Persatuan Seni Silat Cekak Malaysia Universiti Teknologi PETRONAS (PSSCM UTP) Members Management System

By

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the requirements for the
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CERTIFICATION OF APPROVAL

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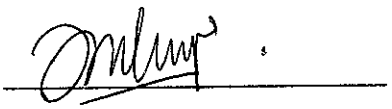
UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK
January 2008

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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Date : **16th May 2008**

ABSTRACT

This paper describes the development of an automated members management system for Persatuan Seni Silat Cekak Malaysia Universiti Teknologi PETRONAS (PSSCM UTP). The objective of this project is to develop an automated system for PSSCM UTP and automating the manual process of entering members personal details, viewing members according to selected class, editing or deleting required members and searching for members based on desired criteria. Having the automated management system, the society is able to spend more time focusing on organizing more events. The current manual filing of members details are very tedious and time consuming causing several bad effects to the society such as the files consume enormous space for storage. While in the case of fire or flood, loss of data is likely to happen yet recovery of data seems impossible. The system is developed by using PHP : Hypertext Preprocessor (PHP) Language with MySQL Server as its data storage.

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First of all, I would like to thank my dedicated and motivating supervisor, Madam Norshuhani bt Zamin for always having faith in me, no matter how hard my situation is. Without her help and trust, it is impossible for me to complete this project.

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Nur Husna binti Salehuddin

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

For every society or organization, there exist filing system to manage and record related data that are important or interconnected to the society/organization. Yet, they are still some filing system found is handled manually, usually by using hard-cover folders and stored in cabinets. However, this method really consumes humongous space for storage. In addition, it causes a lot of trouble when the respective member wants to search for society's member details, which he has to go through each folder just to find individual record for specific person. This is really time-consuming and a very tedious job.

This has also causing more troubles and very disorganized when the society consists of thousands of members. Those data that is kept in papers have tendency to rot with time and will turn yellow which causes the data hard to be seen in the future. Furthermore, in the case of fire or flood, there are always possibilities in losing those invaluable data while backups of data are rarely happened. As time passes by, personal details such as members' address or members' level of learning in the martial art may have several changes. Manual filing makes it hard to update any information because another forms are needed to be filled in order to replace the out-of-fate form.

Time spent for manual searching or manual updating of information should be focused on improving the society's performance or organizing important events to keep the society actively running. Hence, this project's purpose is basically to automate the manual filing for the society's members and assisting in data management. This area of focus includes automating entering of members data into the database, allowing viewing of data in the database, editing and deleting of data in the database, and searching for specific members.

1.2 Problem Statement

The author intended to develop this automated system because of these several problems she has identified earlier:-

a) Time consuming

Traditionally, manual filing consumes so much time in searching for required information or updating some important information, since the secretary of a society needs to go through each hard-cover folders in the storage area. In addition, currently the secretary is needed to re-enter the data in the registration form into the dummy database in which it does not allow searching based on several criteria. This can be more frustrating, if the number of members in the society is quite large.

b) Tedious

It is quite challenging for the secretary of a society to manually file members' registration forms, because the manual filing needed them to be focused and organized. This can be tiresome, when the number of members of the society is large, and it requires the secretary to re-enter the data manually into the dummy database.

c) Burdening

Secretary of a society is already burdened with a tight schedule of lectures during weekdays. Yet, she will need to find some leisure time to re-enter members' data into the database, especially at the early of every semester which new members are registered. This can cause secretary to experience pressure during the data entry session, and might have caused her to burn her leisure time. Searching also is burdening because the secretary is needed to go through several stacks of folders just to find for required information.

d) Data Redundancy

With manual system, searching for members information is very tiring. Most of the time, data redundancy occurred because of failure to search the required data has made the secretary to enter the same data all over again in order to update information. Hence, manual filing has very low accuracy rate in giving the correct information at a time.

e) Space Consuming

Several stacks of hard covered folders needed enormous space for storing. In a case of fire or flood, these can be cause harmful to the data. In addition, loss of data is likely to occur while recovery of data seems impossible.

1.3 Objective of Study

The objective of the study been conducted is to develop an automated system for Persatuan Seni Silat Cekak Malaysia Universiti Teknologi PETRONAS (PSSCM UTP) to automate the manual process of entering members personal details, viewing members according to selected class, editing or deleting required members and searching for members based on desired criteria.

1.4 Benefits and Beneficiaries

Mainly, the developed system brings many advantages to those listed below:-

a) The Secretary

By utilizing the members' management system, time spent on manual filing and entering data on dummy database will be lessened. Also, it helps the secretary to always up-to-date with members' level of learning in this martial art. Hence, more time can be allocated for improving the society, through conducting more events. In addition, it gives more time for the secretary to be more focused on her studies.

b) The Society

This members management system will benefit the society because time spent on manual filing will be allocated to organizing more events for the members. Also, it assists the society to keep track with its members through gradual update on members personal details.

1.5 Scope Statement

The proposed system is developed as to allow data storing and data management, and is written in PHP language with WAMP Server and SQL as its data storage. The members management system is meant specifically for the secretary and can be accessed by the secretary of PSSCM UTP. The functions are basically to allow entering members' personal details into the database, to view stored data according to required class, to edit stored information for tracking purposes, and to search members' details based on several criteria such as by name or by student ID.

CHAPTER 2

LITERATURE REVIEW

2.1 Management Information System

Management Information System (MIS) as "*a system or process that provides the information necessary to manage an organization effectively*" (Federal Financial Institution Examination Council's IS Examination Handbook 1995).

Usually, an organization decide to automate their critical manual process to improve their performance. It includes assisting them in managing information of their employers.

MIS provides several benefits to an organization: "*(i) It minimizes information overload : MIS change the larger amount of data in to summarized form (ii) MIS assembles, process, stores, retrieves, evaluates and disseminates the information*" [4].

An automated system makes it easier for information viewing because data can be displayed in table form or graph form. In addition, it is able to store data in the database and allow for retrieving data from the database. Managing data or editing data can be done easily too.

2.2 Education Management Information System

Education Management Information System (EMIS) is described as "*A system for organizing information base in a systemic way for the management of educational development. It is an information center in the ministry of education responsible for collection, processing, analyzing, publication, distribution, rendering information services for users of educational information*". (Tegegn Nuresu Wako 2003)

Usually, MIS in education is used to record information of students (e.g. course registration) and monitor performance of students through analyzing attendance of students. In addition, statistics of various aspects can be viewed and analyzed in order to gain extra educational information.

"*Technical Education Department (TED) and Malaysia Polytechnics collaborating with World Bank Organization to develop Polytechnic Management Information System (PMIS) in order to improve education services efficiency. PMIS is total campus management solution architect using web based centralized distributed architecture to streamline core administrative operations and improve employee productivity.*"[6]

Malaysian Ministry of Education (MOE) has collaborated with World Bank Organization to develop a portal namely Polytechnic Management Information System. This portal includes Executive Information System (EIS), Management Information System (MIS), Hostel Management System (HMS) and others. Its EIS is meant to monitor its employees Key Performance Index (KPI) that assist the higher level of management for Polytechnics in promoting their employees.

In conclusion, MIS is used in education to assist lecturers and universities in:

- Record personal details of students.

- Evaluate performance of students which includes analyzing attendance of students.
- Assist in critical administrative functions such as hostel registration and academic affairs.

2.3 Martial Art Management System

According to The Columbia Encyclopedia Sixth Edition 2008, ***Martial Art*** is "*various forms of self-defense, usually weaponless, based on techniques developed in ancient China, India, and Tibet. In modern times they have come into wide use for self-protection, as competitive sports, and for exercise.*" [7]

According to Malaysian Embassy in Seoul, "*Most Malay youths, both boys and girls, learn silat from a young age. Established in the Malay Archipelago for centuries, silat is based upon Islamic tenets. The art, which is also a dance form, is performed during weddings and national celebrations. Of late, silat has become popular among Americans, Japanese and Europeans who themselves organise regular silat competitions. The more renowned silat groups in Malaysia are silat gayung, silat cekak and silat kalimah.*" [10]

There are many forms of martial arts in Malaysia. Yet, the most significant one that is closely related to Malaysia and its culture is silat. Youngsters learned martial art at the early age to help in self-defense and protecting own self.

In addition, there exist a software called ***Jackrabbit Dojo*** which is an online martial arts school management for Taekwando to record attendance, belt tracking and billing and provide video training online. It uses Excel Spreadsheets to import data. [11]

Furthermore, there exist a software called ***Martial Arts Organizer 4*** for any martial arts such as Taekwando and Kung Fu, to manage the attendance of martial art learner, record billing payment, and monitor tests to be taken. It also provide service to create student card for attendance tracking. [12]

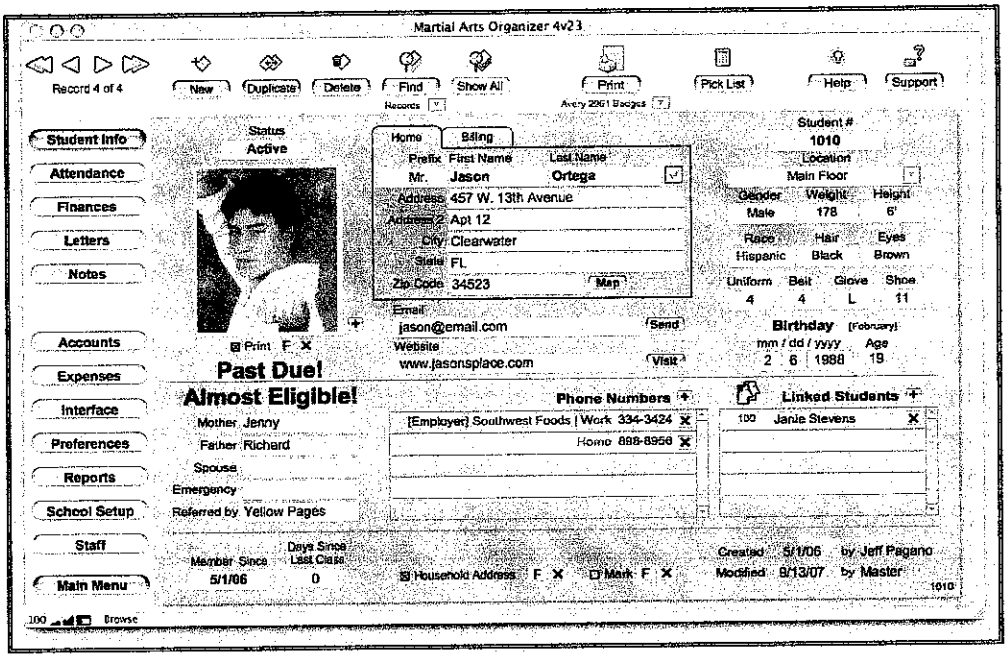


Figure 2.1: Screenshot of Martial Arts Organizer 4 Software

2.4 PSSCM UTP Management System

Currently, there is no automated management system for PSSCM UTP. To date, the society is still using the manual filing system which keeps hardcopies of registration form in several stacks of folders and keeping a dummy database for members. Its database is currently functioning as a place for data entry where data updating and data searching is hard to be done. Hence, the objective of the paper is to automate the current manual system to ease the secretary's job and to assist the society in managing its members.

CHAPTER 3

METHODOLOGY

3.1 System Development Life Cycle (SDLC) Implementation

SDLC has been chosen as a reference throughout of the development of this system. In the Figure 3.1 below, stated the phases in SDLC, with the activities related to each phase.

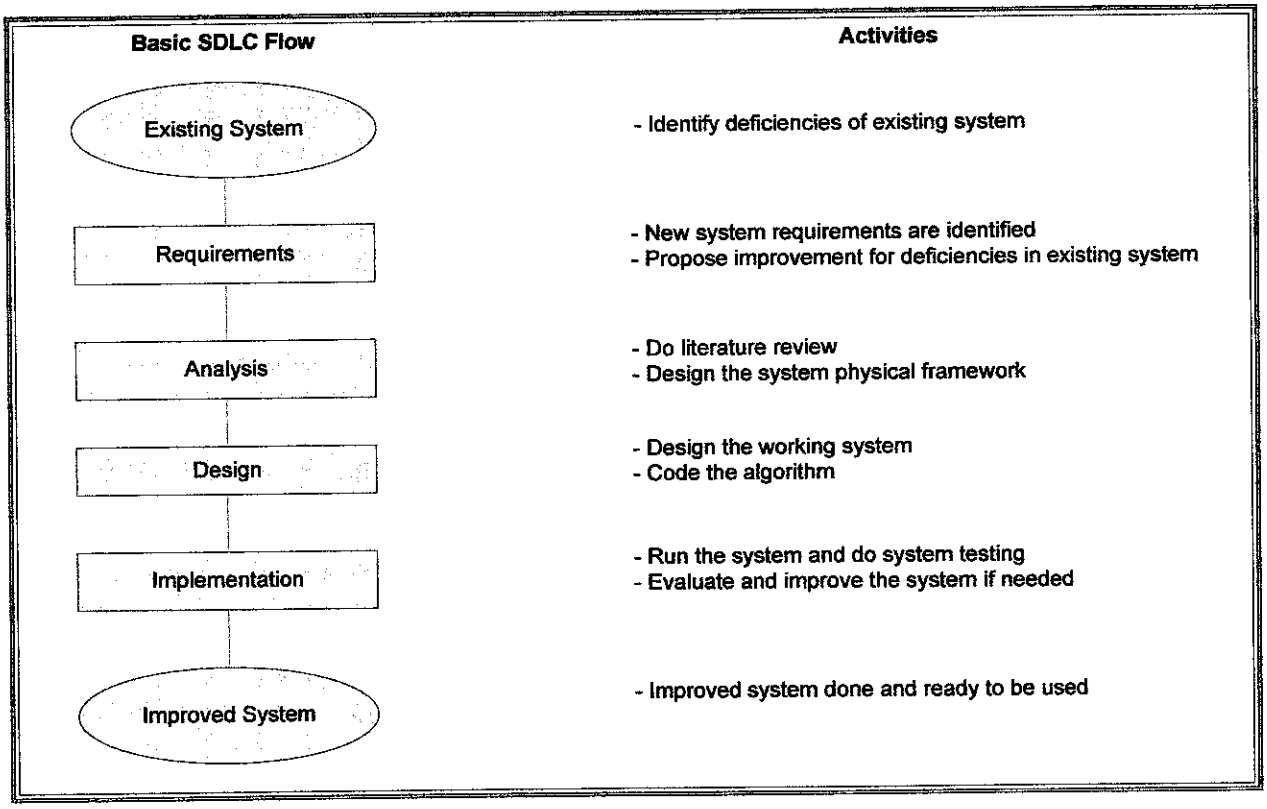


Figure 3.1: Process Flow of the developed system.

3.2 Process Flow

The automated assessment system follows the process flow stated below:-

a) Secretary log in to the system.

b) Secretary register new members into the database by filling in the form with their particular details.

c) Secretary is able to view the newly entered data or other members' details according to respective classes.

d) Secretary is able to edit or delete members' details.

e) Secretary is able to search any specific individual according to particular categories.

f) Every details of each member is stored in *member_details* table in *register* database.

Figure 3.2 below shows the flowchart of the developed system in graphical view:-

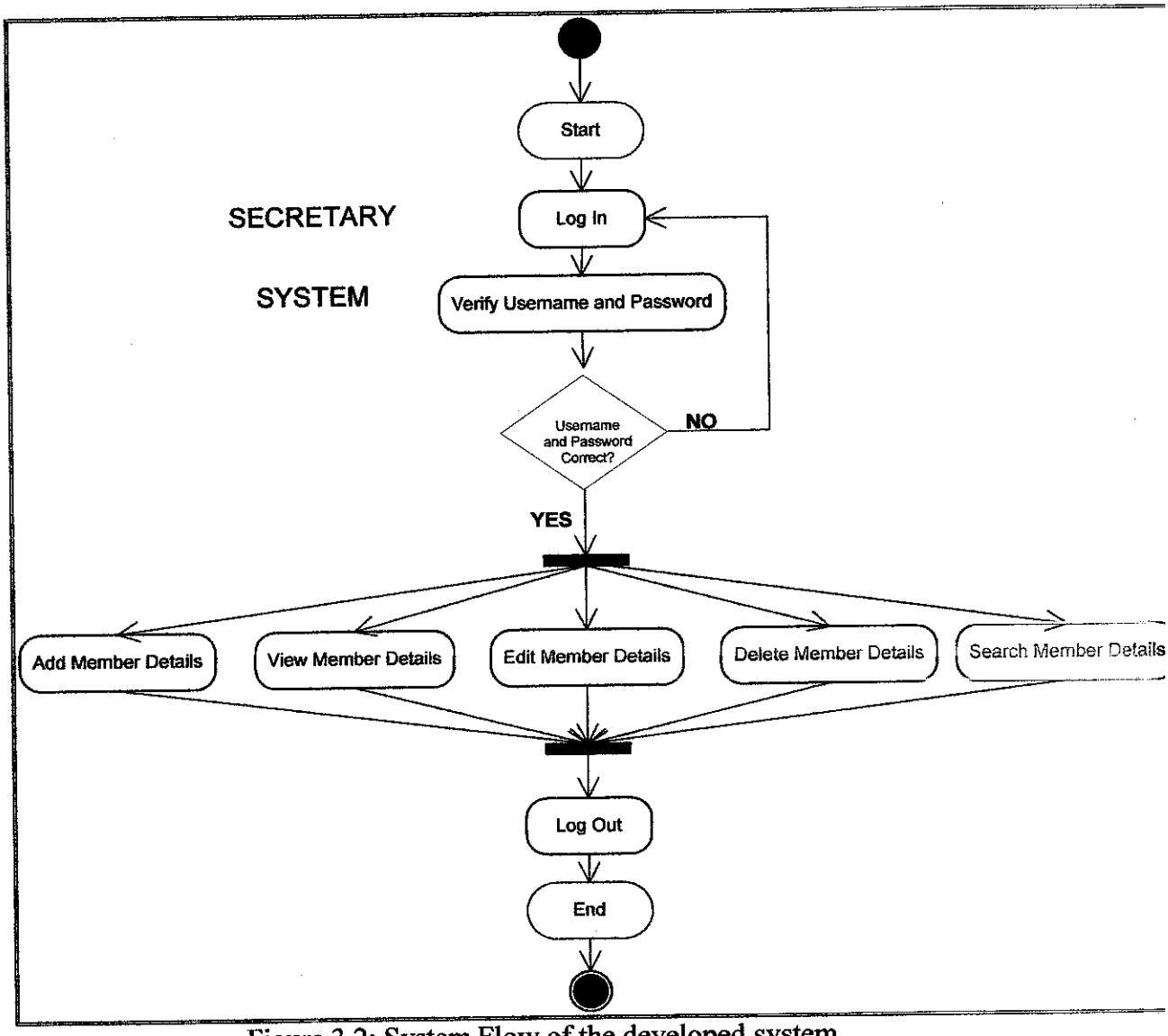


Figure 3.2: System Flow of the developed system.

3.3 System Modeling for High Level Design

3.3.1 Use Case Diagram

The use case diagram as shown in the Figure 3.3 below describes the relationship between the actor and the process of the system.

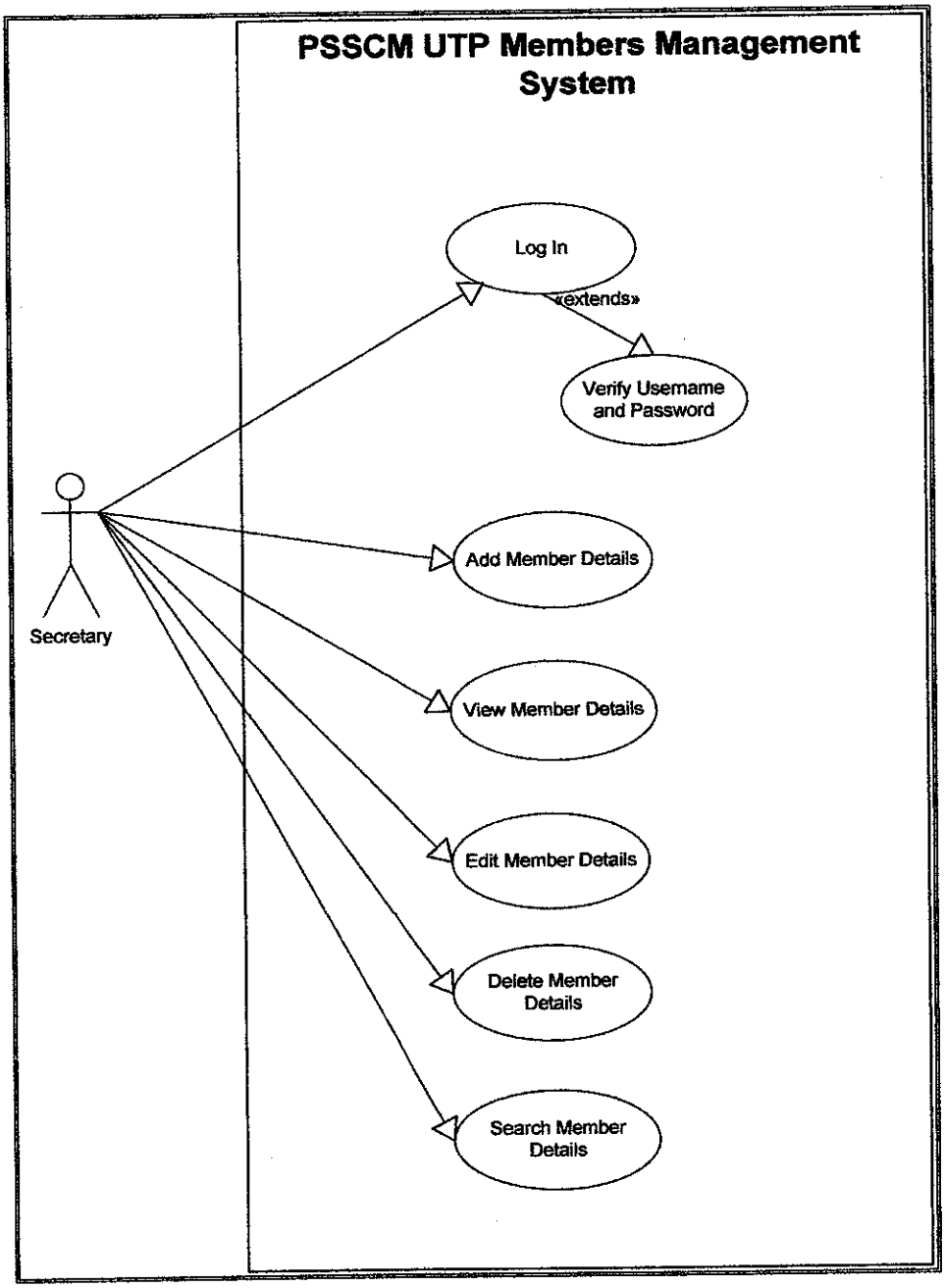


Figure 3.3: Use Case Diagram for the developed system.

3.3.1.1 Use Case Analysis

Use Case diagram elaborates basic process the system needs to handle. The actor represents the function of a system, which the system must support from the user's point of view. Figure 3.3 illustrates the Use Case Diagram for PSSCM UTP Members Management System. The actor that involve is Secretary with six Use Cases and one Extends Use Case involve in the system. The description of each Use Case is describe in Table 1 while the description for Extends Use Case is describe in Table 2.

No.	Use Case	Description
1.	Log In	Secretary logs in to the system.
2.	Add Member Details	Secretary is able to add new member details and store into *members_details* table.
3.	View Member Details	Secretary is able to view members in each class.
4.	Edit Member Details	Secretary is able to edit members details.
5.	Delete Member Details	Secretary is able to delete members details.
6.	Search Member Details	Secretary is able to search for members.

Table 1: Description of Use Case

No.	Extends Use Case	Description
1.	Verify Username and Password	The system checks whether the username and the password are correct.

Table 2: Description of Extends Use Case

3.3.2 Class Diagram

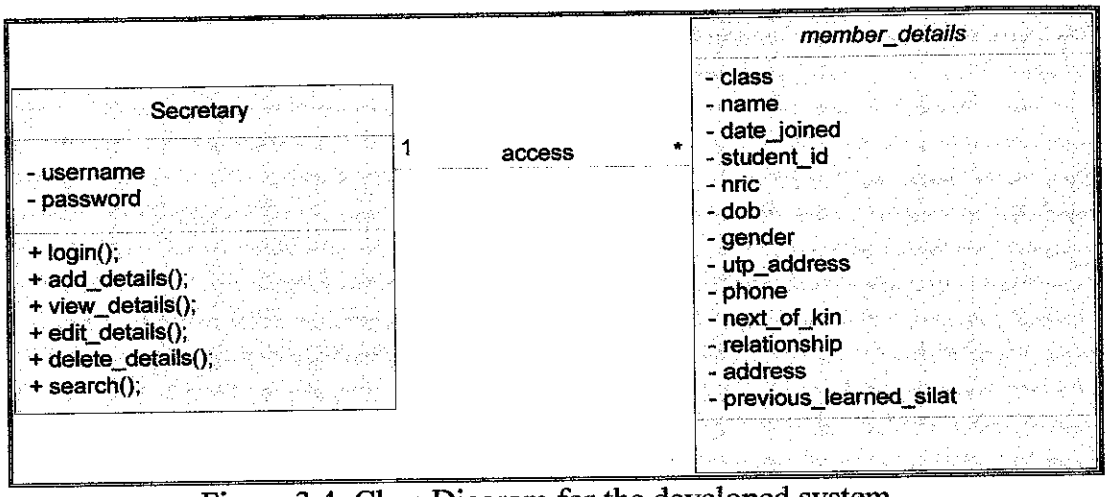


Figure 3.4: Class Diagram for the developed system.

Basically, there exist one database that is called ***register*** and one table called ***members_details***. Secretary has one fixed username which is ***secretary*** and one fixed password which is ***psscmutp***. For member_details class, it contains members information such as class, name, date joined, student ID and such.

3.3.3 Sequence Diagram

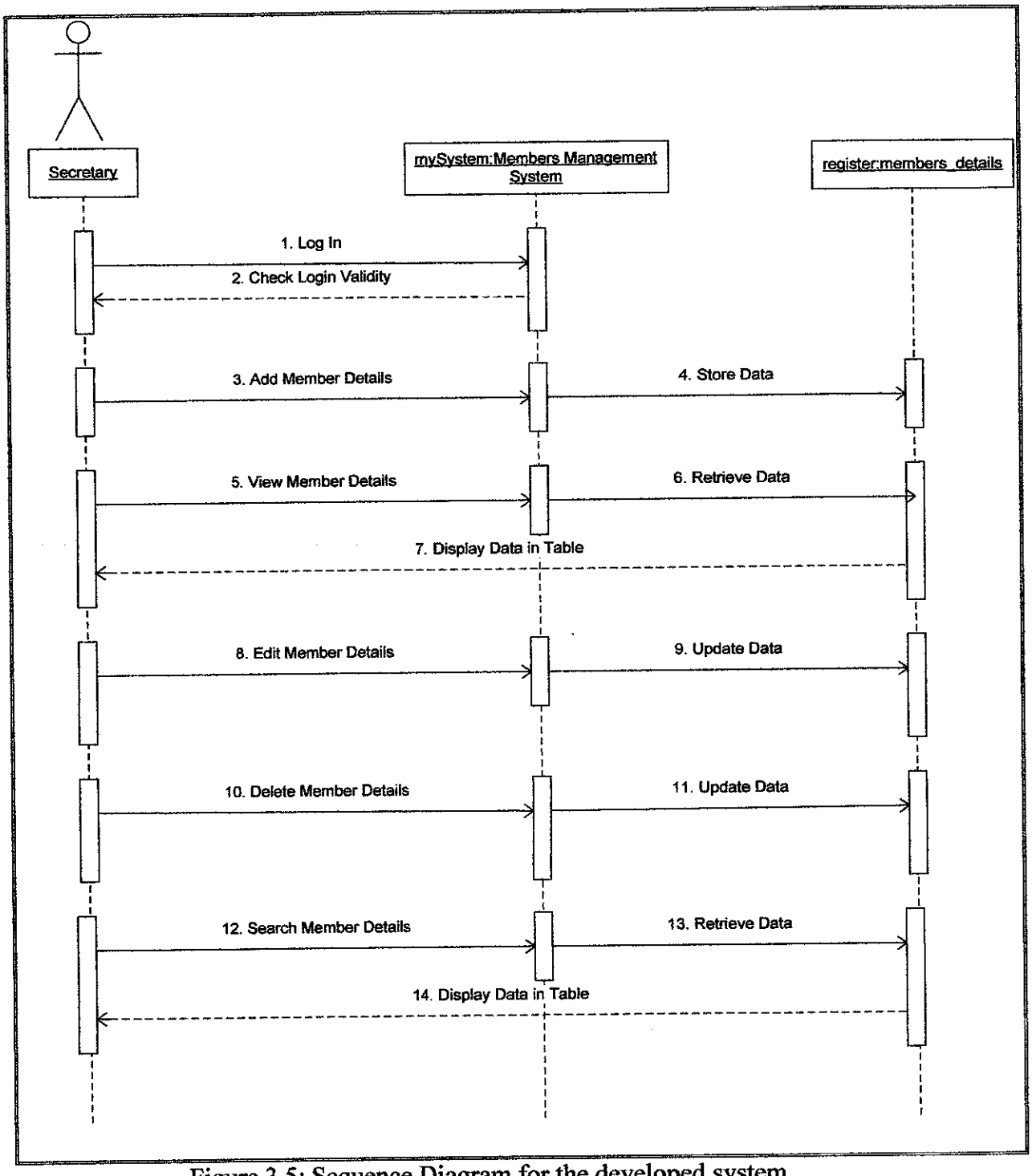


Figure 3.5: Sequence Diagram for the developed system.

3.4 System Framework

Figure 3.4 below describes the system framework and it shows the interaction between the database with the web interface. When the Secretary add new member details, the information will be stored in the *member_details* table in the *register* database. For *View*, *Edit* and *Delete*, and *Search* functions, the database will return the Secretary queries by displaying the member details in a table.

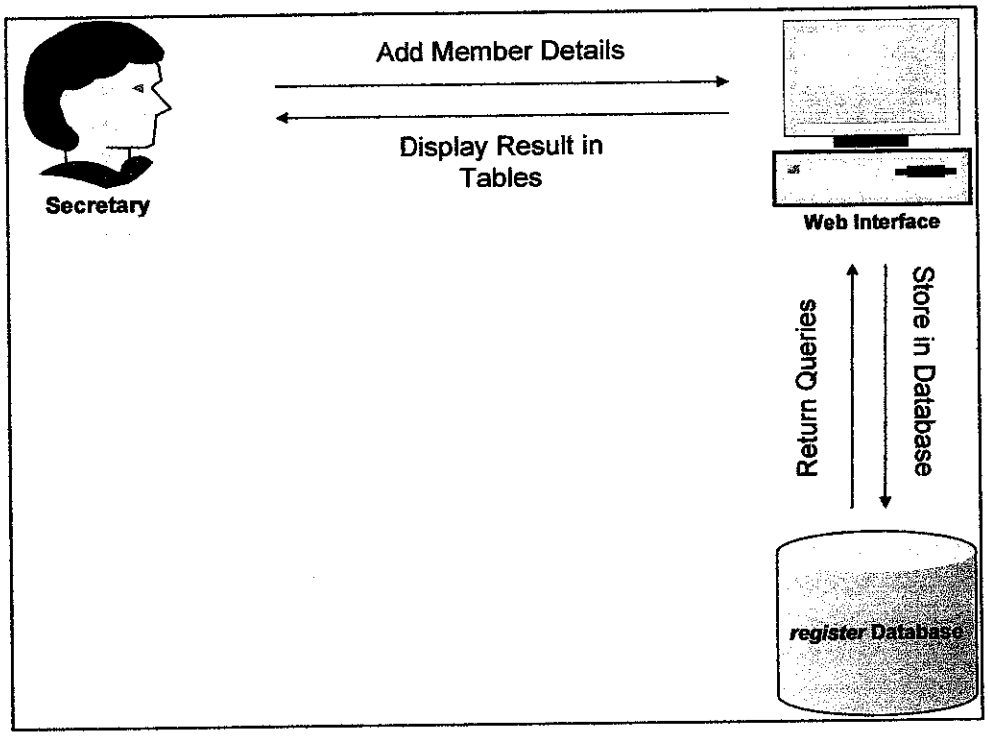


Figure 3.6: System Framework

3.5 Tools Used

The author plan to develop the system by using these tools:-

a) **PHP Language**

For the interface and its server side scripting, the author used PHP language along with HTML. PHP is embedded to create a more dynamic pages for the automated system. PHP language is open source and can be used on almost every web servers and operating system.

b) MySQL

As for the database, the system uses MySQL as its main data storage. MySQL is one of the database component of WAMP platform and uses phpMyAdmin as its database administration. MySQL is scalable, hence making it easier to store very large number of information for students. This factor is taken into consideration because the number of PSSCM UTP members grows with each new semester. Also, it is easy to manage by using simple queries. Therefore, it is very suitable for novice users.

CHAPTER 4

RESULTS AND DISCUSSION

4.0 System Screen Designs

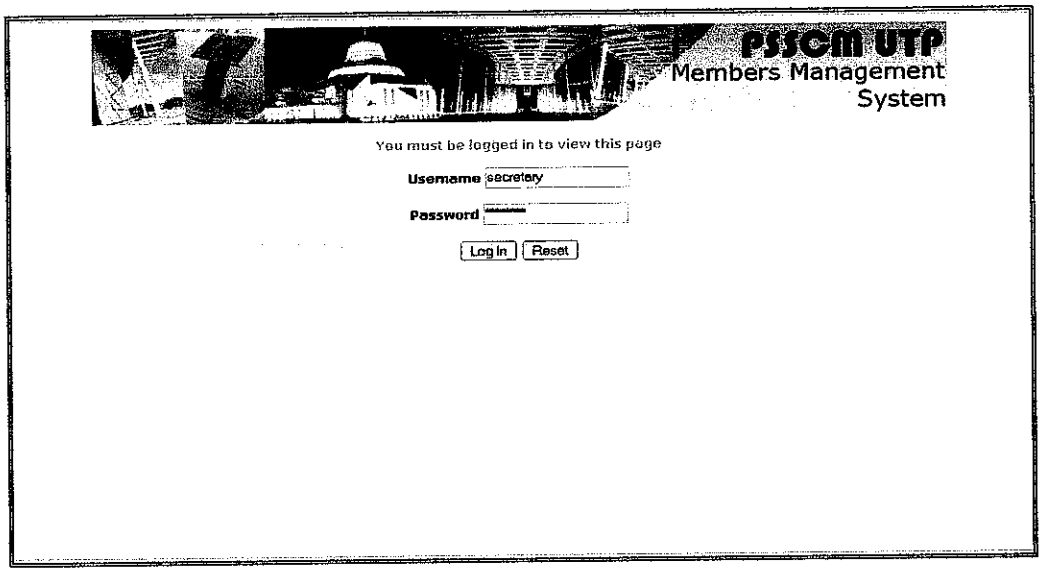


Figure 4.1 : Login Page

Figure 4.1 shows the Login Page. The Secretary needs to log in by using *secretary* as the Username and *psscmutp* as its Password. If she fails to do so by entering incorrect username and/or password, the page as shown in Figure 4.2 will appear.

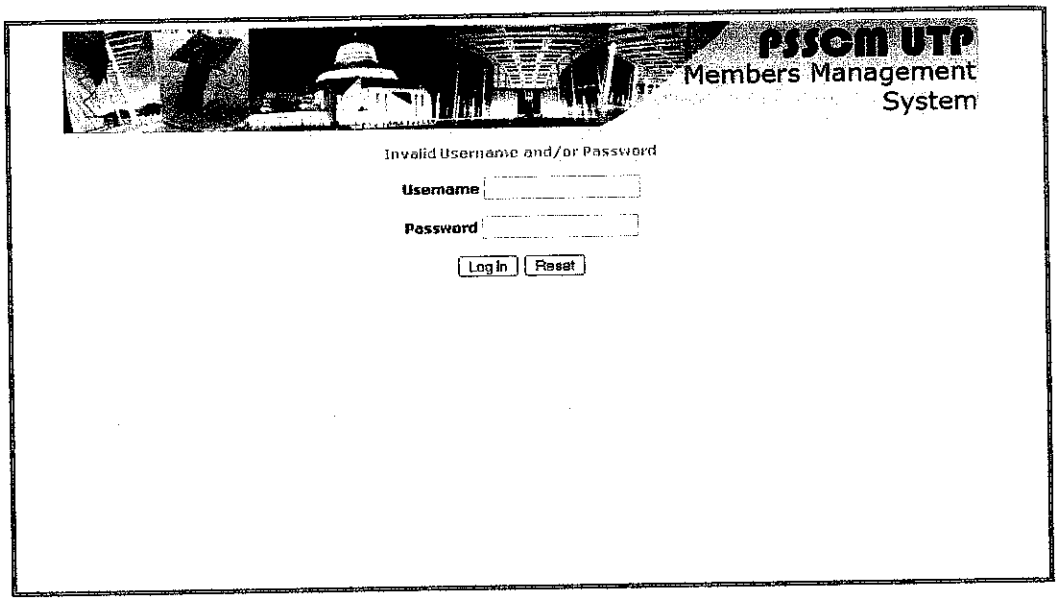


Figure 4.2 : Invalid Username and/or Password Page

On the other hand, if the correct Username and Password are entered, the page as shown in Figure 4.3 will appear.

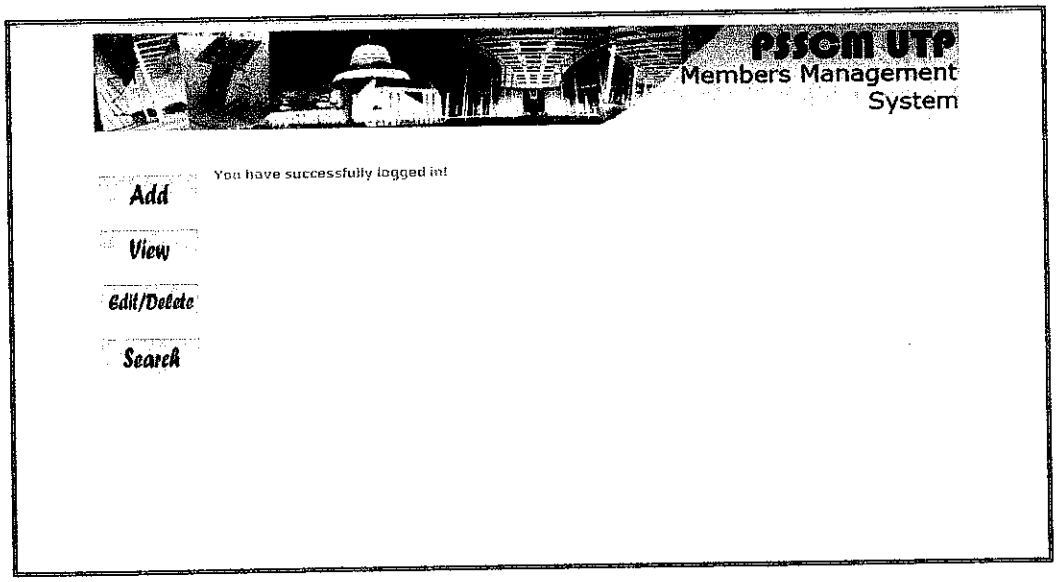


Figure 4.3 : Successful Login Page

If the Secretary is not logged in, yet she is trying to view other page in the system, she will be directed back to the login page. This can be done by using authentication code and is included in every page. The codes are as shown in Figure 4.4 below:

```
<?php
    session_start();
    $_SESSION['logged'] = 0;
    if (isset($_POST['submit'])) {
        if ($_POST['username'] == "secretary" && $_POST['password'] == "psscmutp") {
            $_SESSION['logged'] = 1;
            header ("Refresh: 5; URL=" . $_POST['redirect'] . "");
            echo "You are being redirected to your original page request!<br>";
            echo "(If your browser doesn't support this, " .
            "<a href=\"" . $_POST['redirect']. "\">click here</a>)";
    } else {
?>
```

Figure 4.4 : Codes for User Authentication

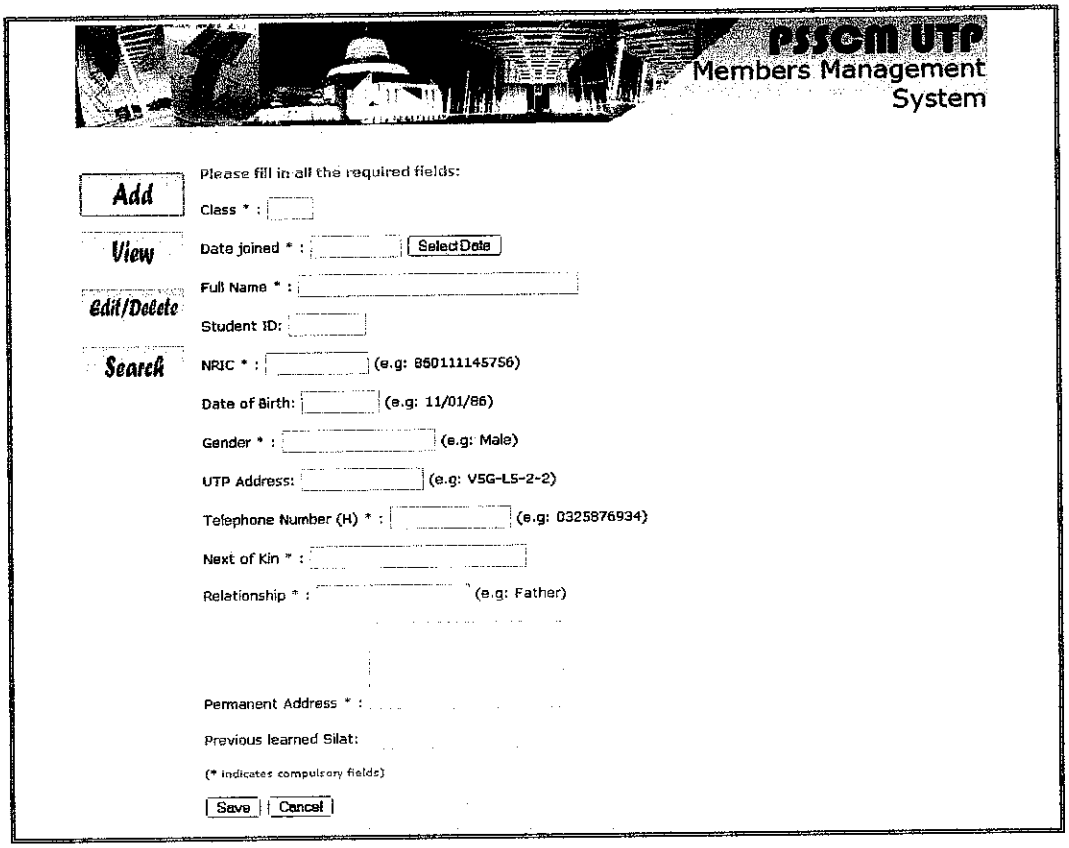


Figure 4.5 : Add Members Data Page

Figure 4.5 shows the Add Members Data Page. It displays the important details that need to be filled by the Secretary. After the *Save* button is clicked, the information is saved in the *register* database and in the *members_details* table. If the *Cancel* button is clicked, it will *Reset* all the entered fields.

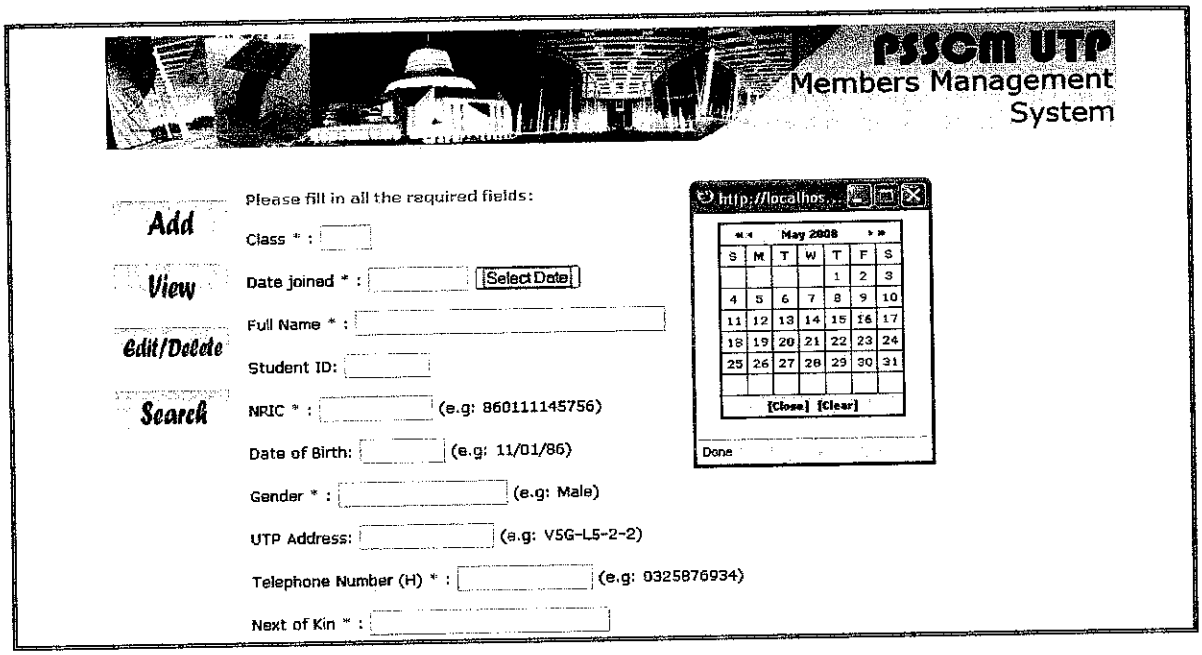


Figure 4.6 : Pop up calendar

Figure 4.6 shows the pop up calendar available to insert *date joined* in the add data form. The pop up calendar is written in Javascript. Some codes for the pop up calendar is shown in Figure 4.7 below. Other codes are available in *cal2.js* and *cal_conf2.js* files.

```
<script language="javascript" src="cal2.js"></script>
<script language="javascript" src="cal_conf2.js"></script>

<input name="date" type="text" size="10">
<input type="button" value="Select Date" onClick="javascript:showCal('Calendar1')">
```

Figure 4.7 : Fragment of Javascript codes for pop up calendar

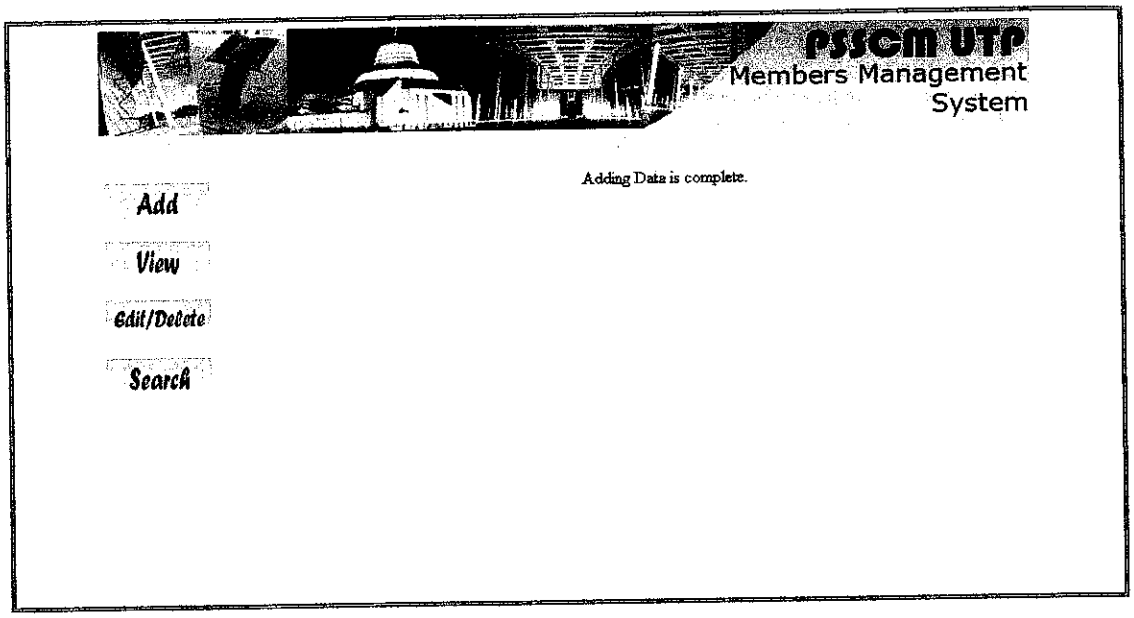


Figure 4.8 : Add Data Complete Page

Figure 4.8 shows the Add Data Complete Page which will appear after all the required fields are entered. This shows that the data entered is already saved in the *members_details* table.

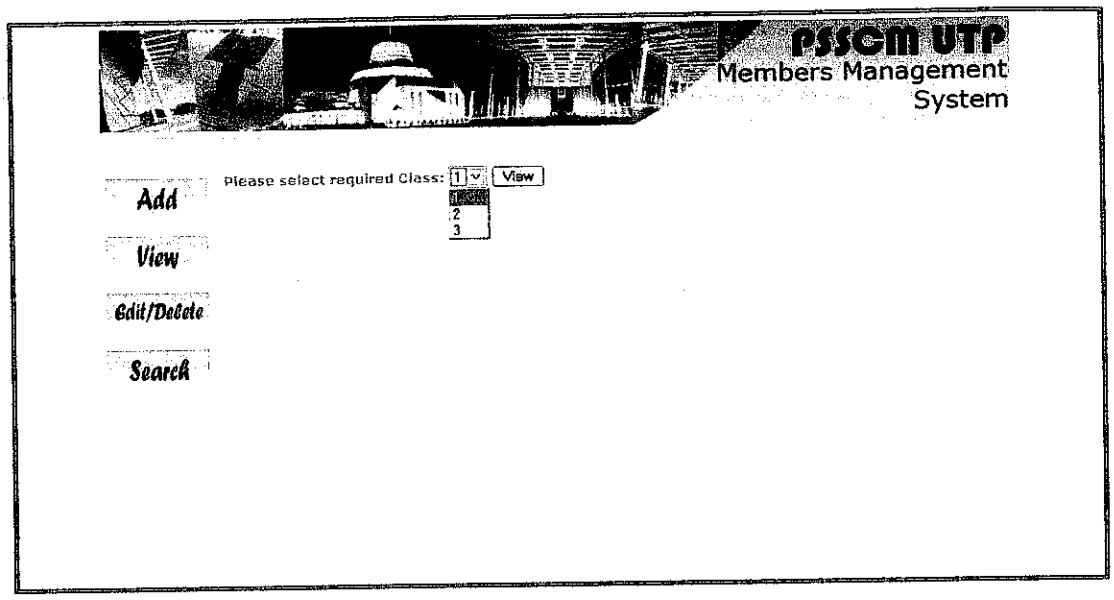
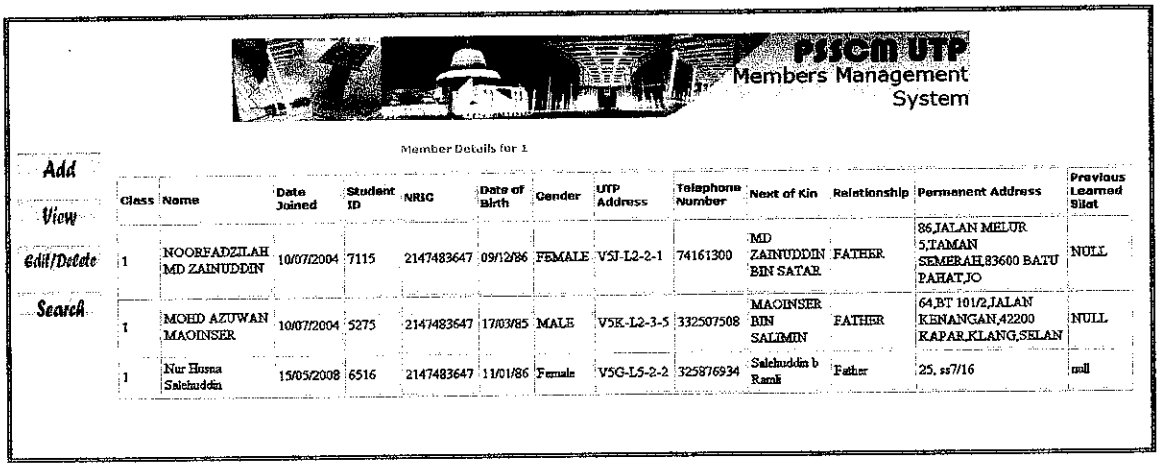


Figure 4.9 : View Data Page

Figure 4.9 shows the View Data Page. This page allows the secretary to select the desired class to view the class members.



Class	Name	Date Joined	Student ID	NRIC	Date of Birth	Gender	UTP Address	Telephone Number	Next of Kin	Relationship	Permanent Address	Previous Learned Silat
1	NOORFADZILAH MD ZAINUDDIN	10/07/2004	7115	2147483647	09/12/86	FEMALE	V5J-L2-2-1	74161300	MD ZAINUDDIN BIN SATAR	FATHER	86,JALAN MELUR 5,TAMAN SEMERAH,83600 BATU PAHAT,JO	NULL
1	MOHD AZUWAN MAOINSER	10/07/2004	5275	2147483647	17/03/85	MALE	V5K-L2-3-5	332507508	MAOINSER BIN SALIMIN	FATHER	64,BT 101/2,JALAN KENANGAN,42200 KAPAR,KLANG,SELAN	NULL
1	Nur Husna Salehuddin	15/05/2008	6516	2147483647	11/01/86	Female	V5G-L5-2-2	325876934	Salehuddin b Rasli	Father	25, ss7/16	null

Figure 4.10 : Selected Class for Viewing Page

Once the View button is clicked, the page as shown in Figure 4.10 is displayed.

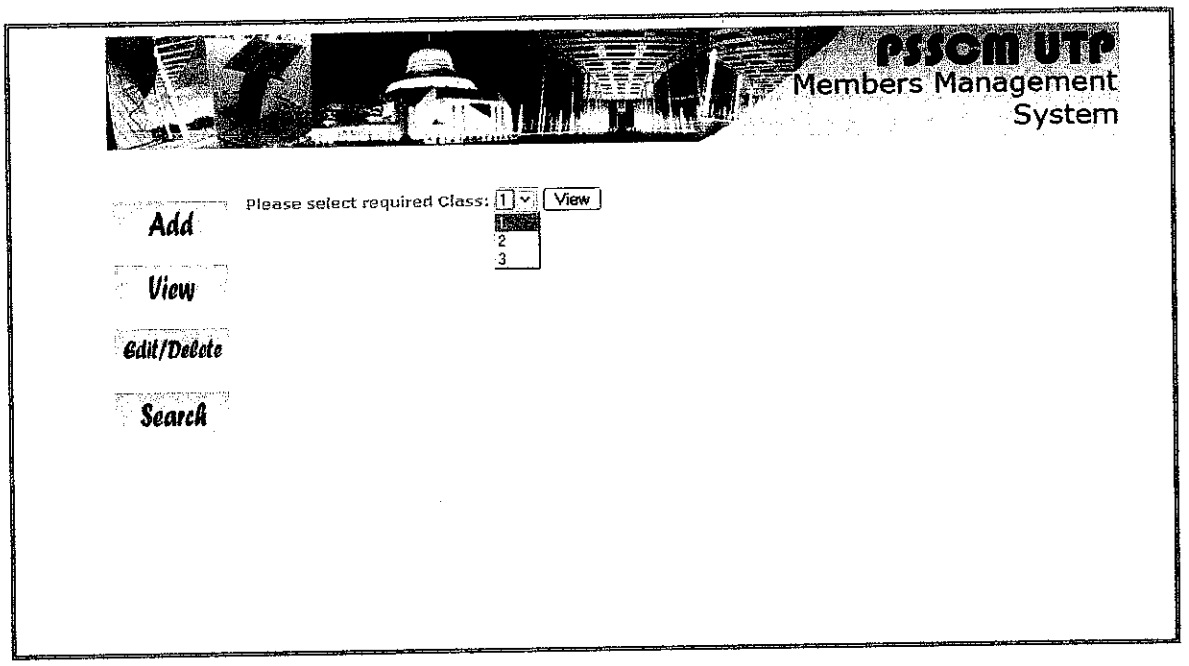
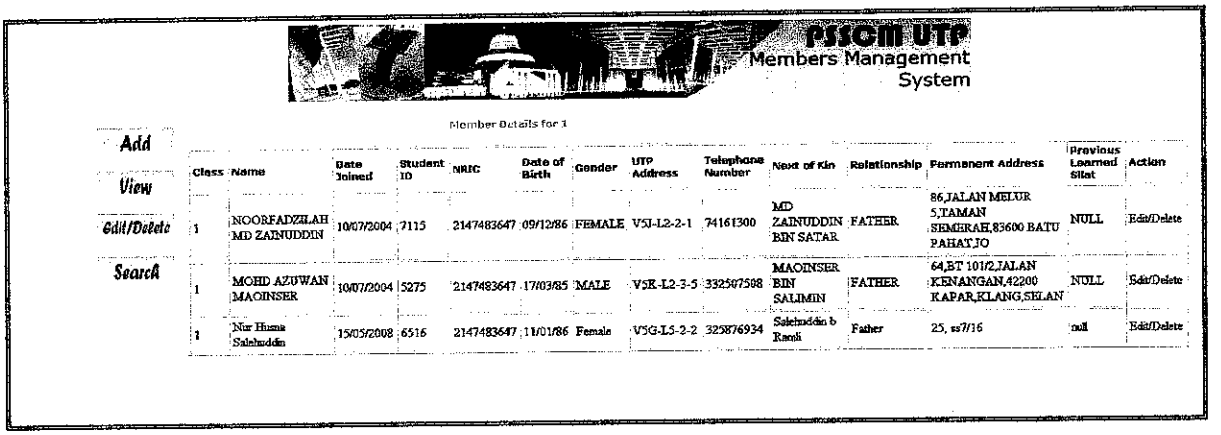


Figure 4.11 : Edit and Delete Page

Figure 4.11 shows the Edit and Delete Page. This page allows the secretary to select the desired class for editing or deleting members.



Class	Name	Date Joined	Student ID	NRIC	Date of Birth	Gender	UTP Address	Telephone Number	Next of Kin	Relationship	Permanent Address	Previous Learned Sllat	Action
1	NOORFADZILAH MD ZAINUDDIN	10/07/2004	7115	2147483647	09/12/86	FEMALE	V5J-L2-2-1	74161300	MD ZAINUDDIN BIN SATAR	FATHER	86,JALAN MELUR 5,TAMAN SEMBRAH,83600 BATU PAHAT,JO	NULL	Edit/Delete
1	MOHD AZUWAN MAOINSER	10/07/2004	5275	2147483647	17/03/85	MALE	V5R-L2-3-5	332507508	MAOINSER BIN SALIMIN	FATHER	64,ET 101/2,JALAN KENANGAN,42200 KAPAR,KLANG,SELAN	NULL	Edit/Delete
1	Nur Husna Salehuddin	15/05/2008	6516	2147483647	11/01/86	Female	V5G-L5-2-2	325876934	Salehuddin b Rasuli	Father	25, ss7/16	null	Edit/Delete

Figure 4.12 : Selected Class for Editing or Deleting Page

Once the View button is clicked, the page as shown in Figure 4.12 is displayed. When the Secretary click the *Edit* link, the page as shown in Figure 4.13 is displayed.

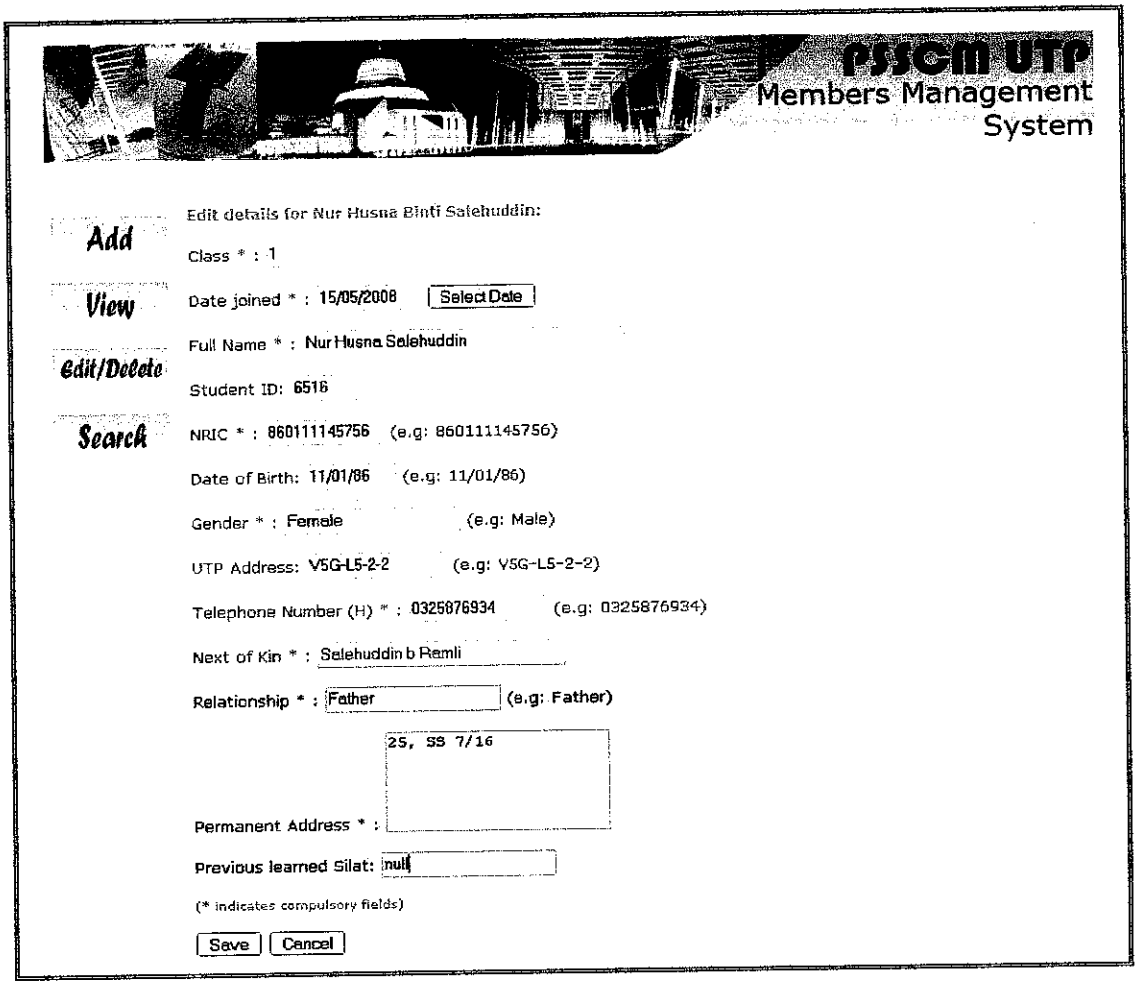


Figure 4.13 : Edit Members Details Page

On the other hand, when the Secretary click the Delete link, the page as shown in Figure 4.14 is displayed. The delete process may proceed when the Secretary click the *Proceed* button.

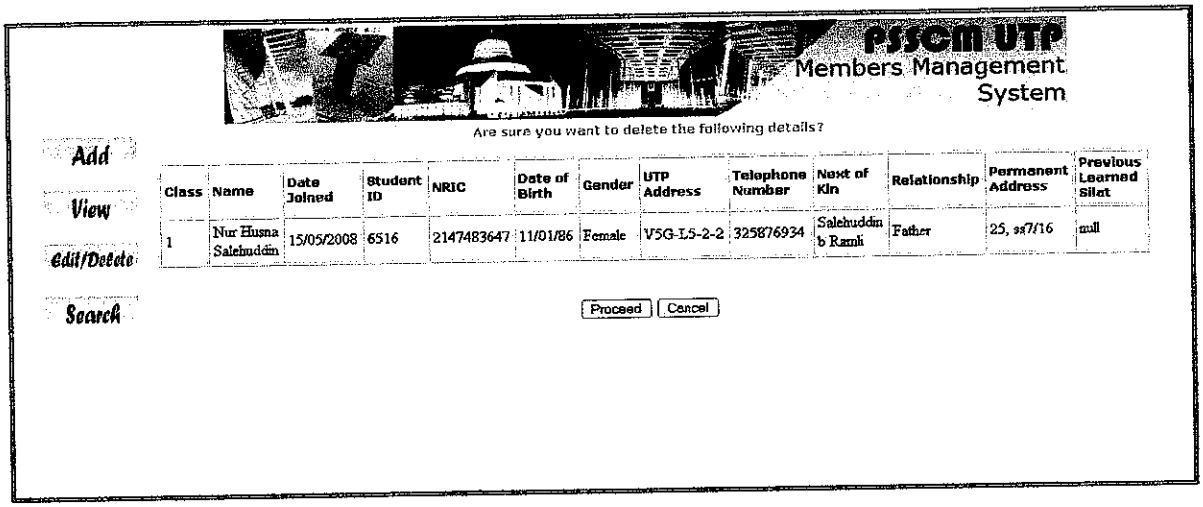


Figure 4.14 : Delete Members Details Page

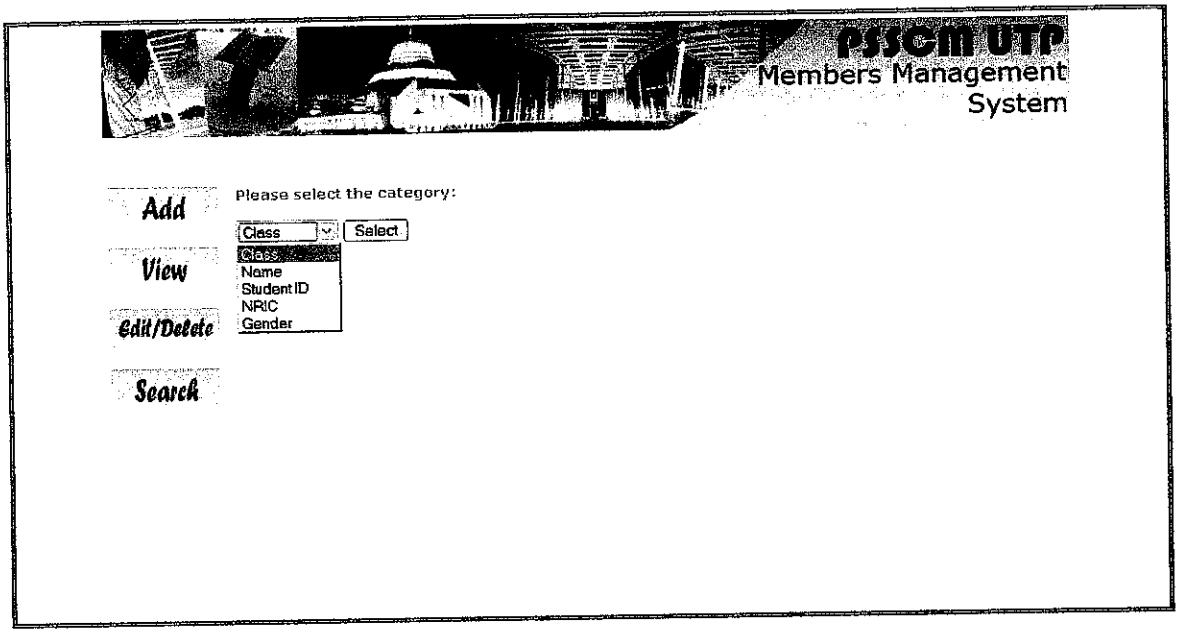


Figure 4.15 : Search Page

Figure 4.15 shows the Search Page. This page allows the secretary to search the desired member based on several criteria such as *Class*, *Name*, *Student ID*, *NRIC* or *Gender*. Figure 4.16 shows an example of searching by *Name*.

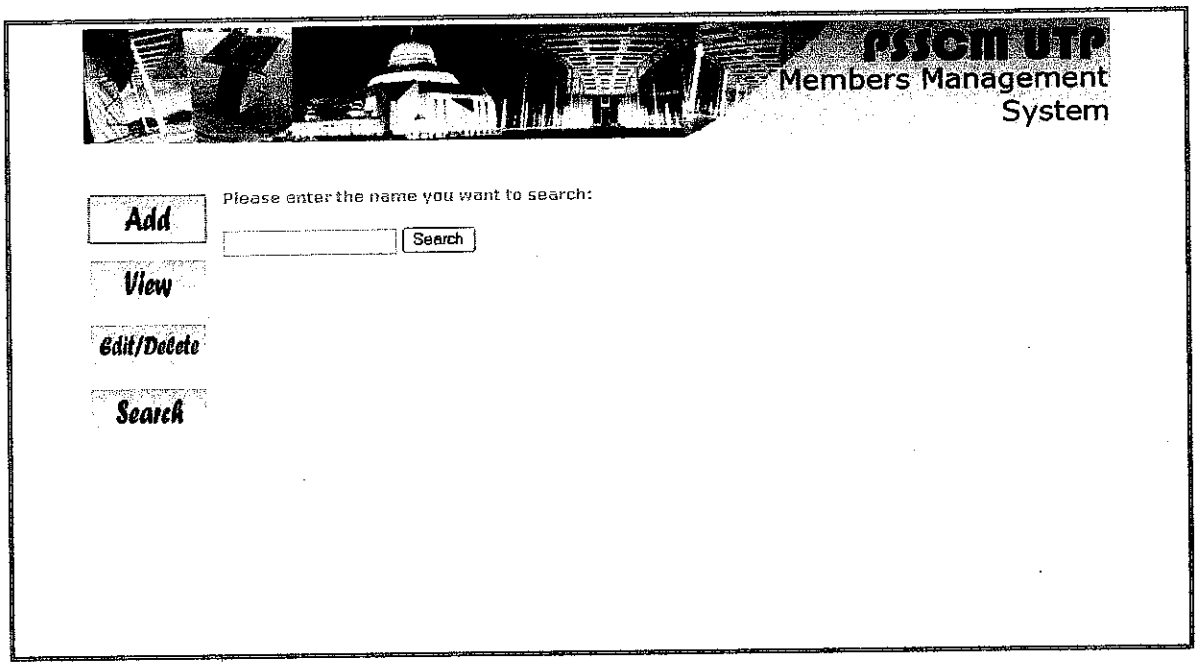


Figure 4.16 : Search by Name Page

The Secretary is required to fill in the *Name* and click the *Search* button to begin searching. The result of the searching is displayed as shown in Figure 4.17 below.

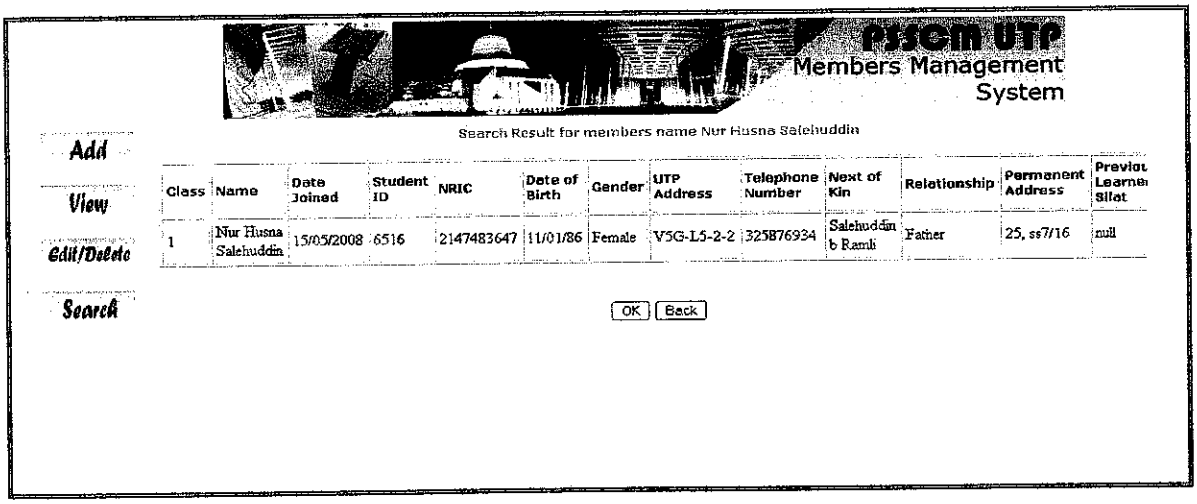


Figure 4.17 : Search Result

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The development of an automated system for members management system for PSSCM UTP can be a very useful tool in assisting the society in managing members information better compared to manual filing. It is hope that by using this system, it will help PSSCM to automate the manual process of entering members personal details, viewing members according to selected class, editing or deleting required members and searching for members based on desired criteria.

Through this system, it is easy for the society to manage its members and update information of its members. In addition, it eliminates the tedious and burdening work of manually entering members' information. Furthermore, it helps lessen space for storing of hardcopies forms. With the new system, hopefully it can reduce the time as most of the processes now are automated.

5.2 Recommendation

For future upgrade and expansion:

5.2.1 Changing database from MySQL to Oracle

The author should consider the high performance database with high capabilities. This is to support the processing of high number of student information. The number of members joining PSSCM is increasing from time to time, hence it is recommended to use Oracle because it is able to support larger capacity of database as compared to MySQL.

5.2.2 Go Online

It is recommended that the system is available online because currently it is only available through LAN.

5.2.3 Implement for PSSCM

It is recommended that the system is implemented for PSSCM, because currently the system is only for PSSCM UTP.

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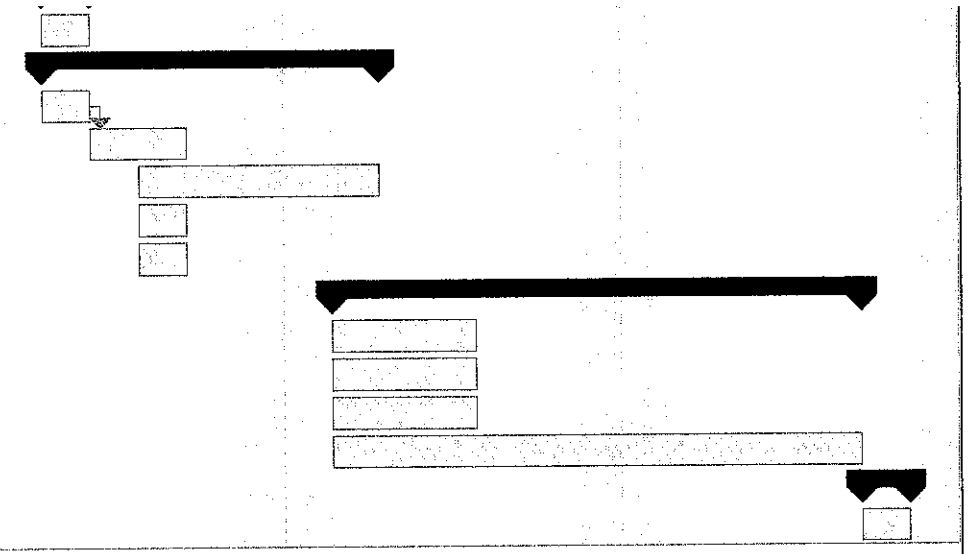
<http://www.martialartsorganizer.com/>

APPENDICES

APPENDIX A: GANTT CHART

		Duration	Start	Finish
2	Prepare project proposal	1 day	Tue 4/29/08	Tue 4/29/08
3	**Planning**	**5 days**	**Tue 4/29/08**	**Mon 5/5/08**
4	Kick-off meeting with Supe	1 day	Tue 4/29/08	Tue 4/29/08
5	Conduct feasibility study	2 days	Wed 4/30/08	Thu 5/1/08
6	Write literature review	3 days	Thu 5/1/08	Mon 5/5/08
7	Compare proposed work w	1 day	Thu 5/1/08	Thu 5/1/08
8	Analyze system benefits	1 day	Thu 5/1/08	Thu 5/1/08
9	**Development planning**	**9 days**	**Mon 5/5/08**	**Thu 5/15/08**
10	Design system framework	3 days	Mon 5/5/08	Wed 5/7/08
11	Design system processes	3 days	Mon 5/5/08	Wed 5/7/08
12	Design data models	3 days	Mon 5/5/08	Wed 5/7/08
13	System prototype delivery	9 days	Mon 5/5/08	Thu 5/15/08
14	**Closing**	**1 day**	**Fri 5/16/08**	**Fri 5/16/08**
15	Interim report submission	1 day	Fri 5/16/08	Fri 5/16/08



Project: gannt chart
Date: Tue 5/20/08

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline