

## ABSTRAK PENYELIDIKAN

Projek ini telah berjaya menghasilkan sebuah sistem terpusat berasaskan web untuk menyimpan rekod akademik pelajar yang dilengkapi dengan kemudahan penasihat. Kemudahan penasihat ini adalah berasaskan input-input rekod pelajar (seperti rekod akademik, keputusan GPA, maklumat pelajar) yang kemudiannya akan digunakan oleh penasihat akademik untuk mencadang dan merancang pembelajaran pelajar. Penasihat akademik boleh memantau prestasi pelajar dengan menjejaki setiap pelajar atau sekumpulan pelajar yang sama kriteria (seperti pelajar setiap tahun, maklumat demografi pelajar). Sistem ini juga berkemampuan menentukan kesesuaian kriteria setiap pelajar yang berijazah dan memaklumkan subjek-subjek pelajar yang perlu dilengkapkan. Sebelum ini, proses ini dilakukan secara manual di antara pelajar dengan staf. Sebagai kesimpulan, pencapaian sistem ini adalah:

- 1) Penyediaan sistem rekod akademik pelajar untuk tujuan pemantauan akademik pelajar.
- 2) Penunjuk kriteria untuk pengijazahan pelajar dan juga latihan industri.
- 3) Keupayaan menganalisis pencapaian pelajar melalui GPA, semester, dapatan demografik pelajar.
- 4) Sistem penasihat yang membantu pelajar dalam perancangan kursus dan pembelajaran.

Sistem ini telah diuji selama setahun dengan dua semester rekod akademik. Seramai 632 pelajar termasuk pelajar baru dan lama dan juga sebahagian pensyarah telah menyertai fasa ujian ini. Ujian ini telah mendapat maklum balas yang positif daripada pelajar dan pensyarah. Selain daripada itu, perubahan minor dan penyahpijatan telah dilakukan ke atas sistem ini untuk menjamin sistem ini dapat berfungsi dengan baik. Ujian ini telah membuktikan sistem ini boleh dipercayai dan Majlis Pusat Pengajian telah mempertimbangkan untuk digunakan sepenuhnya pada akhir tahun ini.

## ABSTRACT OF RESEARCH

This project has successfully produced a centralized web based system for storing student academic record which includes advisory functionalities. The advisory functionalities are based on inputs of students' records (i.e. academic records, GPA results, student information) which will be used by the academic advisor in recommending and planning for the students study. Academic advisors are able to monitor students' performance by tracking each student or groups of students with the same traits or properties (i.e. student by year, by student demographic info). The system is capable to identify the eligibility of each student's graduation criteria and pin point the relevant units which student require in order to complete. Previously, this process is done manually between students and staffs. As a summary for the achievements of this project are:-

- 1) Created a student academic record system for monitoring and tracking purposes
- 2) Students graduation criteria as well as industrial training criteria indicator
- 3) Student Achievement Analysis capabilities via i.e. GPA, semester, students demographic data
- 4) Advisory system which assists student in planning course and studies.

The system has undergone 1 year of testing phase which consists of 2 semesters with real academic records. There are 632 students, include freshmen and senior students as well as some lecturers who participated in this testing phase. The test has received a lot of positive feedbacks from student and lecturers. Minor adjustments and debugging has been done to the system to ensure that the system is reliable and works well. The test has proved its reliability and our board of the school is considering for full fledge use by end of this year.

# Advisory Aided System To Institute of Higher Learning (AASTIH) based on Rule-based & Personality Assessment

<sup>1</sup>Mohd. Azam Osman, Maziani bt Sabudin, Shaiful Hisham Shaharuddin

*School of Computer Sciences  
Universiti Sains Malaysia  
11800 Penang, Malaysia  
{azam, maziani}@cs.usm.my, shaiful.hisham@yahoo.com*

## Abstract

This paper discuss about the implementation and method used in AASTIH. AASTIH is a web-based database system that uses rule-based and personality assessment in assisting student to apply the suitable course in institute of higher learning in Malaysia. It is a system designed with one thing in mind: to guide and advice students in selecting the courses tailored to their interests and qualifications based on students' academic qualifications and interests, using the rule-based approach in Artificial Intelligence

**Keywords:** advisory system, rule-based, personality assessment

## 1. Introduction

This system is targeted for three different types of user: students, university and system administrator. For each type of user, the system will limit the usage and functions depending on the types of the user. AASTIH provides suggestions for students regarding courses which are suitable for them depending on their interest as well as their academic qualification. Personality tests are designed especially to aid students in choosing their courses. The questions prepared are high-level and bilingual consisting of English and Bahasa Malaysia.

AASTIH also functions as an information-providing system to help students gain information such as the minimum requirements of each course and give guidance to students in checking their pointers. This is to ensure that they have met the requirements for each of the courses that they intend to apply. Previously, such problems arise when students were unable to enroll in their preferred choice of course

due to misinformation on the course requirement details.

AASTIH also benefits the university staff as it enables them to update the information for all the different faculties in each university with relative simplicity. This will indefinitely provide the latest and valid information for students at all times. Furthermore, the system will be able to generate graphical reports for the university staff to be used as a prediction and forecasting tool to determine the number of courses offered for each semester or year. By doing so, the university staff will save immense amount of time and workload. Administrators are able to create or delete university accounts and are involve in setting the questionnaires in the personality test. Analysis reports in diagrammatic form are also available. Pie charts, bar and line graphs depict survey results on the popularity of each course in each university. These reports provide further assistance for example, in deciding whether to disband a course or add new courses to the current crop of courses offered in the university.

This paper will discuss the process of identifying and analyzing student's personality, course requirements, student's qualification and the suitability of courses. AASTIH uses the rule-based approach which can adapt to several numbers of problems. As a whole, AASTIH manages the workload of a large number of people from different perspectives and reduces the building stress among students during the course selection process.

## 2. Motivation

Time is gold. AASTIH saves time as every task is fully automated. The generated reports are complete, simple, and easy to view to minutest of details.

Subsequently, students tend to be one-sided when it comes to making decisions. For instance, they would prefer to follow in the footsteps of friends or just simply accept parents' decisions in decision-making situations. They do not have the initiative to be professional by learning to think for themselves. For this reason, AAISTIH offers professional help via personality tests designed to enable students to express their own personalities. The bottom line is, AAISTIH will reap in huge loads of profits and be beneficial to the educational society.

The primary focus of AAISTIH is at students furthering their studies in local educational institutions. At the moment, the usage of AAISTIH is only limited to Malaysian students. Our mission and vision is for this system to break the international barrier and provide for students in major educational cities around the world such as London and Boston, Massachusetts. AAISTIH has yet to hit the streets but it could possibly be the answer to dilemmas such as "What do I want to do in future?" and "What course suits me best?"

## 2. Approach and Methodology

To develop the system, we used a Parallel Development-based Methodology that consists of several phases, planning, analysis, design, implementation and intergration [2]. The reason for choosing the Parallel Development Methodology is due to the nature of AAISTIH system development that involves a team work and each module is developed separately. The choosen methodology make ease of each team member to intergrate the seperated modules to be a complete system. AAISTIH uses VBScript in Microsoft Visual Studio 2003 .NET as its programming language and Microsoft SQL Server as its database anchor head and also incorporates the Ajax technology and a branch of Artificial Intelligence known as the rule-based approach to offer intelligence in predicting the suitable course for each student [6]. Other secondary software used includes the Adobe Photoshop CS2 and Macromedia Flash MX Professional.

This system uses a branch of Artificial Intelligence, commonly known as the rule-based (expert) approach to predict the best suitable course for each student by analyzing the various students' responses in the personality test [3]. AAISTIH takes the best of both

worlds by combining corporate database and Artificial Intelligence technologies in performing the required functions. To determine a student personality we use Self Directed Search by John L. Holland [1]. The reason we choose its method is due to brief description on the category and easier to determine the courses are in what category. The Microsoft Visual Studio NET and the Microsoft SQL Server are the building blocks of AAISTIH and they are chosen because for a lot of reasons. .NET was used because it is stable and it contains a build-in-controller as well as 'intelligence' and code-behind technologies while the SQL Server heads our list of other world renowned database management systems because of it supports client-based script, implements server-based technology, and has a customized controller among other features.

## 3. Implementation

There are few steps involve in the process of advisory to students. The steps are as shown in figure 1. AAISTIH system requires several inputs from various users. There are pra university student (after matriculation or STPM), minimum entry qualification for each course offered from the university and cut of entering point for the appropriate courses. Students are required to fill up the SPM result, MUET and Matriculation results or STPM results. Then, students should answer the personality test for identifying their career suitability. Later students will choose the university and their desire course offered. Based on the available information, the calculation of suitability for students according the students personality and their academic qualification will be computed. The rule-based (expert) approach is used to predict the best suitable course for each student by analyzing the various students' responses in the personality test [4]. AAISTIH takes the best of both worlds by combining corporate database and Artificial Intelligence technologies in performing the required functions.

As mention above, the prediction is based on several parameters to forecast the possibility of success for students to get the applied course. There are three possibilities to indicate the chances for students to get the course that are high, average and low. AAISTIH system will base on two academic years of cut off entering points for each course entered by university staff yearly and later compared with student's qualification (CGPA) and the result of personality test. The following explanation will be discussing on

how find the forecast point of cut of entering point for the next t academic year for each course. Firstly we find the average of cut entering point for entering the appropriate course for last two of academic years, called AveC. Then we get the difference between cut of entering point for the last two academic years and divided by three, called DiffP. To obtain the forecast point of cut of entering point (A) of high possibility chances is  $A = AveC + DiffP$  and to obtain the low possibility is  $B = AveC - DiffP$  [5]. So that student who has CGPA equal or above value of A and the course applied is matched with their personality test, the AAISTIH system will give the result as high. If student's CGPA is lower the B, the AAISTIH system will give the result as low. While if student's CGPA is between the values of A and B, the AAISTIH system will give the result as medium. In addition, The AAISTIH system also has capability to suggest the appropriate course and university to student if the forecasting result is medium or low to student based on student's data [7].

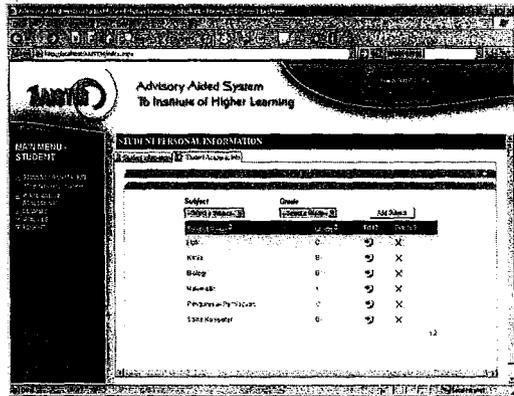


Figure 3

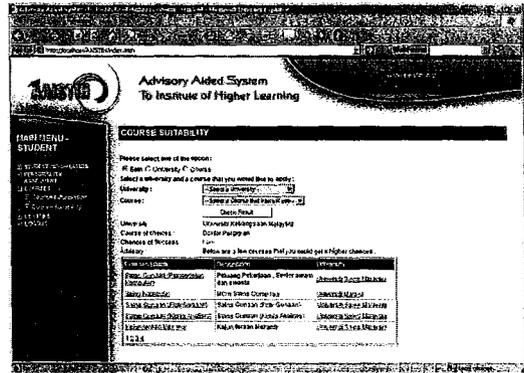


Figure 4

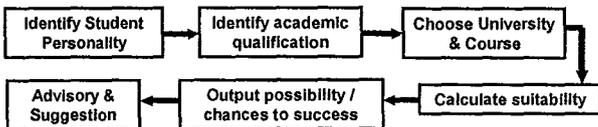


Figure: 1

#### 4. Result

The diagram in figure 2 shows a main page of the AAISTIH system

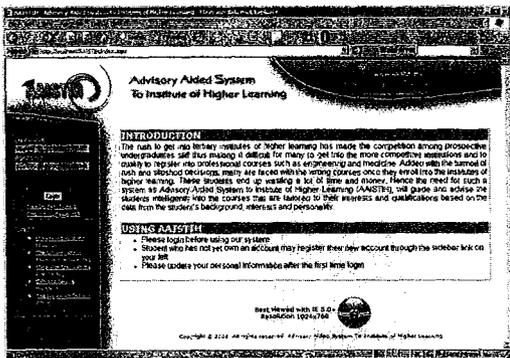
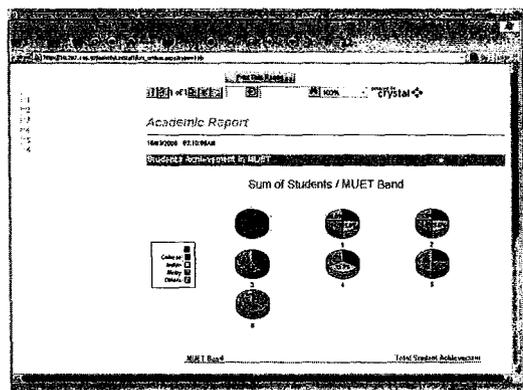
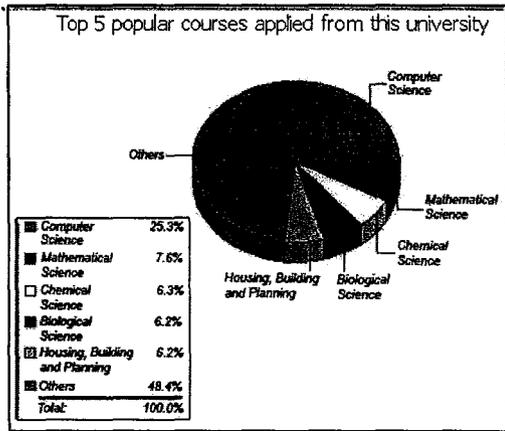


Figure 2

The diagram in figure 3 and 4 shown the students' page where they fill up their personal information and academic qualification

The following figures show the sample of the generated reports from AAISTIH system for the university





#### 4. Conclusion

The end result using of AAISTIH will be undeniably positive. Tasks have been carried out from various universities about career guidance and the results were excellent. The problem which occur might be the hassle for students to submit surveys as well as to wait for the results on what field they are suitable in. At the same time, universities staff will have to check sheets and sheets of survey forms. This might take days or even weeks. This is where AAISTIH comes in. As the Internet is so widely used, web-based systems are fast becoming a common sight among users.

AAISTIH is a non-profit system, and is 100% developed in Malaysia, in University of Science aimed at local universities and providing students and staff alike with unlimited information on course requirements, generating statistical and analytical reports, and perhaps help predict future employment.

#### 5. References

- [1] Thomas Connolly & Carolyn Begg, Pearson Addison Wesley (2004). Database Solution: A Step by step guide to building database Second Edition.
- [2] Alan Dennis & Barbara Haley, Wiley International (2005). System Analysis And Design With UML Version 2.0 : An Object Oriented Approach Second Edition.
- [3] Hendrix, T. D., Cross, J. H. II and Maghsoodloo, S. (2002). The Effectiveness of Control Structure Diagrams in Code Comprehension Activities. *IEEE*

*Transactions on Software Engineering*. 28(5): 463-477.

[4] Oman, P. W. and Cook, C. R. (1990). The Book Paradigm for Improved Maintenance. *IEEE Software*. 7(1): 39-45.

[5] Shaffer, C. A. (1997). *A Practical Introduction to Data Structures and Algorithm Analysis*. New Jersey: Prentice-Hall.

[6] Sulaiman, S., Idris, N. B. and Sahibuddin, S. (2002). Production and Maintenance of System Documentation: What, Why, When and How Tools Should Support the Practice. *Proceedings of 9<sup>th</sup> Asia Pacific Software Engineering Conference (APSEC 2002)*. USA: IEEE Computer Society Press. 558-567. Information Literacy Group, Leeds University Library (2005).

[7] *Harvard Style Bibliographies and References*. Available from: <http://www.leeds.ac.uk/library/training/referencing/harvard.htm>. [Accessed 2 Aug. 2005]



# GRADUATE System VERSION I

**LECTURER**  
TECHNICAL REPORT

School of Computer Sciences, USM  
15/7/2007

# TABLE OF CONTENT

## Table of Contents

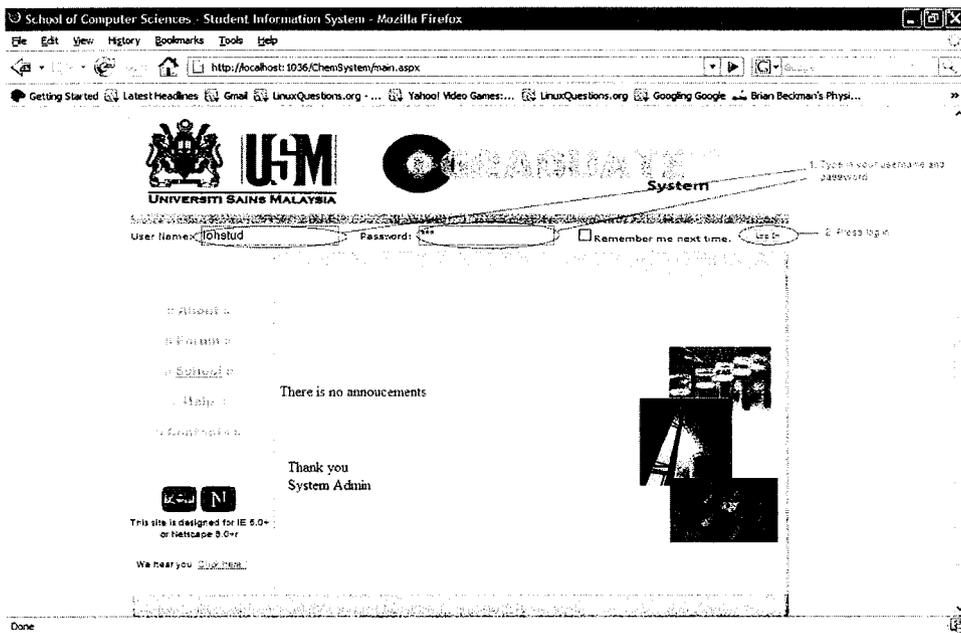
### SYSTEM CONFIGURATION

<i>ABSTRACT</i> .....	2
<i>SYSTEM FUNCTIONS</i> .....	3
View/Edit Profile.....	6
View Student List/Info .....	8
Send Messages .....	9
Student Login Trial Reset.....	11
Validate Student Results .....	12

# ABSTRACT:

I-Graduate System Version I is an enhancement of version I which add on more features and function as well as the interactive user interface.

## SYSTEM CONFIGURATION:



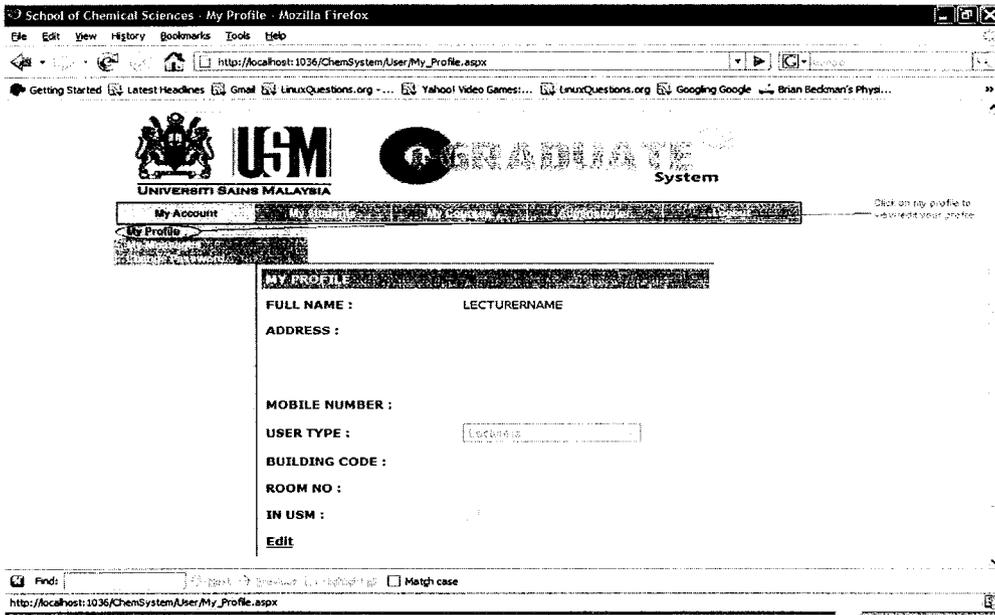
First have to LOGIN TO SYSTEM CONSOLE with :  
USERNAME : Your Username  
PASSWORD: Your Personal Password

Then the main screen will be display:

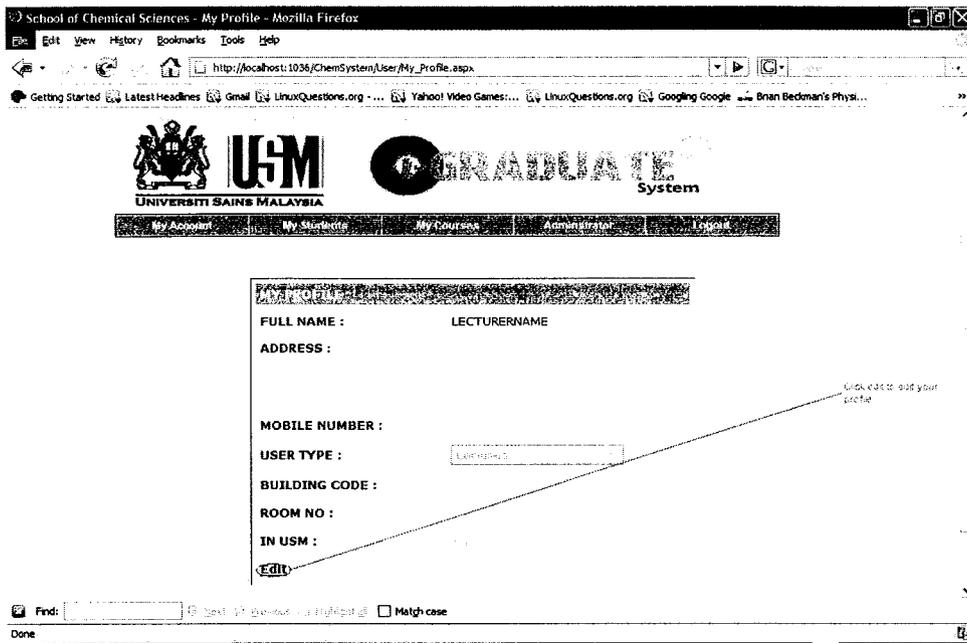
The function of the system configuration as below:

- [1] View/Edit Profile
- [2] View Student List/Info
- [3] Send Messages
- [4] Student Login trial reset
- [5] Validate Student Results

# [1] View/Edit Profile



In the My Profile page, Click Edit to edit your profile



[2] View Student List/Info

School of Computer Sciences - Students List - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/User/Supervisor.aspx

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School of Computer Sciences - Courses List School of Computer Sciences - Stud...

UNIVERSITI SAINS MALAYSIA

GRADUATE System

My Students

Students List

OK

	MATRIX NUMBER	NAME	SEMESTER	STUDSUP ID
Select	90918	ANG WAI HENG	2006/2007 SEM 1	
Select	studentsupport	STUDENTSUPPORT	2006/2007 SEM 1	

Find:      Match case

http://localhost:1036/ChemSystem/User/Supervisor.aspx

School of Computer Sciences - Students List - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/User/Supervisor.aspx

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GRADUATE System

Matrix Number

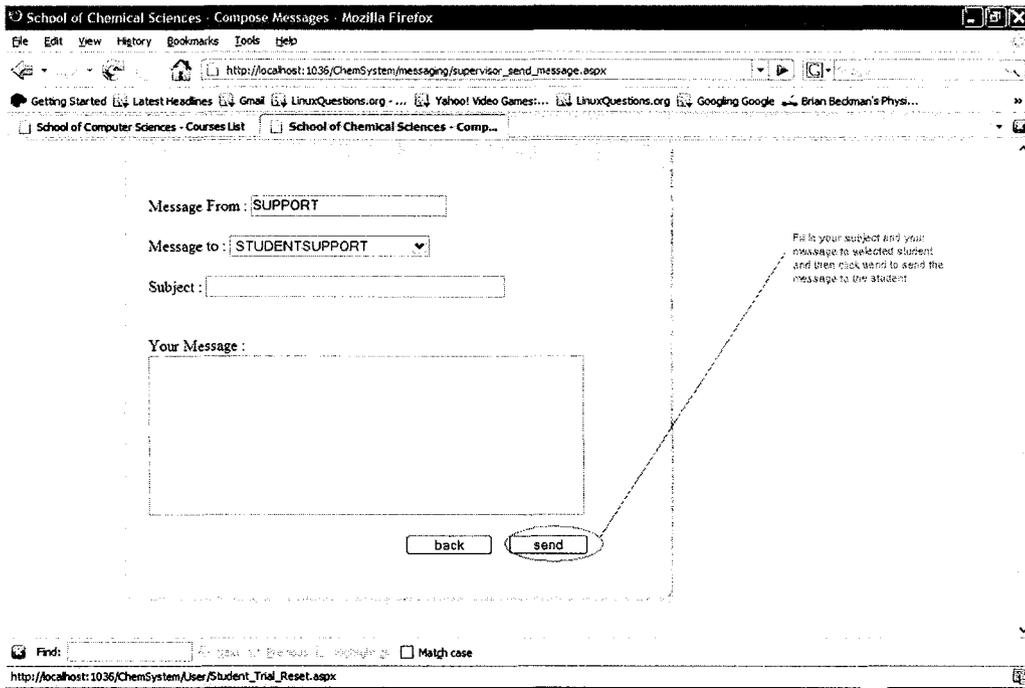
OK

	MATRIX NUMBER	NAME	SEMESTER	STUDSUP ID
Select	90918	ANG WAI HENG	2006/2007 SEM 1	
Select	studentsupport	STUDENTSUPPORT	2006/2007 SEM 1	

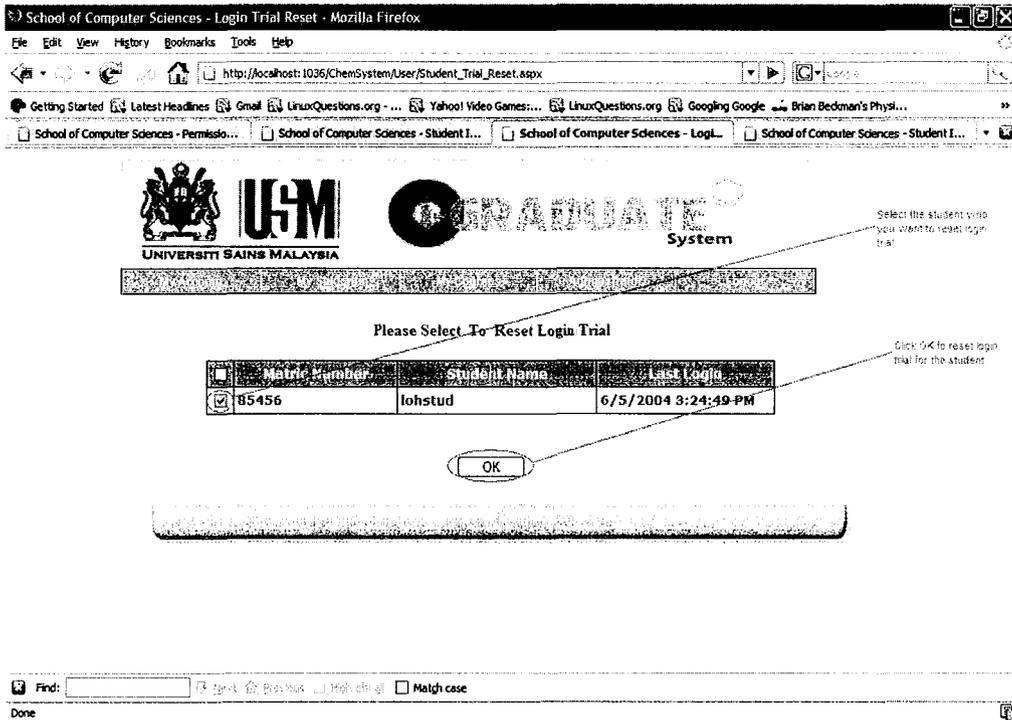
Find:      Match case

Done

### [3] Send Messages



### [4] Login Trial Reset for student



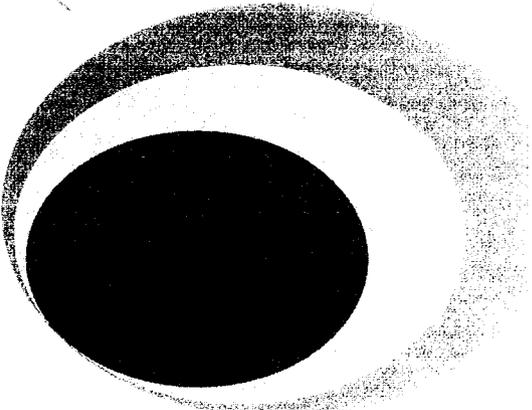
The user's information and login information will show after click on the "show" link button.

The login information section will show the user's password, last login, and login trial (how many times insert the wrong password, after THREE TIMES the user will be lock from login in. So they only can login after System Admin set the Login Trial back to "0".  
"Force Update" option if checked, then this user will prompt to update their profile when they login next time, after the user update, this option will automatically uncheck.

#### [5] Validate Student Result

The screenshot displays a web browser window with the following elements:

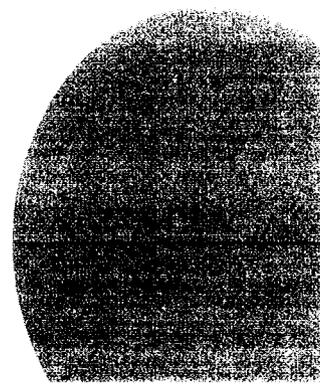
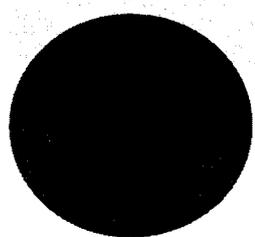
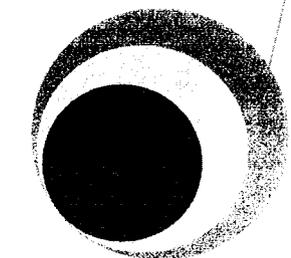
- Browser Title:** School of Computer Sciences - Courses List - Mozilla Firefox
- Address Bar:** http://localhost:1036/ChemSystem/User/User\_MyCourses.aspx
- Page Header:** Includes the logo of Universiti Sains Malaysia (USM) and the Graduate System logo. A tooltip on the right says: "Click on All Courses to view all courses you are currently handling".
- Navigation Bar:** A horizontal bar with two buttons: "All Courses" and "My Courses".
- Main Content Area:** A large, empty rectangular box, likely intended for displaying course information.
- Footer:** A search bar with the text "Find:" and a "Match case" checkbox. The address bar at the bottom shows the same URL as the top.



# GRADUATE System VERSION I

**STUDENT**  
TECHNICAL REPORT

School of Computer Sciences, USM  
15/7/2007



# TABLE OF CONTENT

## **Table of Contents** **SYSTEM CONFIGURATION**

<i>ABSTRACT</i> .....	2
<i>SYSTEM FUNCTIONS</i> .....	3
View/Edit Profile.....	6
Check Results/Courses Enrolled.....	8
Update/Edit Results.....	9
CGPA Calculator.....	11
Graduation Validator.....	12

## **ABSTRACT:**

I-Graduate System Version I is an enhancement of version I which add on more features and function as well as the interactive user interface.

# SYSTEM FUNCTIONS:



First have to LOGIN TO SYSTEM CONSOLE with :  
USERNAME : Your Username  
PASSWORD: Your Personal Password

Then the main screen will be display:

The function of the system configuration as below:

- [1] View/Edit Profile
- [2] Check Results/Courses Enrolled
- [3] Update/Edit Results
- [4] CGPA Calculator
- [5] Graduation Validator

School of Computer Sciences - Profile - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/Student/Student\_Edit\_Profile.aspx

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**GRADUATE System**

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**Student Photo :**

**Student Name :** LOH

**Student Matrix :** 85456

**Student IC :**

**Student Mobile No :**

**Student Mobile No2 :**

**Student Home No :**

**Hostel Address :**

**Permanent Address :**

**Student E-Mail :**

**Date Of Birth :** (MM/DD/YYYY)

**Guardian1 Name :**

Done

This will be the first page you see after you login

# [1] View/Edit Profile

In the My Profile page, Click Edit to edit your profile

School of Computer Sciences - Profile - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/Student/Student\_Edit\_Profile.aspx

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**My Account**

**My Profile** [Click here to edit your profile](#)

**Student Photo :**

**Student Name :**

**Student Matrix :**

**Student IC :**

**Student Mobile No :**

**Student Mobile No2 :**

**Student Home No :**

**Hostel Address :**

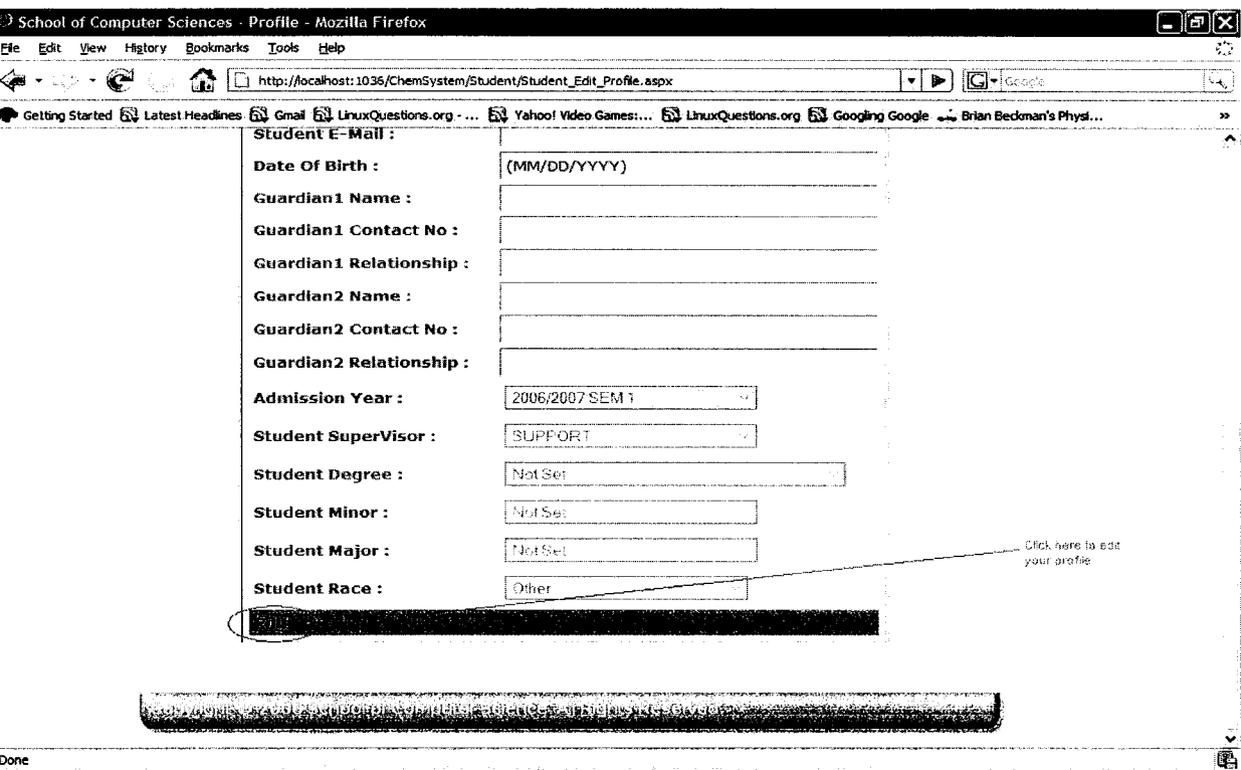
**Permanent Address :**

**Student E-Mail :**

**Date Of Birth :**

**Guardian1 Name :**

http://localhost:1036/ChemSystem/Student/Student\_Edit\_Profile.aspx



You can then fill in your own information (Your Matrix Number, IC number, Mobile Phone number, etc.)

[2] Check Results/Courses Enrolled



Click here to check your overall result

My Results

My Overall Result

Student Ph: [REDACTED]

Student Name : LOH

Student Matrix : 85456

Student IC : [REDACTED]

Student Mobile No : [REDACTED]

Student Mobile No 2 : [REDACTED]

Student Home No : [REDACTED]

Hostel Address : [REDACTED]

Permanent Address : [REDACTED]

Student E-Mail : [REDACTED]

Date Of Birth : (MM/DD/YYYY)

Guardian1 Name : [REDACTED]



UNIVERSITI SAINS MALAYSIA

CURRENT STUDENT ACADEMIC INFORMATION					
ACADEMIC PROGRAM :					
DEGREE :					
MAJOR/ FIELD :					
MINOR :					
ACADEMIC STATUS :	Active				
GPA :	NaN	CGPA :	NaN	CGPA (AT) :	NaN

PRE-UNIVERSITY RESULT	
SPM	
BM :	
BI :	
MUET :	
[REDACTED]	

[3] Update/Edit Results



When you get your result (Sem/Grade), you should update your result. Do so by clicking update Results

My Results

Update Results

Choose Semester

Academic: 2006/2007 SEM 1 OK



1. Select your course code, gred, and type

2. Then click on Save to save your results

Semester : 2006/2007 SEM 1

Unit : GPA : 1.00

Please fill in the Course Code and Gred

Course Code

CLE100E

Gred

A-

Type

Teras (T)

Save

Course Details

AKP201	T	A

Back

Edit



School of Chemical Sciences - Update Results - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/Student/Student\_Enter\_CourseGred.aspx?Sem=8

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**UNIVERSITI SAINS MALAYSIA**

**Graduate System**

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Semester : 2006/2007 SEM 1 Unit : 6 GPA : 3.89

Please fill in the Course Code and Gred

Course Code  Gred  Type

These are the results that you insert:

**Course Details**

AKP201	T	A
CLE100E	T	A-

To change your results. Press Edit

start

ChemSystem (5) - Mc... Computer Management Chensystem School of Computer S...

School of Chemical Sc... program Unbitted 1 - OpenOffic... unbitted - Paint

9:52 PM Thursday 6/5/2004

School of Computer Sciences - Edit Courses Grade - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/Student/Student\_Edit\_CourseGred.aspx?Sem=8

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School of Computer Sciences - Edit ... Unbitted Page School of Computer Sciences - Permisso... School of Computer Sciences - Student I...




**UNIVERSITI SAINS MALAYSIA**

**Graduate System**

---

Semester Academic : 2006/2007 SEM 1

Unit : 6 GPA : 3.89

Please fill in the Course Code

<input type="button" value="Edit-Delete"/>	CLE100E	A	T	False
<input type="button" value="Edit Delete"/>	CLT300E	A	T	False

Press Edit to edit your course result

Press Delete to delete your course result

Find:   Match case

javascript:doPostBack("GndView1", "Edit50")



School of Computer Sciences - CGPA Calculator - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/Student/Student\_CGPA\_Calculator.aspx

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Tools [Logout](#)

**CGPA Calculator**

**CGPA CALCULATOR**

**Calculate CGPA/GPA**

Current CGPA	<input type="text" value="3.89"/>	GPA	<input type="text" value="3.89"/>	Calculated CGPA <input type="text" value="3.89"/>
Units	<input type="text" value="6"/>	Units	<input type="text" value="20"/>	

[Calculate Required GPA](#) [Calculate CGPA](#)

In order to score CGPA of 3.89 as your final CGPA, you are required to score 3.89 for this coming semester with 20 units

**Forecast Results**

http://localhost:1036/ChemSystem/Student/Student\_CGPA\_Calculator.aspx

Click on CGPA Calculator to calculate your CGPA

School of Computer Sciences - CGPA Calculator - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/Student/Student\_CGPA\_Calculator.aspx

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**UNIVERSITI SAINS MALAYSIA**

**CGPA CALCULATOR**

**Calculate CGPA/GPA**

Current CGPA	<input type="text" value="3.89"/>	GPA	<input type="text" value="3.89"/>	Calculated CGPA <input type="text" value="3.89"/>
Units	<input type="text" value="6"/>	Units	<input type="text" value="20"/>	

[Calculate Required GPA](#) [Calculate CGPA](#)

In order to score CGPA of 4 as your final CGPA, you are required to score 4.03 for this coming semester with 20 units

**Forecast Results**

Semester 2006/2007 SEM 2

**Calculate GPA**

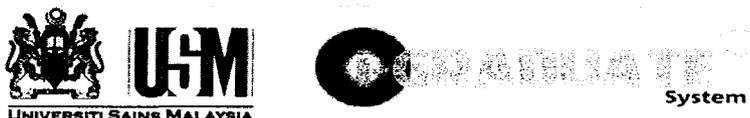
1. Type in the CGPA you wish to get!
2. Type in the number of units you take in current semester
3. Click on Calculate Required GPA
4. You shall be able to see the GPA you need to score in current semester to achieve the CGPA

School of Computer Sciences - CGPA Calculator - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:1036/ChemSystem/Student/Student\_CGPA\_Calculator.aspx

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**Tools**

**Graduation Validator**

**Calculate CGPA/GPA**

Current CGPA	<input type="text" value="3.89"/>	GPA	<input type="text" value="3.89"/>	Calculated CGPA <input type="text" value="3.89"/>
Units	<input type="text" value="6"/>	Units	<input type="text" value="20"/>	

[Calculate Required GPA](#) [Calculate CGPA](#)

With the GPA of 3.89 for this coming semester with 20 units, you are able to score 3.89 as your final CGPA..

**Forecast Results**

http://localhost:1036/ChemSystem/Student/Student\_Graduation\_Validator.aspx

Click on graduation validator to see if you will be able to graduate on time

Click on Graduation Validator to check your graduation status

<b>REGISTRATION STATUS</b>					
[Empty]					
<b>ADMISSION STATUS</b>					
[Empty]					
<b>REGISTRATION STATUS</b>					
Active					
<b>GPA</b>	NaN	<b>GPA</b>	3.89	<b>GPA (A1)</b>	3.89
<b>ADMISSION STATUS</b>					
Unable To Graduate					
<b>[6/0]</b>					
<b>[0/0]</b>					
<b>[0/0]</b>					

**Unfulfilled Requirements Courses**

<b>CORE COURSES [6/0]</b>						
No.	Sem	Code	Title [Malay/Eng]	Unit	Type	Grade
[Empty]						

In this page, you shall be able to see your current graduation status, the core courses that you have taken, etc.

## TECHNICAL REPORT: ADMINISTRATOR

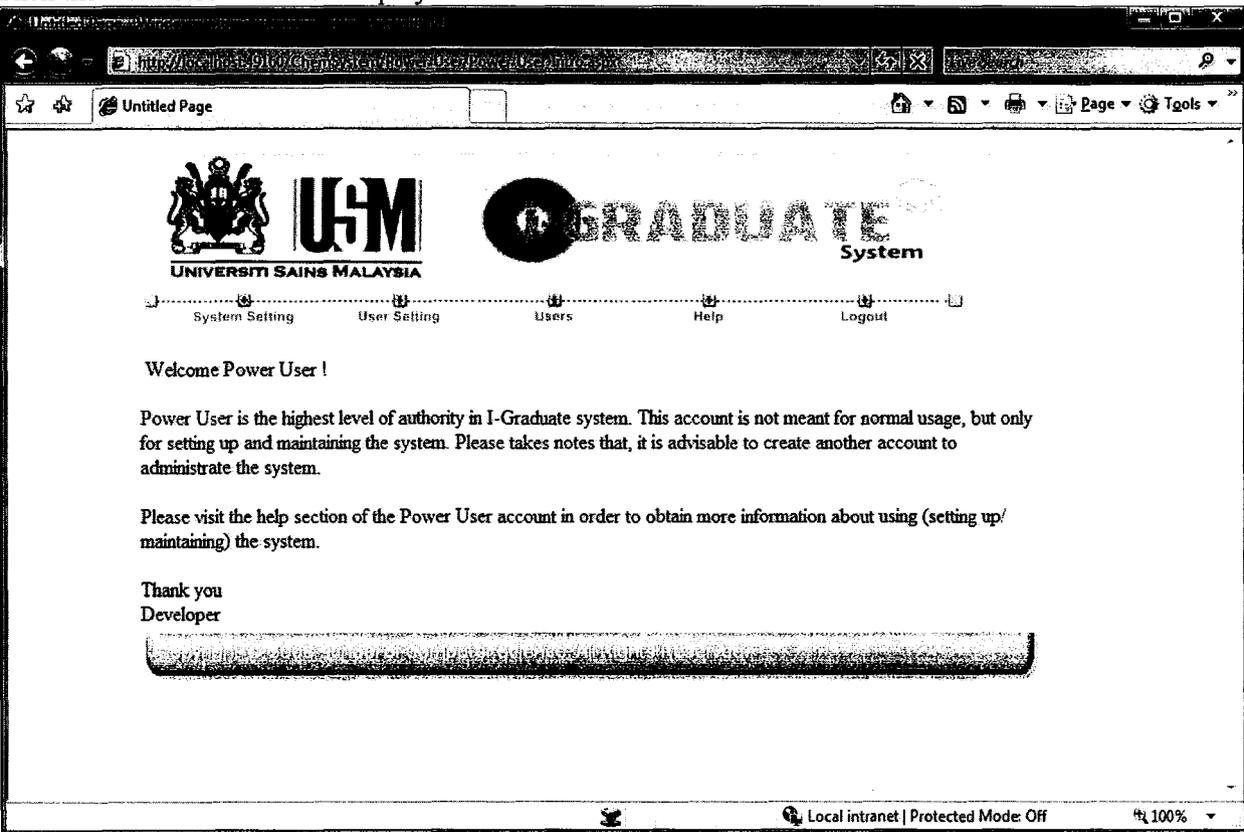
### SYSTEM CONFIGURATION:

First have to LOGIN TO SYSTEM CONSOLE with :

USER NAME: ROOT

PASSWORD: 1234

Then the main screen will be display:



The function of the system configuration as below:

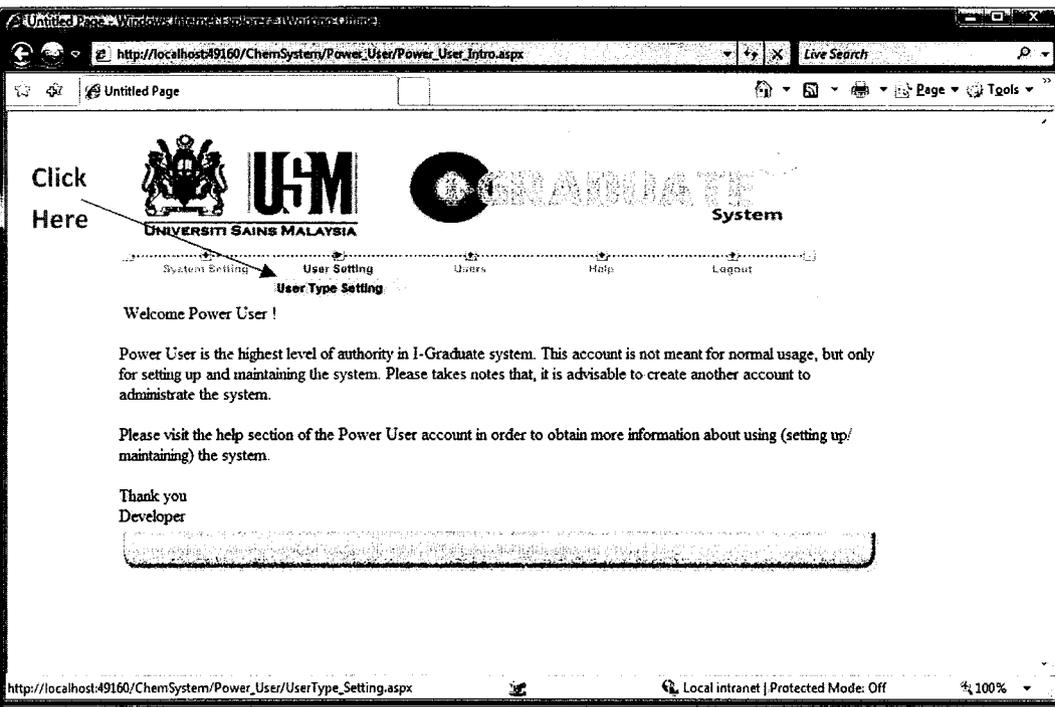
[1] System Setting

[1] User Type Setting

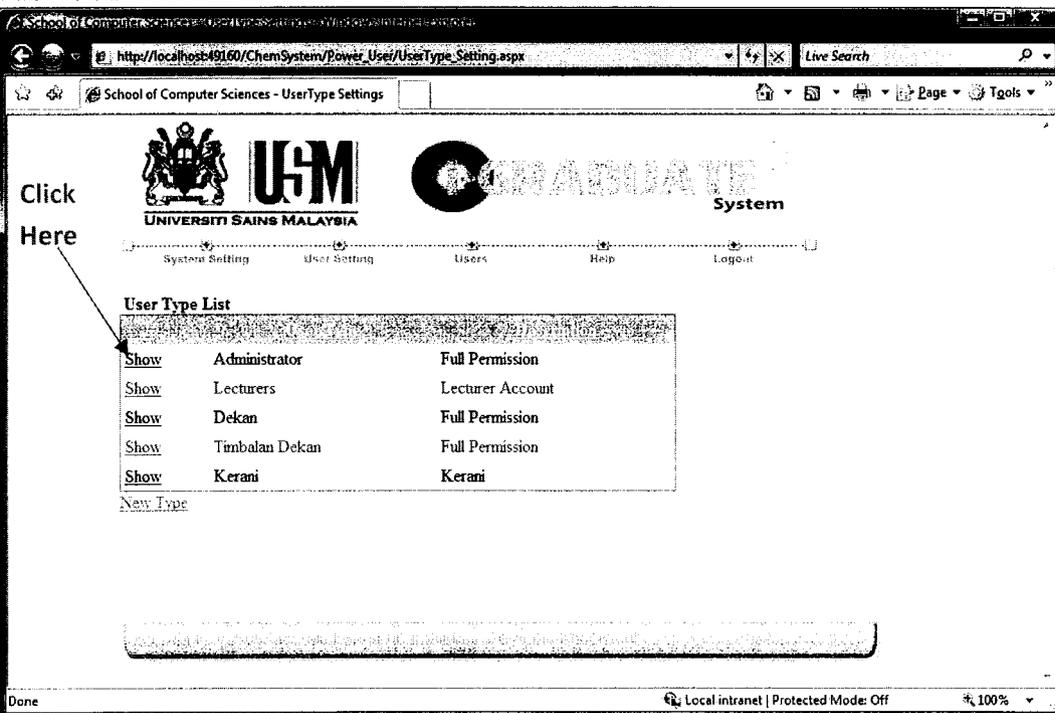
[2] Create New User

[3] View Existing User

[1] User Type Setting:



The Default User List will show as below:



The Permission setting for the user type, this is the example of the type "Administrator".  
 Click the edit link button to edit. Check the check box for allow the access and uncheck to block user from access the function. Then click update to save the setting.

User_Type_ID	1
UserType_Name	Administrator
UserType_Description	Full Permission
UserType_Supervisor	<input type="checkbox"/>
Course_Not_Validate	<input type="checkbox"/>
Courses_ViewAndEdit	<input type="checkbox"/>
Force_Update_Profile	<input type="checkbox"/>
New_Courses	<input type="checkbox"/>
System_Setting	<input type="checkbox"/>
UserType_New_User_Account	<input type="checkbox"/>
Student_Courses_Result	<input type="checkbox"/>
Student_Force_Update	<input type="checkbox"/>
Student_New	<input type="checkbox"/>
Student_Profile	<input type="checkbox"/>
Student_Semester	<input type="checkbox"/>
Student_Trial_Reset	<input type="checkbox"/>
Supervisor	<input type="checkbox"/>
SystemMessage	<input type="checkbox"/>
UserType_System_ViewEditSemester	<input type="checkbox"/>
User_Courses_Result	<input type="checkbox"/>
User_MyCourses	<input type="checkbox"/>
User_New	<input type="checkbox"/>

UserType_New_User_Account	<input type="checkbox"/>
Student_Courses_Result	<input type="checkbox"/>
Student_Force_Update	<input type="checkbox"/>
Student_New	<input type="checkbox"/>
Student_Profile	<input type="checkbox"/>
Student_Semester	<input type="checkbox"/>
Student_Trial_Reset	<input type="checkbox"/>
Supervisor	<input type="checkbox"/>
SystemMessage	<input type="checkbox"/>
UserType_System_ViewEditSemester	<input type="checkbox"/>
User_Courses_Result	<input type="checkbox"/>
User_MyCourses	<input type="checkbox"/>
User_New	<input type="checkbox"/>
User_Report_Interface	<input type="checkbox"/>
User_Set_Rule	<input type="checkbox"/>
User_Setting	<input type="checkbox"/>
User_Student_ViewAndEdit	<input type="checkbox"/>
withoutSupervisor	<input type="checkbox"/>
List_Student_BY_PA	<input type="checkbox"/>
<a href="#">Edit Delete New</a>	

Click Here to  
 it

User's Permission List:

No	Permission	Description
1.	@UserType_Supervisor	
2.	@Course_Not_Validate	Access to validate students result
3.	Courses_ViewAndEdit	
4.	Force_Update_Profile	
5.	New_Courses	
6.	@System_Setting	
7.	@UserType_New_User_Account	Access to create a new user
8.	Student_Courses_Result	
9.	Student_Force_Update	
10.	Student_New	
11.	Student_Profile	
12.	Student_Semester	
13.	Student_Trial_Reset	
14.	@Supervisor	
15.	SystemMessage	Access to post announcement on main page
16.	@UserType_System_ViewEditSemester	
17.	@User_Courses_Result	
18.	@User_MyCourses	
19.	@User_New	
20.	@User_Report_Interface	Access to view the report
21.	@User_Set_Rule	
22.	@User_Setting	
23.	User_Student_ViewAndEdit	
24.	@withoutSupervisor	
25.	List_Student_BY_PA	

USERS:

- [1] DEKAN
- [2] TIMBALAN DEKAN
- [3] LECTURES
- [4] STUDENT

## [2] Create New User

The screenshot shows a web browser window with the URL `http://localhost:49160/ChemSystem/Power_User/Power_User_Intro.aspx`. The page features the logos of Universiti Sains Malaysia (USM) and the I-Graduate System. A navigation menu includes links for System Setting, User Setting, Users, Help, and Logout. The 'Users' link is circled in red, with a red arrow pointing to a 'View Users' button. The main content area displays a 'Welcome Power User!' message, explaining that the Power User account is for system administration and not for normal usage. It advises creating another account for administration and directs the user to the help section for more information. The page concludes with 'Thank you Developer' and a large empty text box.

The screenshot shows a web browser window with the URL `http://localhost:49160/ChemSystem/Power_User/User_New.aspx`. The page features the logos of Universiti Sains Malaysia (USM) and the I-Graduate System. A navigation menu includes links for System Setting, User Setting, Users, Help, and Logout. The main content area is titled 'Account Creation' and contains the following fields:

- Username:
- Password: abc123
- Fullname:
- User Type: Administrator (dropdown menu)

A 'Create' button is located below the fields. A red arrow points from the text 'Click "create" to create user after fill in the entire blank.' to the 'Create' button. The page concludes with 'Thank you Developer' and a large empty text box.

Fill in the user name for the user, this user name will be the login username for the user.  
The default password is "abc123", the user will be prompt to change their password when first time login.

### [3] View Existing User

The screenshot shows a web browser window with the URL `http://localhost:49160/ChemSystem/Power_User/Power_User_intro.aspx`. The page features the logos of Universiti Sains Malaysia (USM) and the I-Graduate System. A navigation menu includes System Setting, User Setting, Users, Help, and Logout. The main content area contains the following text:

Welcome Power User !

[View Users](#)

Power User is the highest level of authority in I-Graduate system. This account is not meant for normal usage, but only for setting up and maintaining the system. Please take notes that, it is advisable to create another account to administrate the system.

Please visit the help section of the Power User account in order to obtain more information about using (setting up/ maintaining) the system.

Thank you  
Developer

The browser's status bar at the bottom shows `http://localhost:49160/ChemSystem/Power_User/User_Setting.aspx`, `Local intranet | Protected Mode: Off`, and `100%`.

The screenshot shows a web browser window with the URL `http://localhost:49160/ChemSystem/Power_User/User_Setting.aspx`. The page title is "School of Computer Sciences - User Settings". The navigation menu is the same as in the previous screenshot. The main content area is titled "User List" and includes a "Filters:" section with a dropdown menu. Below the dropdown is a table with columns for "Show", "SUPPORT", and "Administrator".

Annotations with arrows point to the dropdown menu and the "Show" column header.

- Click here to choose user type (points to the dropdown menu)
- Click here to show the details (points to the "Show" column header)

The browser's status bar at the bottom shows `Done`, `Local intranet | Protected Mode: Off`, and `100%`.

http://localhost:49160/ChemSystem/Power\_User/User\_Setting.aspx

School of Computer Sciences - User Settings

### User List

Filters:

Administrator

Show	SUPPORT	Administrator
------	---------	---------------

**User Type** Administrator

**Full Name** SUPPORT

**Address** 123

**Mobile No**

**Building Code**

**Room No**

**Located In USM**

[Edit Details](#)

**Username** SUPPORT

**Password** 1234

**Last Login** 6/3/2007 9:41:24 PM

**Login Trial** 0

**Force Update**

Click here to edit the details

Done Local intranet | Protected Mode: Off 100%

The user's information and login information will show after click on the "show" link button. The login information section will shown the user's password, last login, and login trial (how many times insert the wrong password, after THREE TIMES the user will be lock from login in. So they only can login after System Admin set the Login Trial back to "0". "Force Update" option if checked, then this user will prompt to update their profile when they login next time, after the user update, this option will automatically uncheck.