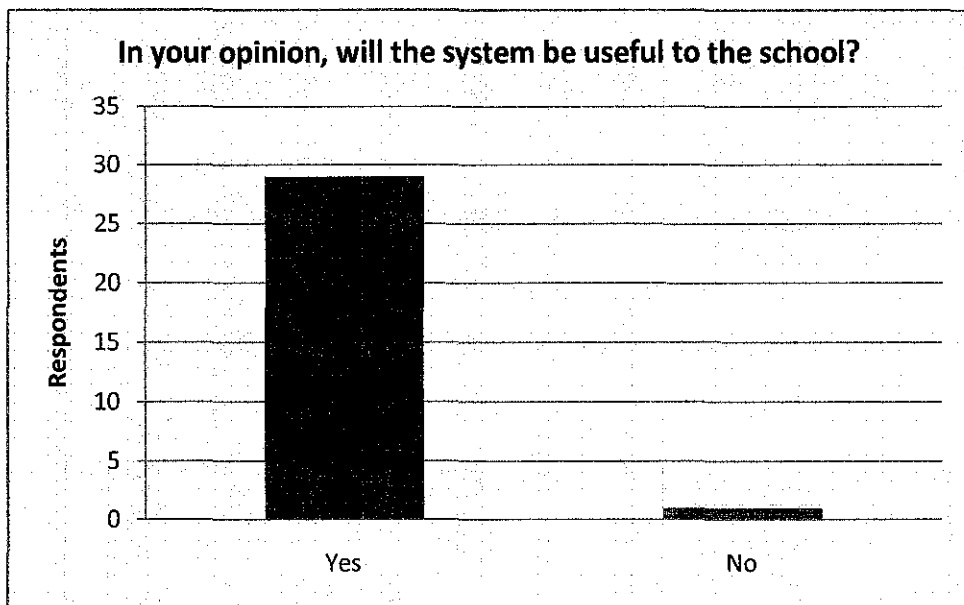
Figure 6: Use of system

From the questionnaires, it is known that almost all the thirty repondents think that this system will be useful to their schools. This is a sign that this system is needed by them in order to be able to monitor their students.

For respondents who were not agree that the system will be useful to the schools, they might be thinking that it is hard to implement this technology where teachers will have to learn on how to use it before they can really make use of the system.
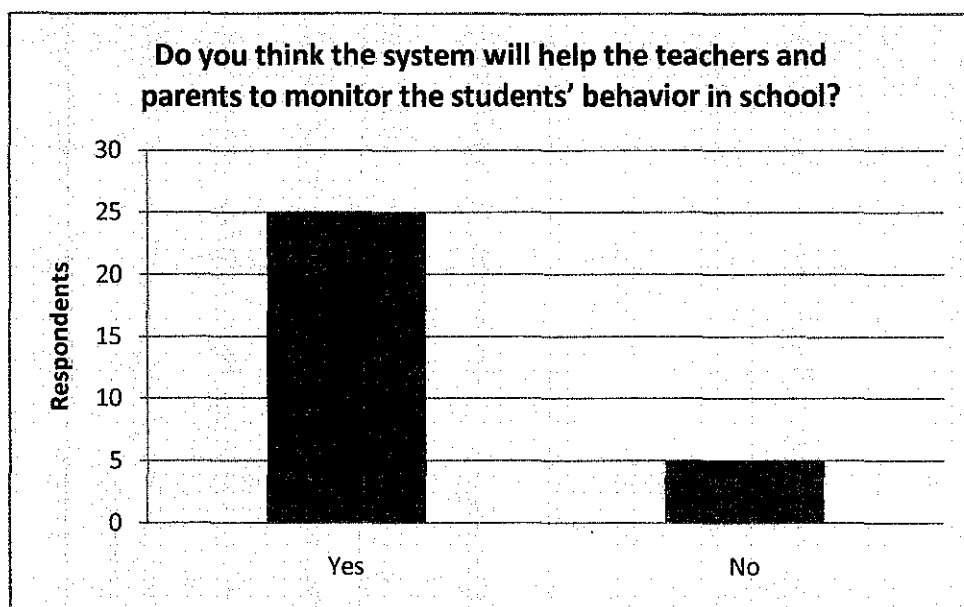
Figure 7: System's function

Based on the bar chart above, we can see that twenty-five of thirty respondents think that this system will help the teachers and parents to monitor the students' behaviour in school.

There are five respondents answered no to the question which means that only a few of them think that this system will not be much useful to them. This is maybe because they did not think that students' behaviour can be monitored by using such technology.
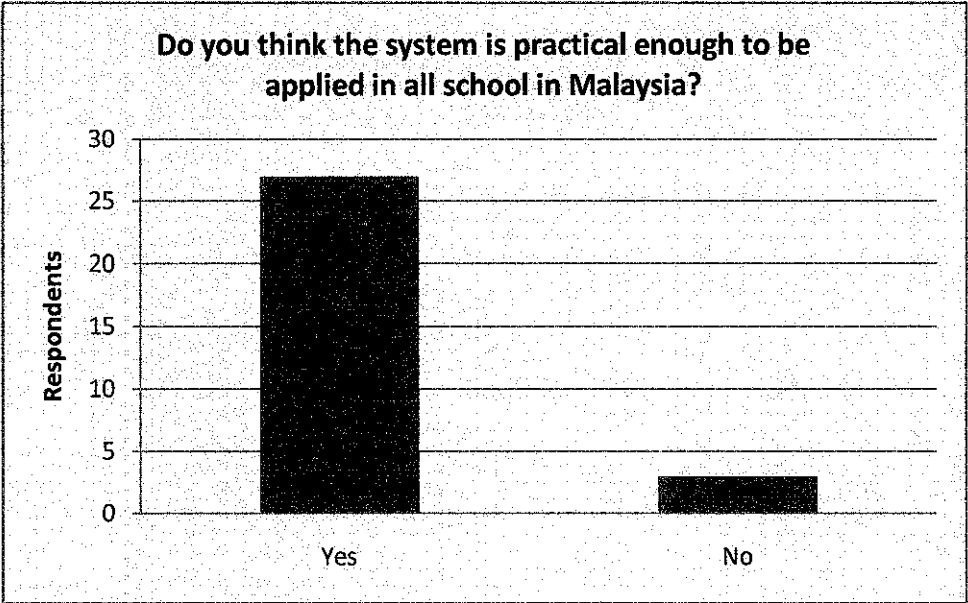
Figure 8: Practicality of the system

For the last question, we can see that twenty-seven of thirty respondents said that they think that the system is practical enough to be applied in all school in Malaysia. For those who answered no, it is maybe because they do not believe the capability of information technology to take over the traditional way of managing students.

4.1.2 Interview

1. What is the current problem in your school?

2. What is the statistic of disciplinary problems in your school?

3. How does your school react when there are problems regarding the students occurred?

4. What kind of punishment would be given to the students?

5. Is there any counseling session provided for the students?

6. What would you say if you were given a system to monitor all the problems and counseling session for students with problems?

7. What other functions would you want to be provided by the system?

Figure 9: Interview Questions

Based on the interview with some school teachers in Sekolah Kebangsaan Tanah Putih Baru, Kuantan, we can summarize that disciplinary is one of the major problems in schools nowadays followed by social problems.

For the current moment, these two schools are still using manual method of organizing the cases of disciplinary problems. Usually, the school will give warning to students with problems before informing their parents. This is not very useful because the students often ignore the warning given by their teachers.

As for the counseling system, they are still using papers to record all the cases and progress of the students. It is kind of hard for them to monitor these students' behavior and progress of the counseling session.

Based on the findings from the data gathering process, there are some functions that the users would want to be provided by the system, which are:

- Equally distributed students among teachers whom will be the counselors.
- Report generation after each counseling session for documenting purposes.
- Report should include all these information:
    - Student's name
    - Student's IC Number
    - Counselor's name
    - Type of problem
    - Date of counseling session
    - Comment on the student's progress after each session

Lastly, most of the interviewees think that SDCS will be useful for them to monitor all the students' disciplinary problems and also to monitor the counseling session given to the students.
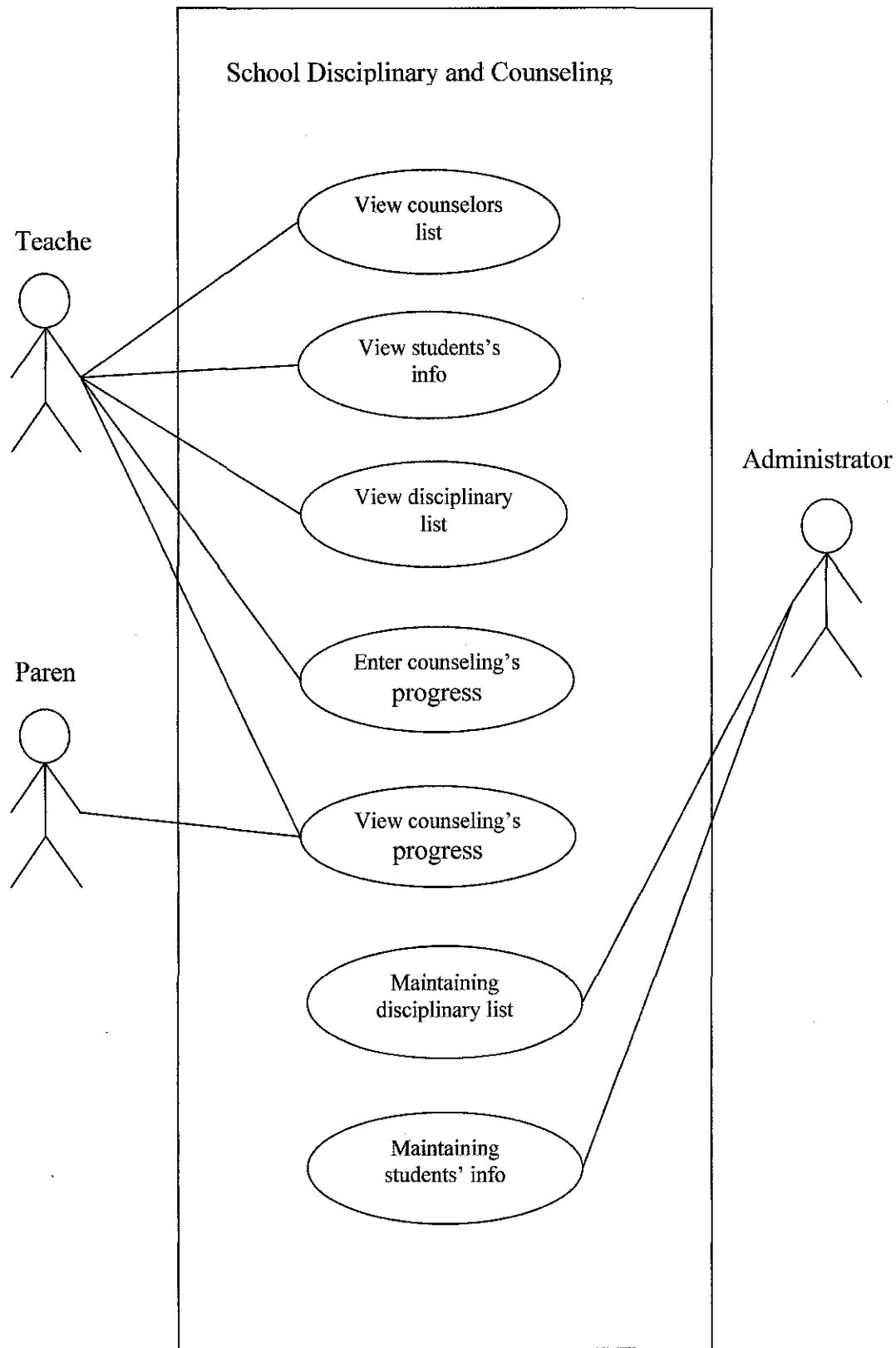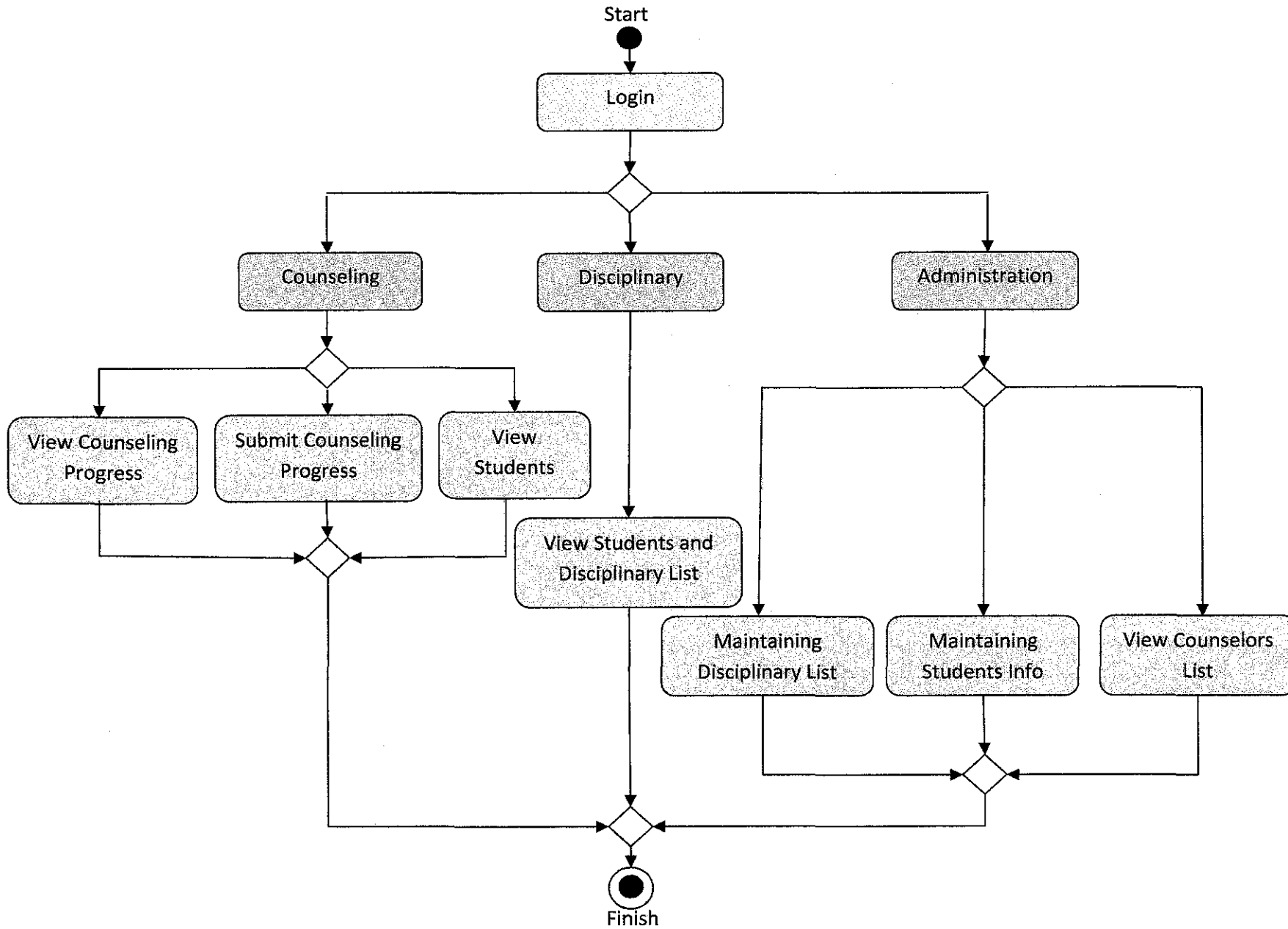
4.2   Experimentation/Modelling

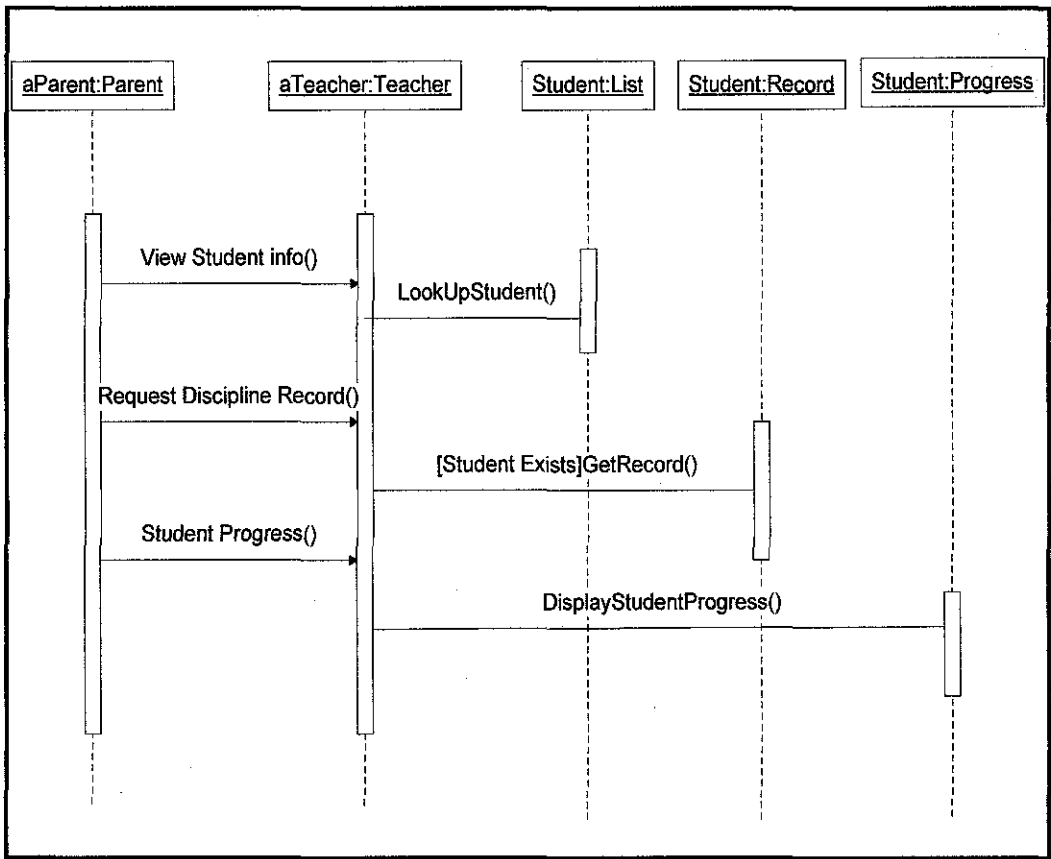**Figure 10: Use Case Diagram**

Activity Diagram

Figure 12: Sequence Diagram
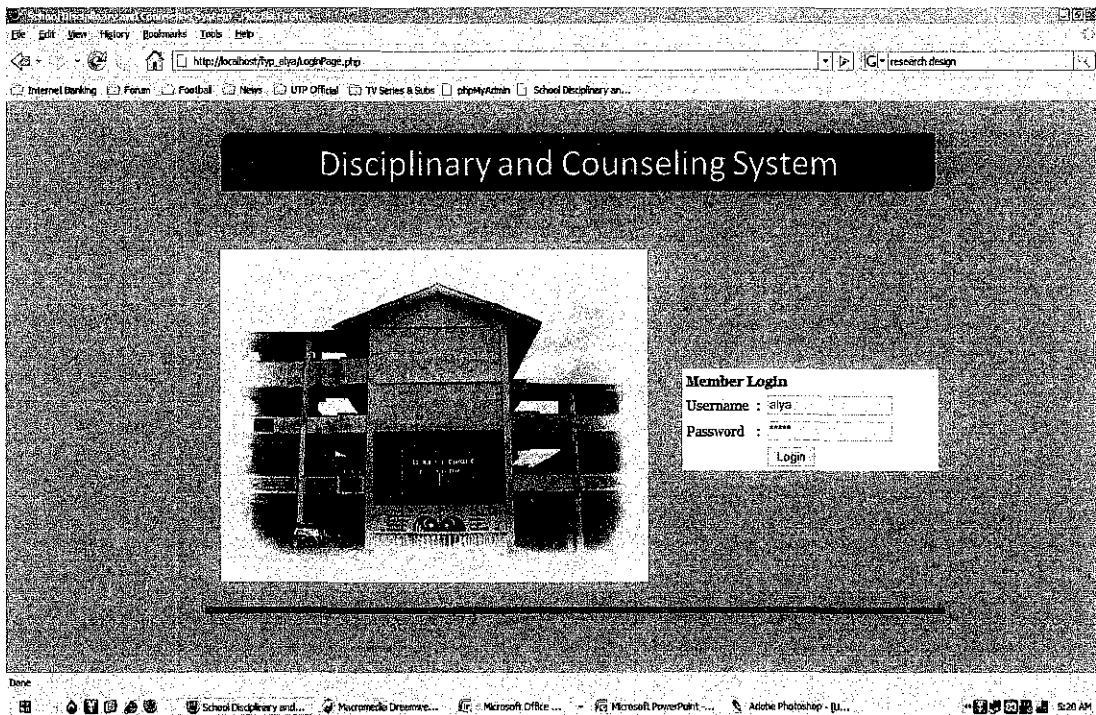
4.2.1 Screenshots

Figure 13: Login Page

The SDCS login system will authenticate the users before the can enter the system. There are two types of user which are administrator (teachers) and normal users (parents).If the users entered the correct username and password, they will successfully log in to the system, and the system will show a message "The user has logged in successfully".

As shown in the figure above, the login form is located at the center, on the right of the page. The reason why author does not include as much graphic as possible is to capture users' attention to the important function which is login form. Soft colour is being used in order to make the page looks professional and not dull.
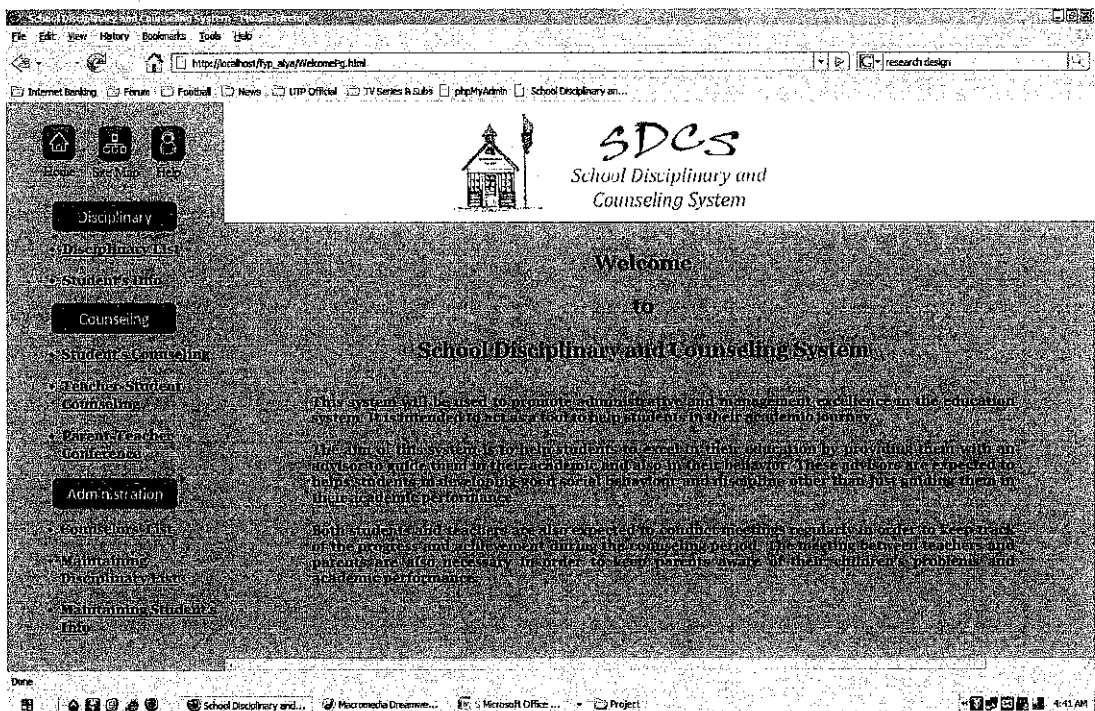
Figure 14: Welcome Page

This is the welcome page of the system which is the Main Page once the users have logged in into the system. It basically tells what the system is and this is where the functions and links that are provided by the system are shown.

From here, users can choose where they want to go. If the users are the administrators, they will have full access of the system while parents will have some restriction to which extent that they can go to. For example, parents will not have the authorization to click the 'Administration' link.
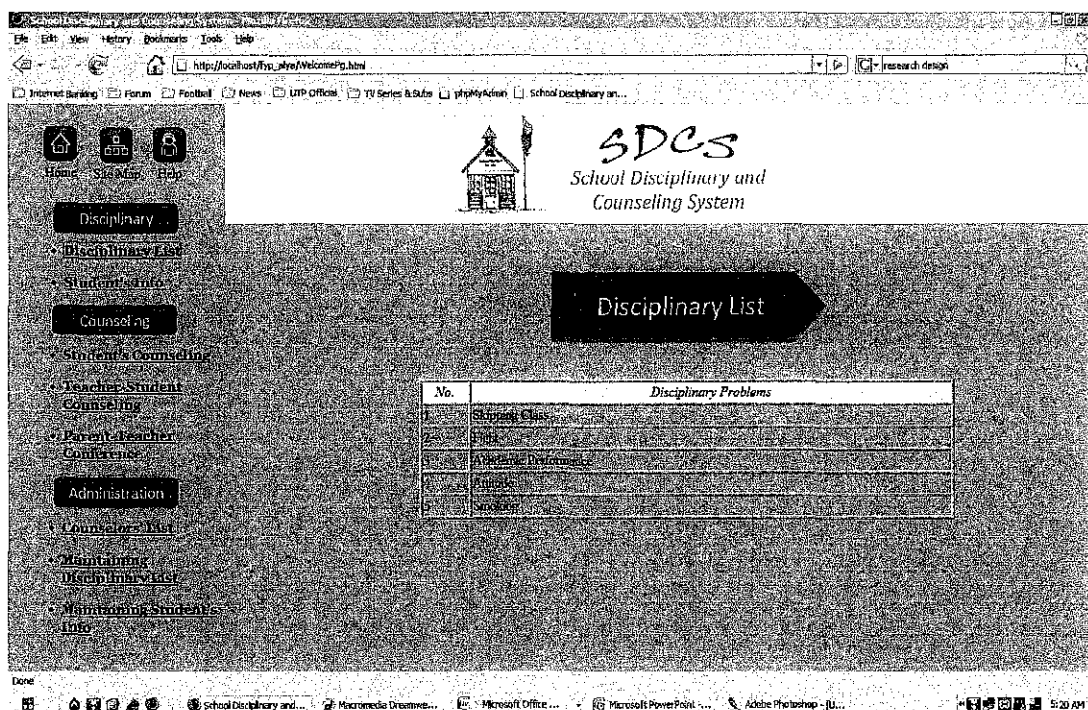
Figure 15: Disciplinary List Page

This page will show the users all the disciplinary types that have been committed by the students of the school.
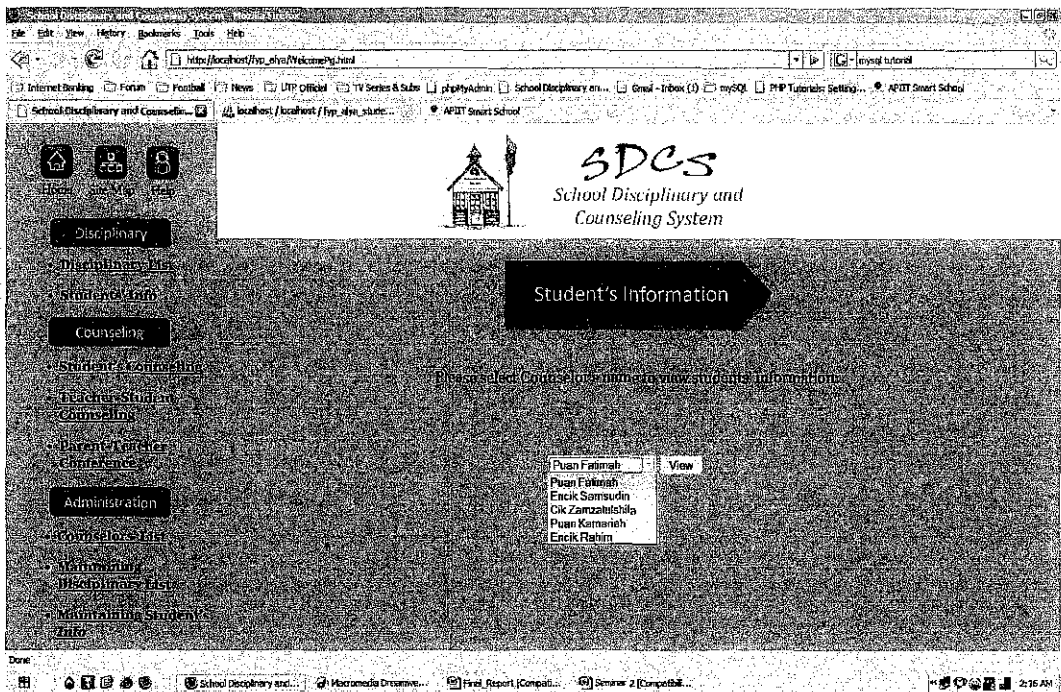
Figure 16: Select Student's Information Page

If the teachers want to view the students' information, they will have to select the name of the counselor before they can proceed. After the users have selected the counselor's name, they have to click the 'View' button in order to go to the next page.

Then the information of all the students under that counselor will appear.
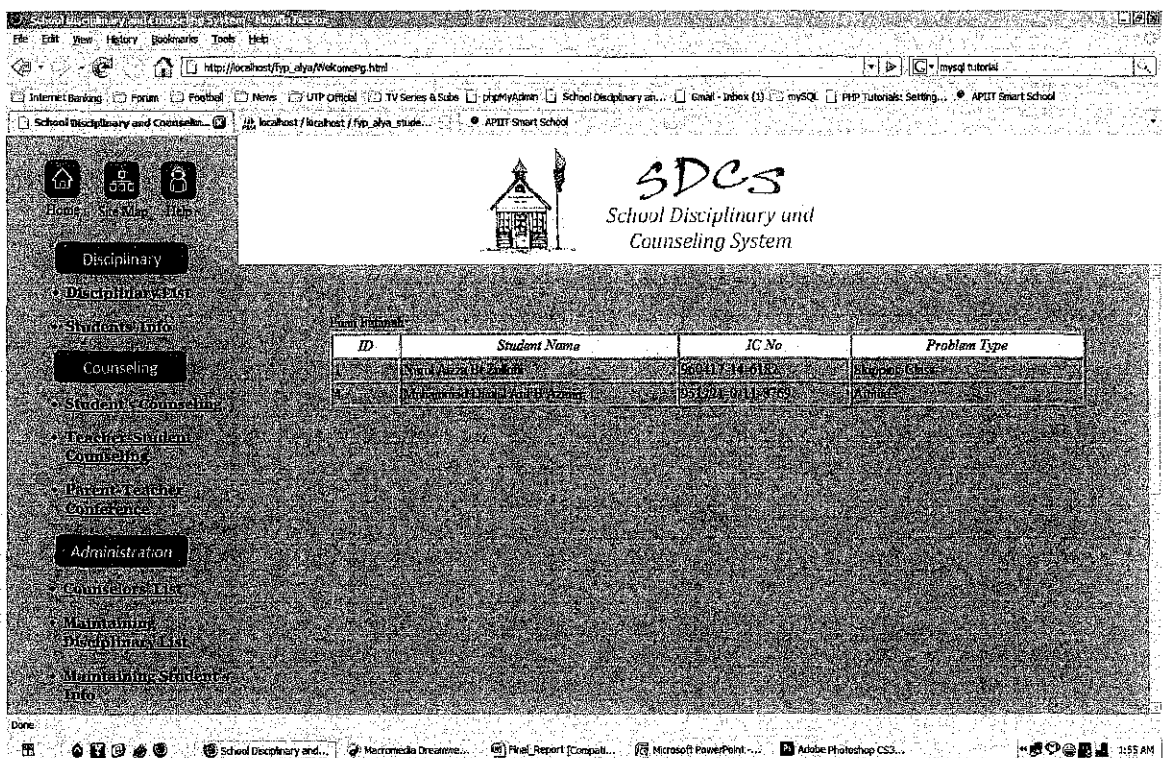
Figure 17: Student's Information Page

This is the page where the students' information will be shown. However, this page can only be accessed by the teachers and administrators as the information of all students are considered confidential to protect their privacy.
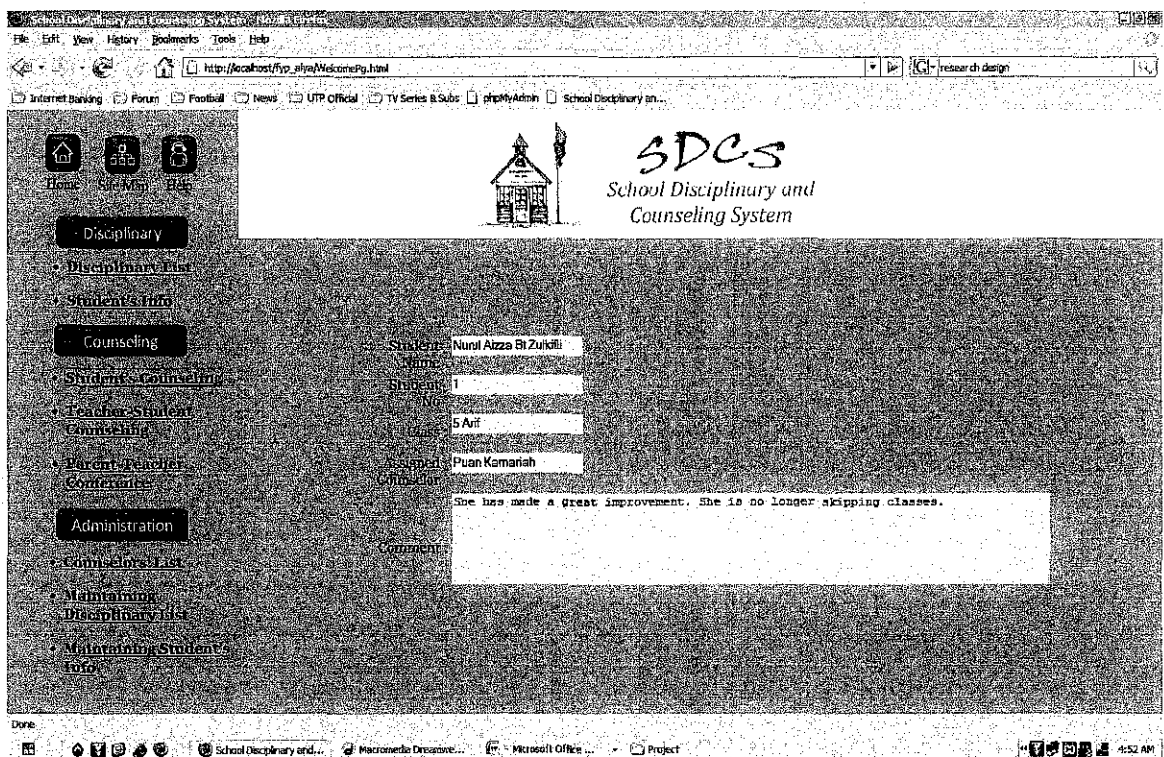
Figure 18: Student's Counseling Page

Parents can only view their child's progress of counseling on this page where they will be directed to only their child's information.
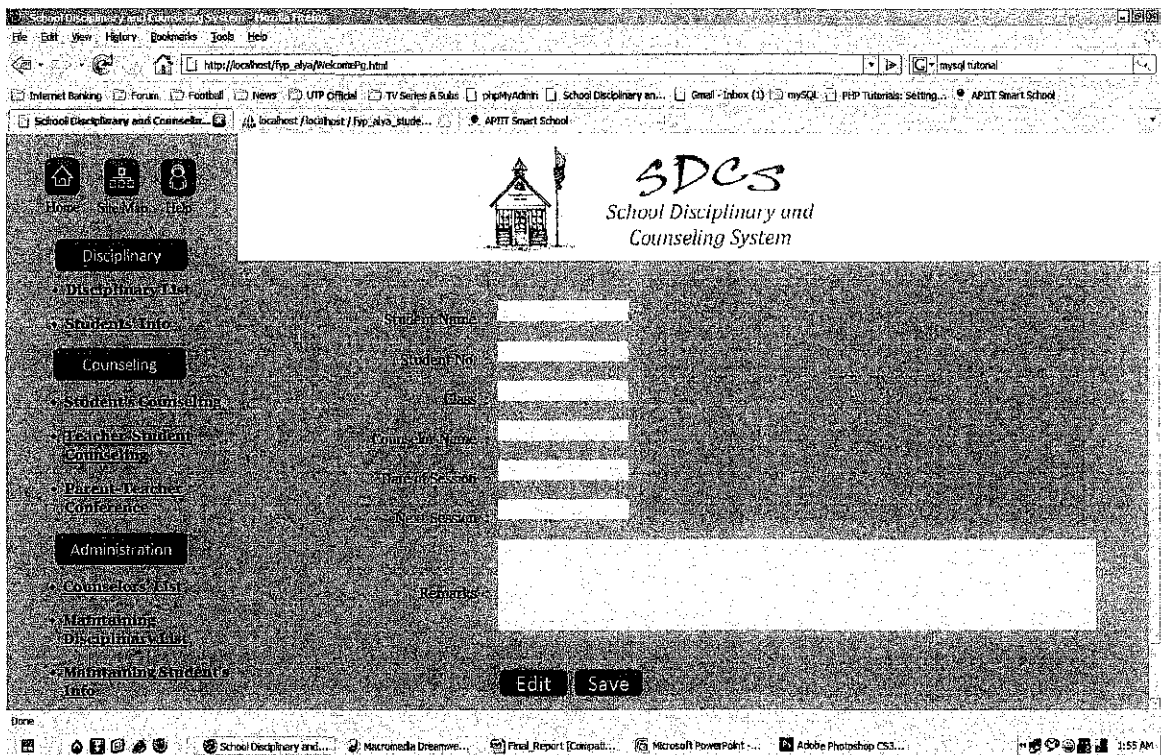
Figure 19: Teacher-Student Counseling Page

Teachers, which are also the counselors can submit the comment and progress in every counseling session on this page. After the 'Submit' button has been clicked, the database will be updated and available for parents to view.

Figure 20: Counselors' List Page

As shown above, this is the Counselors' List page where all the counselors of the school will be listed.

CHAPTER 5: CONCLUSION

As the conclusion, the development of School Disciplinary and Counseling System will give many benefits for a better school management system compared to the current method of using paper to keep all the school records.
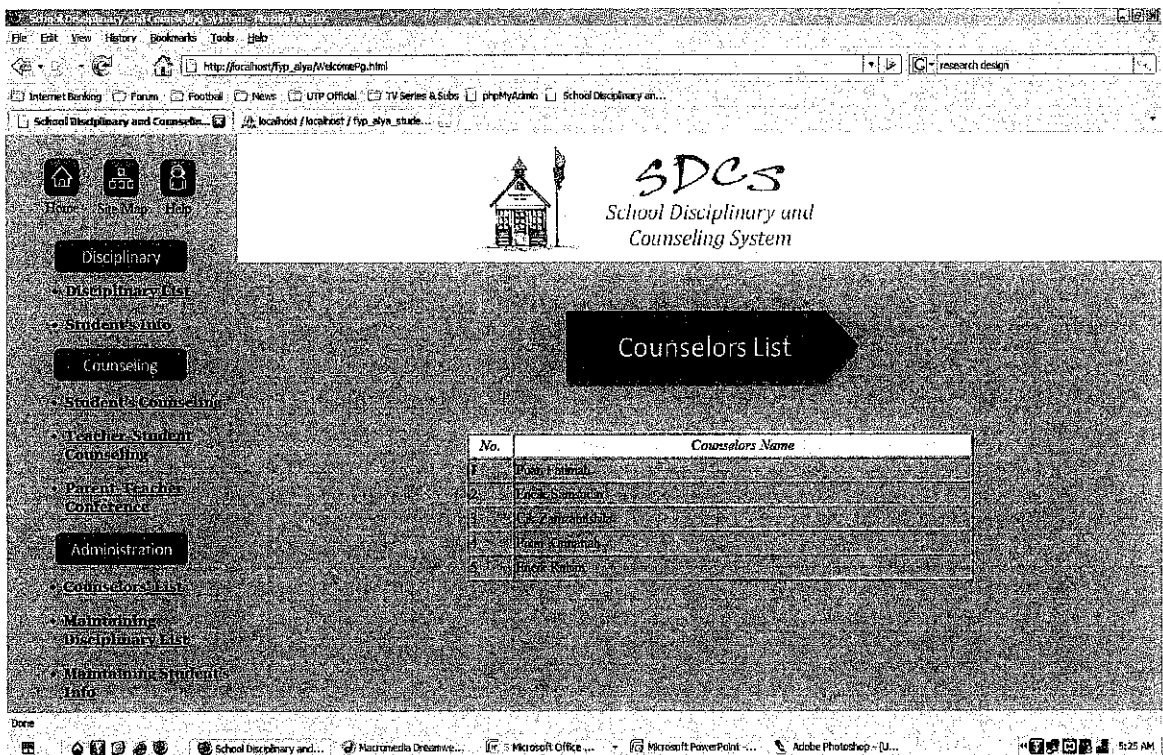
It will provide the teachers with tools to manage and monitor students' disciplinary records and counseling session efficiently while parents can monitor their children's education and behavior progress in order to make sure that they have the best education for their future.

The system will apply both the author knowledge about programming and also knowledge gain by doing additional research. Using open source applications is a solution that can bring great alternative in comparison with other propriety solution. Open Source is on its way to the top.

From the analysis that had been carried out, we can conclude that most of the respondents demand a new system which will be able to suit their needs and improve the traditional way of keeping record of disciplinary cases and also managing the counseling session effectively. At the early stage in the development phase, the system will not fully functioning but despite that, the system will be developed without sacrificing the concept of Human-Computer Interaction (HCI).

Lastly, the system is hopefully successful for a better management of school information.

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APPENDICES

Database Design

user_account Table

Field	Type
username	varchar(12)
password	varchar(8)

student_info Table

Field	Type
studentID	int(100)
studentName	varchar(50)
icNo	varchar(50)
counselorID	int(50)
problemID	int(50)
comment	varchar(500)
dateSession	date
nextSession	date

counselor_info Table

Field	Type
counselorID	int(50)
counselorName	varchar(50)
studentID	int(100)

problem_type Table

Field	Type
problemID	int(50)
problemType	varchar(50)

Login Page

```
<form name="form1" method="post" action="checklogin.php">

<td>

<table width="100%" border="0" cellpadding="3" cellspacing="1" bgcolor="#FFFFFF">

    <tr>

    <td colspan="3"><font face="Georgia, Times New Roman, Times,
serif"><strong>Member

    Login </strong></font></td>

    </tr>

    <tr>

    <td width="78"><font face="Georgia, Times New Roman, Times,
serif">Username</font></td>

    <td width="6"><font face="Georgia, Times New Roman, Times, serif">:</font></td>

    <td width="294"><font face="Georgia, Times New Roman, Times, serif">

    <input name="username" type="text" id="username">

    </font></td>

    </tr>

    <tr>

    <td><font face="Georgia, Times New Roman, Times, serif">Password</font></td>

    <td><font face="Georgia, Times New Roman, Times, serif">:</font></td>

    <td><font face="Georgia, Times New Roman, Times, serif">

    <input name="password" type="password" id="password">
```

```html
      </font></td>

    </tr>

    <tr>

      <td><font face="Georgia, Times New Roman, Times, serif"> </font></td>

      <td><font face="Georgia, Times New Roman, Times, serif"> </font></td>

      <td><font face="Georgia, Times New Roman, Times, serif">

        <input type="submit" name="Submit" value="Login">

        </font></td>

    </tr>

    </table>

</td>

</form>
```

To check login

```php
<?php

$host="localhost"; // Host name

$username="root"; // Mysql username

$password=""; // Mysql password

$db_name="fyp_alya_student"; // Database name

$tbl_name="user_account"; // Table name


// Connect to server and select databse.

mysql_connect("$host", "$username", "$password")or die("cannot connect");

mysql_select_db("$db_name")or die("cannot select DB");


// username and password sent from signup form

$username=$_POST['username'];

$password=$_POST['password'];


$sql="SELECT * FROM $tbl_name WHERE username='$username' and
password='$password'";

$result=mysql_query($sql);
```

```php
// Mysql_num_row is counting table row

$count=mysql_num_rows($result);

// If result matched $myusername and $mypassword, table row must be 1 row


if($count==1){

// Register $myusername, $mypassword and redirect to file "WelcomePg.html"

session_register("username");

session_register("password");

header("location:WelcomePg.html");

}

else {

echo "Wrong Username or Password";

}

?>
```

To view list (disciplinary, counselors)

```php
<?php

        extract( $_POST );


        print ($select);


                mysql_connect("localhost", "root", "");

                mysql_select_db("fyp_alya_student");



                $result = mysql_query("SELECT problemID, 'problemType FROM
                `problem_type`");



                while($row = mysql_fetch_array($result))

                {

                        echo "<tr>";

                        echo "<td>".$row[ 'problemID' ]. "</td>";

                        echo "<td>".$row[ 'problemType' ]. "</td>";

                        echo "</tr>";

                }

        ?>
```

To view student's info

```php
<?php

    extract( $_POST );

    print ($select);

    if($select == 'Puan Fatimah')

    {

        mysql_connect("localhost", "root", "");

        mysql_select_db("fyp_alya_student");


        $result = mysql_query("SELECT a.studentID, a.studentName, a.icNo,
        b.problemType FROM student_info a, problem_type WHERE
        a.problemID = b.problemID AND counselorID = 1");


        while($row = mysql_fetch_array($result))

        {

            echo "<tr>";
            echo "<td>".$row[ 'studentID' ]. "</td>";
            echo "<td>".$row[ 'studentName' ]. "</td>";
            echo "<td>".$row[ 'icNo' ]. "</td>";
            echo "<td>".$row[ 'problemType' ]. "</td>";
            echo "</tr>";

        }

    }


    elseif($select == 'Encik Samsudin')

    {

        mysql_connect("localhost", "root", "");
```

```php
mysql_select_db("fyp_alya_student");

$result = mysql_query("SELECT a.studentID, a.studentName, a.icNo,
b.problemType FROM student_info a, problem_type WHERE
a.problemID = b.problemID AND counselorID = 2");


while($row = mysql_fetch_array($result))
{
        echo "<tr>";

        echo "<td>".$row[ 'studentID' ]. "</td>";

        echo "<td>".$row[ 'studentName' ]. "</td>";

        echo "<td>".$row[ 'icNo' ]. "</td>";

        echo "<td>".$row[ 'problemType' ]. "</td>";

        echo "</tr>";

}
}


elseif($select == 'Cik Zamzatulshila')
{
        mysql_connect("localhost", "root", "");

        mysql_select_db("fyp_alya_student");

        $result = mysql_query("SELECT a.studentID, a.studentName, a.icNo,
        b.problemType FROM student_info a, problem_type WHERE
        a.problemID = b.problemID AND counselorID = 3");
```

```php
while($row = mysql_fetch_array($result))
{
        echo "<tr>";

        echo "<td>".$row[ 'studentID' ]. "</td>";

        echo "<td>".$row[ 'studentName' ]. "</td>";

        echo "<td>".$row[ 'icNo' ]. "</td>";

        echo "<td>".$row[ 'problemType' ]. "</td>";

        echo "</tr>";

    }

}


elseif($select == 'Puan Kamariah')
{
        mysql_connect("localhost", "root", "");

        mysql_select_db("fyp_alya_student");

        $result = mysql_query("SELECT a.studentID, a.studentName, a.icNo,
        b.problemType FROM student_info a, problem_type WHERE
        a.problemID = b.problemID AND counselorID = 4");


        while($row = mysql_fetch_array($result))
        {
                echo "<tr>";

                echo "<td>".$row[ 'studentID' ]. "</td>";

                echo "<td>".$row[ 'studentName' ]. "</td>";

                echo "<td>".$row[ 'icNo' ]. "</td>";

                echo "<td>".$row[ 'problemType' ]. "</td>";

                echo "</tr>";
```

```php
        }

    }


else

{

        mysql_connect("localhost", "root", "");

        mysql_select_db("fyp_alya_student");

        $result = mysql_query("SELECT a.studentID, a.studentName, a.icNo,
        b.problemType FROM student_info a, problem_type WHERE
        a.problemID = b.problemID AND counselorID = 5");

        while($row = mysql_fetch_array($result))

        {

                echo "<tr>";

                echo "<td>".$row[ 'studentID' ]. "</td>";

                echo "<td>".$row[ 'studentName' ]. "</td>";

                echo "<td>".$row[ 'icNo' ]. "</td>";

                echo "<td>".$row[ 'problemType' ]. "</td>";

                echo "</tr>";

        }

}
?>
```

To insert data into database

```php
<?php

        extract( $_POST );


        $query = "INSERT INTO student_info " .

                "( studentID, studentName, icNo,counselorName,
                dateSession,nextSession,comment)" .

                "VALUES ( '$sID', '$sName', 'icNo', '$cName, '$date', '$next', '$comment'
                )";



        //Connect and select a database

        mysql_connect("localhost", "root", "*******");

        mysql_select_db("fyp_alya_student");



        mysql_query($query);


?>
```