

Certification of FYP Dissertation Submission

Herewith I, (Azlena Bt. Arabi).[(1476)], certify that I am responsible for the work submitted in this project, and I have done all the modifications according to my supervisor's advice.

Thank you.

	Submit by Student	Verify by Supervisor
Signature	panfaran)	fritand
Name	Azlena Bt. Arabi	SALPUNIDAM MAHAMAD
Student ID	1476	116846
Date	05 June 2004	2/7/04

IMPROVING SECURITY IN MEETING ROOM BOOKING SYSTEM

By

Azlena Arabi 1476

Dissertation Report submitted in partial fulfillment of the requirement for the Bachelor of Technology (Hons) (Information Technology)

JUNE 2004

Universiti Teknologi PETRONAS Bandar Seri Iskandar 31750 Tronoh Perak Darul Ridzuan

List of Abbreviation

MRBS	Meeting Room Booking System
XHTML	Extended HyperText Markup Language
PHP	Hypertext Preprocessor
SKO	Sarawak Operation
PCSB	Petronas Carigali Sdn. Bhd
XML	Extended Markup Language

List of Figures

- Figure 4.1 Meeting Room Booking System Login Page
- Figure 4.2 Meeting Room Booking System About Page
- Figure 4.3 Meeting Room Booking System Welcome Page
- Figure 4.4 Meeting Room Booking System Room Reservation Page View by Day
- Figure 4.5 Meeting Room Booking System Room Reservation Page View by Week
- Figure 4.6 Meeting Room Booking System Room Reservation Page View by Month
- Figure 4.7 Meeting Room Booking System Administration Login Page
- Figure 4.8 Meeting Room Booking System Report on Meeting Page
- Figure 4.9 Meeting Room Booking System Search Page

TABLE OF CONTENTS

ABSTRACT	
ACKNOWLEDGEMENT	
TABLE OF CONTENTS	
CHAPTER 1: INTRODUCTION	1
1.1 Background of study/ research	1
1.2 Problem Statement	3
1.2.1 Problem Identification	3
1.2.2 Significant of the Project	3
1.2.3 Objectives and Scope of Study	4
1.2.3.1 Objectives of the Project	4
1.2.3.2 Scope of the Project	5
1.2.3.3 Relevancy of the Project	5
1.2.3.4 Feasibility of the Project	6
CHAPTER 2: LITERATURE REVIEW	7
2.1 Security Issues	7
2.2 XHTML	8
2.3 PHP	10
CHAPTER 3: METHODOLOGY/PROJECT WORK	11
3.1 Procedure Identification	11
3.1.1 The Waterfall Model	12
3.2 Tools Required	15
CHAPTER 4: RESULTS & DISCUSSION	16
CHAPTER 5: CONCLUSION	30
REFERENCES	
APPENDICES	

ABSTRACT

Meeting Room Booking System is a web-based application system which is design to simplify the tasks of secretaries and receptionists where they can record the meeting room reservation online. This web-based application system also enables them to edit and delete the application of the reservation. This system also leads them to improve their task performance especially in doing the recording and reserving the meeting. Thus by providing the security mechanism such as the use of password and use of cookies, the administrator can made any administration tasks such as deleting, editing and inserting without any interference from other users. Besides that, by using the password, the system can identify the access level of the user which has been assigned by the system administrator.

This system also aims to computerize meeting room reservation and an up-to-date room reservation would be automatically maintained by the system. Besides that, with additional features like online record searching and admin page to add he meeting room database entry and valid user this system promises a better functionality, more efficient utilization of resources and time saving especially to the secretaries and receptionists.

In this project, the author also would like to study several topics such as creating effectives web-based application and security issues in web-based application. For the development of this system, the author has used the programming language that is PHP, XHTML and PostgreSQL. The use of these tools has enabled me to learn more about it since these tools are very important for the web-based application. The author has given a responsible to develop a Meeting Room Booking System that should include the information of the room, location of the room, date and time available. The method that the author applied for the development of this system is software engineering method and waterfall model.

ACKNOWLEDGEMENT

I am indebted to many individuals who have helping my final year project a success. They are people of my respects who involve indirectly throughout this project or otherwise.

First of all I would like to thank Allah s.w.t for giving me some strength and patience in order to complete this final year project. I would also like to express my gratitude to Mr. Saipunidzam B. Mahamad for guiding me throughout the final year project. Furthermore, he always offered to help if I have any difficulties and are always kindly to share his knowledge and skills.

My gratitude also goes to Mr. Shuib B. Basri and Mr. Mohd Noor Ibrahim for their willingness to share their knowledge, for the time they spent and their explanation that help me to better understand the flow of the final year project and about MySQL and PHP.

To my co-league Miss Normieza Ibrahim and Miss Sharita Azna Ahmad, who were also under Saipunidzam supervision, thanks for their time in giving help, ideas and knowledge throughout the progress of this final year project.

Lastly, special thanks to goes to my precious family members for their constant love, priceless support, valuable advice, understanding and caring. Without them I would not stand where I am now.

CHAPTER 1 INTRODUCTION

1.1 Background of study/research

The term "security" has been used in many ways of daily lives. A "security system" protects the house, warning the neighbors or the police if an unauthorized intruder tries to get in. "Financial security" involves a set of investments that are adequately funded; hoping the investments will grow in value over time, so having enough money to survive later. Just as each of these terms has a very specific meaning in the next of its use, so too does the phrase "computer security."

In the computer security there are three very important aspects of any computer related system: confidentiality, integrity and availability.

- Confidentiality ensures that computer-related assets are accessed only by authorized parties. That is, only those who should have access to something will actually get that access. By "access," we mean not only reading but also view, printing or simply knowing that a particular asset exists. Confidentiality is sometimes called secrecy or privacy.
- Integrity means that assets can be modified only by authorized parties or only in authorized ways. In this context, modification includes writing, changing, changing status, deleting and creating.
- Availability means that assets are accessible to authorized parties at appropriate times. In other words, if some person or system has legitimate access to a particular set of objects, that access should not be prevented. For this reason, availability is sometimes known by its opposite, denial of service.

The author has related the title of the project with Meeting Room Booking System as an example in order to show how the security issues included in the system. The Meeting Room Booking System or also known as MRBS is a web based application system that simplifies the receptionists and secretaries tasks. This system enables the user to book, edit or delete the meeting room reservation record. With additional features like online record searching and admin page to add the meeting room database entry and valid user this system promises a better functionality, more efficient utilization of resources and time saving.

As this system involves only certain users, thus user authentication should be considered such as use of password and cookies.

1.2 Problem statement

1.2.1 Problem Identification

Currently, PCSB SKO is using piles of books and paper to book meeting rooms. Manual recording the log sheet, searching for schedule conflicts and available room deleting the cancelled meeting are tedious and time consuming. Most of all it can only be made at the receptionist desk. But the problem that has been faced by them is sometimes the data in this system might be unnecessary, deleted or redundant as this system can be access by all users. As we know, in computing, the choices are more limited and the possibilities less secure. Anyone can attempt to access the system. Unlike the manager who recognizes his staff's voice, the computer cannot recognize electrical signal from on person as being any different from those of anyone else. Thus, most computing authentication systems must be based on some knowledge shared only by the computing system and the user such as the use of password.

1.2.2 Significant of the project

The most common authentication mechanism for user to operating system is a password, a "word" known to computer and user. Passwords are mutually agreed-upon code words, assumed to be known only to the user and the system. In some cases, the user chooses passwords; in other cases they are assigned by the system. The length and format of the password also vary from one system to another.

The use of passwords is fairly straightforward. A user enters some piece of identification, such as a name or an assigned user ID; this identification can be available to the public or easy to guess because it does not provide the real security of the system. The system then will request a password from the user. If the password matches that on file for the user, the user is authenticated and allowed access to the system. If the password match fails, the system requests the password again, in case the user mistyped.

3

Meeting Room Booking System is a web-based application system which is design to simplify the tasks of secretaries and receptionists where they can record the meeting room reservation online. This web-based application system also enables them to edit and delete the application of the reservation. This system also leads them to improve their task performance especially in doing the recording and reserving the meeting. Thus by providing the security mechanism such as the use of password and use of cookies, the administrator can made any administration tasks such as deleting, editing and inserting without any interference from other users. Besides that, by using the password, the system can identify the access level of the user which has been assigned by the system administrator.

1.2.3 Objective & scope of study

1.2.3.1 Objectives of the project

The objectives implementing the Meeting Room Booking System are:-

- a) To develop a web-based application that can record and view meeting room reservation online.
- b) To provide security mechanism into the system.
- c) To conduct research that can be used for a betterment of the application to be developed.
- d) To design an effectives and efficient web-based application.

1.2.3.2 Scope of the project

The author wants to study several topics such as:

a) Creating effectives Web-based application

In developing the web-based application, the author must distinguish between good web pages and bad web pages. There are certain criteria need to be considered by develop the web-based application such as the response time and the font selection. Thus, it is very important to develop an effective's web-based application.

b) Security issues in web-based application

The author also would like to study on securities issues that related to the webbased application. In developing the system, the author should aware of the system being attacks by the hackers. Thus, the security needs to be included in this system.

1.2.3.3 Relevancy of the project

For the development of this system, the author has used the programming languages which are XHTML, PHP and MySQL. The use of these tools has enabled the author to learn more about it since these tools are important for the web-based application.

The author responsible to develop a Meeting Room Booking System that should include the information of the meeting room reservation record as the example of on how the author can relate the security mechanism involves in the web-based application. From what the author has seen and studied, this system is very suitable for the receptionists and secretaries where before they have to do the reservation record for the meeting room using piles of books and papers. Manual recording the log sheet, searching for the meeting room reservation record and deleting the cancelled room reservation are tedious and time consuming. This development process should be completed within 4 months.

CHAPTER 2 LITERATURE REVIEW

2.1 Security Risks of XML Web Services

Just as with standard Web-based traffic, authentication, access control, encryption and data integrity play an important role in providing basic levels of security for communication with Web Services. In Meeting Room Booking System, the author would like to focus more into the authentication area.

Authentication

As in standard web traffic, service requestors need to be authenticated by the service provider before information is sent. Standard web technologies using passwords, certificates, Kerberos, LDAP and Active Directory can be used to authenticate service requestors. However, service requestors need also to authenticate the service provider. Valuable information can be sent not only in the reply but in the request and it is paramount for service requestor to ensure that the service provider is who they think it is. For example, an e-commerce site may wish to authorize a credit card purchase and send a credit card number to a third party service for authorization. A WSDL file can be tampered with causing a service requestor to communicate with a spoofed Web Service. WSDL files in this case should be signed to ensure it has data integrity.

2.2 Extensible HyperText Markup Language (XHTML)

The Extensible HyperText Markup Language (XHTMLTM) is a family of current and future document types and modules that reproduce, subset, and extend HTML, reformulated in XML. XHTML Family document types are all XML-based, and ultimately are designed to work in conjunction with XML-based user agents. XHTML is the successor of HTML, and a series of specifications has been developed for XHTML.

XHTML 1.0 is the W3C's first Recommendation for XHTML, following on from earlier work on HTML 4.01, HTML 4.0, HTML 3.2 and HTML 2.0. With a wealth of features, XHTML 1.0 is a reformulation of HTML 4.01 in XML, and combines the strength of HTML 4 with the power of XML.

XHTML 1:0 is the first major change to HTML since HTML 4.0 was released in 1997. It brings the rigor of XML to Web pages and is the keystone in W3C's work to create standards that provide richer Web pages on an ever increasing range of browser platforms including cell phones, televisions, cars, wallet sized wireless communicators, kiosks, and desktops.

XHTML 1.0 is the first step and the HTML Working Group is busy on the next. XHTML 1.0 reformulates HTML as an XML application. This makes it easier to process and easier to maintain. XHTML 1.0 borrows elements and attributes from W3C's earlier work on HTML 4, and can be interpreted by existing browsers, by following a few simple guidelines. This allows you to start using XHTML now!

You can roll over your old HTML documents into XHTML using an Open Source HTML Tidy utility. This tool also cleans up markup errors, removes clutter and prettifies the markup making it easier to maintain.

> n D

Three "flavors" of XHTML 1.0:

XHTML 1.0 is specified in three "flavors". You specify which of these variants you are using by inserting a line at the beginning of the document. For example, the HTML for this document starts with a line which says that it is using XHTML 1.0 Strict. Thus, if you want to validate the document, the tool used knows which variant you are using. Each variant has its own DTD - Document Type Definition - which sets out the rules and regulations for using HTML in a succinct and definitive manner.

- XHTML 1.0 Strict Use this when you want really clean structural mark-up, free
 of any markup associated with layout. Use this together with W3C's Cascading
 Style Sheet language (CSS) to get the font, color, and layout effects you want.
- XHTML 1.0 Transitional Many people writing Web pages for the general public to access might want to use this flavor of XHTML 1.0. The idea is to take advantage of XHTML features including style sheets but nonetheless to make small adjustments to your markup for the benefit of those viewing your pages with older browsers which can't understand style sheets. These include using the body element with background color, text and link attributes.
- XHTML 1.0 Frameset Use this when you want to use Frames to partition the browser window into two or more frames.

2.3 PHP

PHP is a server-side scripting language for creating dynamic Web pages. You create pages with PHP and HTML. When a visitor opens the page, the server processes the PHP commands and then sends the results to the visitor's browser, just as with ASP or ColdFusion. Unlike ASP or ColdFusion, however, PHP is Open Source and cross-platform. PHP runs on Windows NT and many Unix versions, and it can be built as an Apache module and as a binary that can run as a CGI. When built as an Apache module, PHP is especially lightweight and speedy. Without any process creation overhead, it can return results quickly, but it doesn't require the tuning of mod_perl to keep your server's memory image small.

In addition to manipulating the content of the pages, PHP can also send HTTP headers, set cookies, manage authentication, and redirect users. It offers excellent connectivity to many databases (and ODBC), and integration with various external libraries that can do everything from generating PDF documents to parsing XML.

PHP goes right into the web pages, so there's no need for a special development environment or IDE. Start a block of PHP code with "<? *Php*" and end it with "?>." The PHP engine processes everything between those tags. PHP's language syntax is similar to C's and Perl's. No variables declaration is needed before using them, and easy to create arrays and hashes (associative arrays). PHP's even has some rudimentary object-oriented features, providing a helpful way to organize and encapsulate the code.

CHAPTER 3 METHODOLOGY/PROJECT WORK

3.1 Procedure Identification

The first published model of the software development process was derived from other engineering process (Royce, 1970)[1]. Because of the cascade from one phase to another, this model is also known as the 'waterfall model' or software life cycle. The principle stages of the model map onto fundamental development activities:

1. Requirement analysis and definition

The system's services, constraints and goals are established by consultation with system users. They are then defined in detail and serve as a system specification.

2. System and software design

The systems design process partitions the requirement to either hardware or software systems. It establishes overall system architecture. Software design involves identifying and describing the fundamental software system abstractions and their relationships.

3. Implementation and unit testing

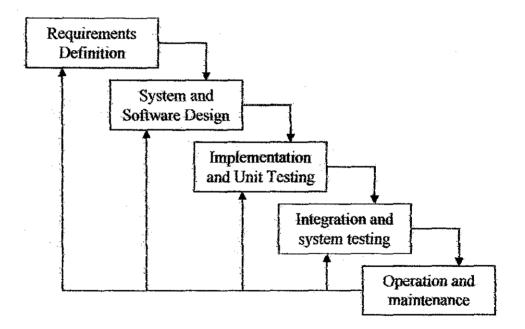
During this stage, the software design is realized as a set of programs or program units. Unit testing involves verifying that each unit meets its specification.

4. Integration and system testing

The individual program units or programs are integrated and tested as a complete system to ensure that the software requirements have been met. After testing, the software system is delivered to the customer.

5. Operation and maintenance

Normally this is the longest life-cycle phase. The system is installed and put into practical use. Maintenance involves correcting errors which were not discovered in earlier stages of the life cycle, improving the implementation of the system units and enhancing the system's services as new requirements are discovered.



The author has applied only three phases of waterfall model in the Meeting Room Booking System (MRBS) which are:

1. Requirement analysis and definition

In this phase, the author has identified the goals that want to be achieving while developing the Meeting Room Booking System (MRBS). The author has developed this MRBS to the target user which is the receptionist or secretaries in Petronas Carigali Miri. The purpose of developing this system is to eliminate the traditional way to book the meeting room where the user still using piles of paper to record the reservation of the meeting room.

2. System and software design

The author has decided to use XHTML, PHP and MySQL in order to implement this Meeting Room Booking System. The main purpose the author use these programming languages because they are easy to be integrate with each other.

3. Implementation and unit testing

In the implementation and unit testing, the author has identified that there are 4 modules included in the Meeting Room Booking System. One of the most important modules in this system is security element that must be included as it is the requirement based on the title of the project.

Besides applying the three phases that has been mentioned above, the author also applied a Software engineering method. Software engineering is structured approach to software development whose aim to facilitate the production of highquality software in a cost-effective way. Methods such as Structured Analysis (DeMacro, 1987)[1] and JSD (Jackson, 1983)[1] were first development in the 1970's. These methods attempted to identify the basic functional components of a system and function-oriented methods are still widely used. In the 1980's and 1990's, these function-oriented methods were supplemented by object-oriented methods such as those proposed by Brooch (1994) and Rumbaugh (Rumbaugh et al., 1991)[1]. These different approaches have now been integrated into a single unified approach built around Unified Modelling Language (UML) (Fowler and Scott, 1997; Booch et al., 1999; Rumbaugh et al., 1999a, 1999b)[1].

3.2 Tools Required

Software	Hardware
 Extended HyperText Markup Language PHP MySQL Fireserv Dramweaver MX Photoshop Adobe Browser 	 Personal computer with a 486 or higher processor Microsoft Windows 95 or later or Windows NT version 4.0 or later 16 MB of RAM for Windows 95 or later 24 MB of RAM for Windows NT VGA or higher resolution monitor (Super VGA recommended) Microsoft Mouse or compatible pointing device Hard Disk requirement: -52 MB for typical installation -65 MB for maximum installatio CD-ROM drive

CHAPTER 4 RESULTS AND DISCUSSION

4.1 Introduction

The Meeting Room Booking System (MRBS) is a web based application systems that simplify the receptionists and secretaries tasks. This system enables the user to book, edit or delete the record searching and admin page to add the meeting room database entry and valid user this system promises a better functionality, more efficient utilization of resources and time saving.

MRBS engine v1.0.0 is consisting of 5 modules. Room reservation log sheet module for room booking data entry, search engine to find the booking record, reporting module to view the reservation record and the secure admin page to update meeting room database, edit validated user id and password and view log features to tract the login record based on user id. The features in the admin page are strictly for security purposes. From the Meeting Room Booking System, the author has taken the opportunity to include the safety elements that are useful to secure this system from unwanted user where the author will only focus more on password and cookies elements.

4.2 Brief description about the security element involves

4.2.1 Password Issue

For security purposed, passwords are included for the login page. It is necessary to protect the integrity of the data. However, there are several issues related to the password need to be considered. One of the issues is about attack on password. There are several ways to determined others person password:

- Try all possible passwords
- Try many probable passwords
- Try password likely for the user
- Search for the system list of password

Following are the technique use to gain other person password:

Exhaustive Attack

In exhaustive or brute force attack, the attacker tries all possible passwords. The number of possible passwords depends on the implementation of the particular computing system.

Probable Password

Here the penetrator searching for password based on human characteristics. Therefore, penetrators try techniques that are likely to lead to rapid success. If people prefer short passwords to long ones, the penetrator will try all passwords, but try them in order by length.

• Password Likely For a User

People typically choose personal passwords, such as name of a spouse, a child, a brother or a sister, a pet, a street name or something similar. Selecting just names of people, streets, project and so forth, produce a list of only few hundred possibilities at most. These can all be tried in under a

second! Event a person working by hand could try 10 likely candidates in a minute or two.

From the findings, we need to choose type of password used in the system based on several criteria. Here are some guidelines for password selection criteria:

- Use characters other than just A-Z
- Choose long passwords
- Avoid actual names or words
- Choose an likely password
- Change the password regularly
- Do not write it down
- Do not tell anyone else

4.2.2 Cookies

Cookies are pieces of information generated by a Web server and stored in the user's computer, ready for future access. Cookies are embedded in the HTML information flowing back and forth between the user's computer and the servers. Cookies were implemented to allow user-side customization of Web information. For example, cookies are used to personalize Web search engines, to allow users to participate in WWW-wide contests and to store shopping lists of items a user has selected while browsing through a virtual shopping mall:

Essentially, cookies make use of user-specific information transmitted by the Web server onto the user's computer so that the information might be available for later access by itself or other servers. In most cases, not only does the storage of personal information into a cookie go unnoticed, so does access to it. Web servers automatically gain access to relevant cookies whenever the user establishes a connection to them, usually in the form of Web requests.

Cookies are based on a two-stage process. First the cookie is stored in the user's computer without their consent or knowledge. For example, with customizable Web search engines like My Yahoo!, a user selects categories of interest from the Web page. The Web server then creates a specific cookie, which is essentially a tagged string of text containing the user's preferences, and it transmits this cookie to the user's computer. The user's Web browser, if cookie-savvy, receives the cookie and stores it in a special file called a cookie list. This happens without any notification or user consent. As a result, personal information is formatted by the Web server, transmitted, and saved by the user's computer.

During the second stage, the cookie is clandestinely and automatically transferred from the user's machine to a Web server. Whenever a user directs her Web browser to display a certain Web page from the server, the browser will, without the user's knowledge, transmit the cookie containing personal information to the Web server.

4.3 System Design

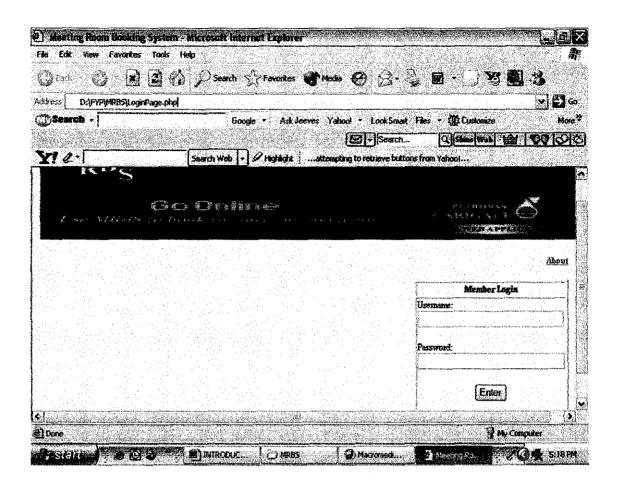


Figure 4.1: Login Page

This is the structure of the Meeting Room Booking System login page. This login page requires the user to insert their user id and password. The username and password included in this system as one of way to secure the system from any unwanted purpose.

dress D: (FYP) MRES About php						<u> </u>	G
Search -	to	gle • Ack Jee	ves Yahod + LookSm	and a state of the state of the state	No. Pasto Barrela	al de san de la companya de la comp Na companya de la comp	ore
ci e ·	Search Web	Pringslagie	attempting to retrieve bu	AGARGANAN DEBERTARIAN DEBERTARIAN AND DEBERTARIAN DEBERTARIAN	wa Sa	<u>89 69 13</u>	1
Vhat Is MR8S?		• f an 1997 - 19	<u>ى يەرىكە ئەتلەر مەمەرىي بىيەر مەمەرىكە تەرىكە تەرىكە تەرىخەن مەمەرىيى بەرمەر مەمەرىكە تەرىكە تەرىخەن تەرىخەن ب</u>				
a Montina Room Booking I							÷.
nd secretaries. This system dditional features like onlin	enable the user b e record searching	o book, edit or and admin pa	delete the meeting r ge to add the meetin	oom reservation y room database	record. W	dh	
he Meeting Room Booking I nd secretaries. This system dditional features like onlin his system promises a beth his MRBS born with 5 modu	e record searching e record searching er functionality, mo	o book, edit or and admin pa	delete the meeting r ge to add the meetin	oom reservation y room database	record. W	dh	
nd secretaries. This system dditional features like onlin his system promises a beth his MRBS born with 5 modu	e enable the user to e record searching er functionality, mo les which are:	o book, edit or and admin pa	delete the meeting r ge to add the meetin	oom reservation y room database	record. W	dh	
nd secretaries. This system Iditional features like onlin ils system promises a beth his MRBS born with 5 modu Room Reservation log she	e enable the user to e record searching er functionality, mo les which are: et module	o book, edit or and admin pa	delete the meeting r ge to add the meetin	oom reservation y room database	record. W	dh	
nd secretaries. This system diditional features like onlin ils System promises a bett his MRBS born with 5 modu Room Reservation log she Reporting and researching	e enable the user to e record searching er functionality, mo les which are: et module	o book, edit or and admin pa	delete the meeting r ge to add the meetin	oom reservation y room database	record. W	dh	
nd secretaries. This system dditional features like onlin nis system promises a beth	r enable the user t e record searching er functionality, mo les which are: et module	o book, edit or and admin pa	delete the meeting r ge to add the meetin	oom reservation y room database	record. W	dh	

Figure 4.2: About MRBS (Not Login)

This page mainly consists of the general information about the system and the developer. The user can view this page even though there are not log in to the system.

ktress D: FVPiMR851WelcomePag	e.cho	<u> </u>		
Search -	and a subscription of the	oves Vahool • LookSmart F	ies 🔹 🕼 Customize	More
an China Arawa Ara		E Seach.	C. State Well . Mar	99 80
¥7 & ·	Search Web - Phiphight	attempting to retrieve buttons f	rom Yahool	
Location / Areas	121	1234167	121426	
SKO - 1st Floor	42678210	8 9 10 11 12 13 14	1 8 9 18 11 12 13	
SKO - 2nd Finer	11 12 13 14 15 16 17	15 16 17 18 19 20 21	14 15 16 17 13 19 20	
	18 19 20 21 22 23 24	22 23 14 25 26 27 28	21 22 23 24 25 26 21	
1. 문명은 영문하였	25 26 27 28 29 30 31	20. 120. 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u>28 29 30 31</u>	te de la
	Thursday 01	January 2004		
se Go Ta Day Before	<u>Go 1</u>	<u>o Todar</u>	<u>Go To Da</u>	y Afler >:=
	Fest Latong I	W	est Luiong II	
17:00				
17:30 haris integrate and a state	🗩	a (), Water of (), "		
8:00	الم المراجع الم			
8:30	**************************************			
9:00	*			
930			ى كى مەرىپى بىرىكەن بىر يېچىدى ئېرىمىيەر ئېرىمىيەر بىرىكەر يەسىرىيەر يېزىكە تەسىرىيەر يېزىمۇرىيەر بىرى يېزى	. الج
0.00	an.		👻	

Figure 4.3: Welcome Page

After the successful login, the user will be redirect to this welcome page. This page will shown the date of the day and the detail of the room reservation for that day.

3 Back - 🙄 - 🖬 🖪] 🖞 🔎 Search 렀	Favorites 💣 M	edia 🤁 🛓	3- 💱 I	J • _ ¥	
dress D:\FYP\MRBS\Day.php	and the second		al e recenció e els		1.1.2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	<u> </u>
)Search -	Google	• Ask Jeeves	Yahool - Loc	#Smart Files	• 🐺 Customize	Mi
				ewch		S 00 1 16
K! 2.	Search Web -	Highlight	mpting to retrie	ve buttons from	Yahoo!	
location / Areas	13	3	12342	6 7	1.2.3.4	Σ.6
KO - 1st Floor			2 10 11 12 1		1821011	
KO - 2nd Floor	11 12 13 14 15 16	12 1	<u>5 16 17 18 19 2</u>	<u>9 21</u>	14 15 16 17 18	12 20
	13 19 20 21 22 23	24 2	2 23 24 25 26 2	7 28	21 22 23 24 25 1	<u>26 21</u>
	<u>25 26 27 28 29 30</u>	31 2	2		<u>28 29 30 31</u>	
	Thur	sday 01 Janua	ry 2004			
🕾 Ga Ta Day Before	والمحافظ ويوجدوا والموجل والمحافي معالمهم والمحافظ والمحافظ والمحاف	So Ta Toda	Ľ			To Easy Ailer >>
fime:	West Lutong I	·····		West	Latong II	
700		·····			*	
7 30 8 00	1999 - 19	Ny 1814, amin'ny faritr'o dia kaominina dia mampikambana amin'ny faritr'o dia	AND DESCRIPTION OF THE PARTY OF T			
8 30	ann spin minder a state and a state and a state of the st		nancyariadi manana a da			
850 960				na 17 atargan tas. 3944 M42 (Ale	*	
930	*			ing the second second	*	
0.00		n se		مو معر (»، «منه» رسور، معناه (»،	*	
0:30 /					*	

Figure 4.4: Room Reservation - View by Day

This page will let the user to view the room reservation by day. The user can select the room name from the location or area section.

•

ke Edit)) Back •	View Pavorite		Merry Mart	rontes 💣 Media 🕇	n / A		og an i 39
	ten andarin aktimatika d			Unites and the second	00.2		a harden an der der die die
idress	D:\FYP\MR85\we	ek.phpl	and the state of the		and the second secon		
))Searel	b -		Google •	Ask Jeeves Yahool	 LookSmart File 	s 🔹 🎲 Customi	20 Mi
				e e	₹ Search	Q Sile We	S 60 180 3
21 2-		[s	sarch Web + & Hig	hightattempting	to retrieve buttons fro	on Yahoot	
	din universitation de la companya	na ini ili ini pana di ili ini i			<u> Antonio antoni</u>	18. 19. 19. 19. 19. 19	
			SKO - 1st	Floor - West Lut	ong I		
	R 1 P.C			المتعادية ومعادية			
54 UO 10.1	<u>Veek Before</u> Man		angang ga ang minang mang mang mang mang mang mang mang	Go To This Week			Co To Week After>>
Time:	Jan 85	Tue Jan 86	Wed Jan 87	Thu Jan 82	Fri Jan 89	Sat Jap 10	Sun Jan 11
07.00	*		*	*		*	*
07:30	*	*	*	*	*	٠.	a 🕹 a .
08:00		*	*		ا ا	۲	
08:30	۲		(· · · · · •	*	*		*
09:00	.	*	*	1 B	****	٠	*
09:30	۲	*			*	*	#
10:00	÷	*	*	ه الله الله ال	*		*
10:30			۲		۲	۲	۲
11:00	٠	- 1	*			. *	*
11:30	٠	*	***	*	٠. ا	*	
12:00	٠	*	۲	*	e [*	
2:30		*		*	*	*	*
13:00	😸	۲	*	B.	*	*	*
			and the second				My Computer

.

Figure 4.5: Room Reservation - View by Week

This page will let the user to view the room reservation by week where the user can have a view of the available room within the whole one week of the intended month.

,

🕽 6ack - 🙄 [2]	a 4.1	C Search	Forcentes	ledia 🥝	A	8 - 🗍	78 80 2	
diess D:\FYP\M885\mont	an and and a set of the	<u>en anderen</u>		and a start of the s	Land Million		COMPLEX MALING STATE	~] E] G
Search -		Google	- Ask Jeeves	Yahoot + L	ookSmart File	r • @Custo	to where some fact the state of the	More
	a stratic graditation		の間の	<u>e</u> t:	Search	Q Stars V	nes : 201 1	20
<u>ci 2-</u>		arch Web 🕞 🎸	PHighlightatt	empting to reb	ieve buttons fr	om Yahoo!		
KO - 2nd Floor	<u>West</u>]	<u>Entang II</u>					141516121	
				X 12 X 21 4 X 26 27 28 29		됳뺩뛓좏棍	1 21 12 12 14 2 28 28 30 31	0.70.51
	1. A			.	. ಜವದನ್ ಈಗಿಸಿ		***	
		1. Star 1. Star	a second	i set			and the second	
		January 20	04 - 1st Floor	West Lut	ong I			
		January 20			ong I			
Con To Month Before			<u>Go To Tais M</u>	ienth			<u>Go Ta Mostk</u>	······································
	wesday	January 20 Wednesday		ienth	ong I iday	Saturday	<u>Go To Mosth</u> Sunds	······································
	wesday		<u>Go To Tais M</u>	ienth		Saturday		······································
	tesday		<u>Go To Tais M</u>	ienth		Saturday		······································
	weeday		<u>Go To Tais M</u>	ienth		Saturday		······································
	Secolary		<u>Go To Tais M</u>	ienth		Saturday	Sunda	······································
	tesday		<u>Go To Tais M</u>	ienth		Saturday		······································
	vesday		<u>Go To Tais M</u>	ienth		Saturday	Sunda	······································

Figure 4.6: Room Reservation - View by Month

This page will let the user to view the room reservation by month. By viewing this page, the user will know the rooms that have been reserved for the intended month.

4

.

) Back + 🦪 👔	Sead	h 🕺 Favorites 👹	Meda 🙆 🚊 🔩	፼ •] 7 3 8	13
itess D:\FYP\MR85\Adminlogin	المجاريبين ومواصف التعبيد مريش	alanan in serai an s	<u>. Andreas an </u>	an a	¥8@
Bearch -		Google 🔹 Ask Jeeve	is Yahool - LookSmart Fi	les 👻 🕕 Customize	More
<u>ci e-l</u>	Search Web	-) Ø Higtilight	attempting to retrieve buttons I	California (1995) - Califo	199 (S)4
letine Roem Beeline System	22	Mar 💌 2004 💌	(gato)	About Adam Reyor	f Szarth
on do not have access rights to mod	lify this item.	genti dagiling 19 fullog yati da sha na kutana	un land Begin ditter timber in seine sternen sind eine seine seine seine seine seine seine seine seine seine s	an ing daa ing talan	a yang astron
ease log in					
Name					
browsa					
Log in a					
Xine	en de la compañía de En la compañía de la c	n friheite der der standesse som Andere standesse som	n na serie de la companya de la comp Na serie de la companya de la company	W My Co	dent distington y companying and distance

Figure 4.7: Administration Login Page

This page will require a password from the user before the user can access through it. To go through the administration page, the user should have an administration access level which has been set earlier by the administrator.

2

A	rontes tools Help 20
🗿 Back • 🎲	🖹 🗳 🖏 🔎 Search 💬 Favorites 🐨 Media 🧭 📿 - 🥥 🔟 - 🗌 - 💭 📆 🚵
And a second	iStreport.phyl
Search •	Google - Ast Jeeves Yahool - LookSmath Files - @Clustomize More
	Search Web - 2 Highlight attempting to retrieve buttors from Yahoo!
<u>Y1 e-1</u>	Search Web + 2 Highlightattempting to retrieve buttons from Yahoot
	22 × Mar × 2004 × 2004
Meeting Room Book	<u>eSteinen</u> <u>Abou</u> Adum Natori Senti
Report start clate: Report end clate: Match area:	1 x Jan x 2004 x 1 x Mer x 2004 x
Match mom:	
Match brief descriptio	د (المراجع الم المراجع المراجع
Match full description	
Match full description Include:	S Report only Summary only Report and Summary

---

Figure 4.8: Report on Meetings page

User can view the report of the meeting room booking room reservation by accessing this page. On this page, the user can view the report by indicate the start date and end date. User can also view the report only, summary only or both of it. The purpose of this report page is to give the user the overall view of the meeting room description and information that available for those meeting rooms.

3 Back + 🕖 🛛 🗷	🚯 🔎 Search 🐥 Favorites 💓 Med	• 6 3.3	图 - 〕 对 图	Q -36
idress Du FrPiMR85isearch.p h				Ma
Search -	Google • Ask Jeeves Ye	المحمد الكلاك في المعام المنتقب المحالة المعاد المعاد الم	Section of the a section of the	Mor
57 e-1	Search Web 🔹 🖉 Highlight 🗍attem	AND A DEPARTMENT OF A DEPARTMENT OF A DEPARTMENT	C. Stand Web - 122 m Yahoo!	1998
	22 🛩 Mar 🛩 2004 🛩 go	ale second		
Meeting Broth Rocking Syntem		4	bout Adapan Repo	ff Seath
Advanced search				
Jeanth For				
Firm 4 Y Feb 2004				
Search				
		ann dennis ann an de fran de fran de fran de fran de francés de francés de francés de francés de francés de fra	anna io ann ann ann ann ann ann ann ann ann an	an a

Figure 4.9: Search page

This page will redirect user through the advance searching. By accessing this page, user can search the intended date that they want to view and they can specify which room that they want to view for that specific date.

CHAPTER 5 RECOMMENDATION & CONCLUSION

5.1 Conclusion

The Meeting Room Booking System allows the receptionists and secretaries, making sure that the meeting room reservations are recorded and easy to keep track. With the additional features that will be include in this system, the secretaries and receptionist will easily to manipulate the database of the system such as edit, delete and add the record. Thus within four months of the development phase, the author have learn that it is very important to apply the knowledge that we have gained in the class before.

From this web-based application development process, the author has found that there are lots of experience and valuable lessons especially in the technical parts. The author also realized that security aspect should be considered for the system since this can avoid the hackers to hack our system and managed to view, edit and delete the confidential information.

As the author have added the login page and cookies feature in this system, the author have also realized that user authentication is a serious issue that becomes even more serious when acquainted users seek to share facilities by means of computer networks.

5.2 Recommendation

ţ

For recommendation part, the Meeting Room Booking System V1.0.0 still have feature to add on such as infrastructure feature. Since that in this version I have limited time to finish it so I just put is as static information and I hope that it will add to the next version. It would be nicer if it is in dynamic form, where admin can add to the next version. For the next version, I also want to suggest that this system should be include other security mechanism such as access control list, secure socket layer (SSL) and encryption.

REFERENCES

- Roger S. Pressman, Software Engineering a Practitioner's Approach, McGraw Hill International Edition, 2001
- [2]. Uma Sekaran, Research Methods for Business 4th Edition, John Wiley & Sons, Inc. 2003
- [3]. Deitel Deitel Nieto, Internet & World Wide Web How to Program 2nd Edition, Deitel Associates, Inc. 2000
- [4]. Christopher Cosentino, Essential PHP for Web Professionals, Prentice Hall, 2001

[5]. Jakob Nielsen (May 1996), Top Ten Mistake in Web Design, http://www.useit.com

[6]. Charles P. Pfleeger, Security in Computing 2nd Edition, Prentice Hall, 2000

[7]. Lincoln Stein and John Stewart (February 4, 2002), W3C The World Wide Web Security Version 3.1.2, http://www.w3.org/Security/Fag/www-security-fag.html

[8].John Disember(2002), Web Development, Summer Guide, http://www.december.com

[9]. Ray West, Tom Muck and Tom Allen, 200, The Complete Reference Dreamweaver UltraDev4, Osborne/Mc Graw Hill

[10]. Jeffrey L. Whitten and Lonnie D. Bently, System Analysis and Design Methods, Irwin McGraw Hill, Fourth Edition, 1998

APPENDICES

Appendix A Timeline

No	Detail/Week	1	2	3	4	5	6	7	8	9	10	11	12	13	
1.	Selection of Project Topic				······································					· · · ·					
	- Propose-Topic			1			1		1	1		1		1	
	-Topic assigned to students														
			1									·			
2	Prefiminary Research/ Design Work														
	- Introduction			1					i.		1				
	- Objective			1	1					<u> </u>	1.	1	<u> </u>	1	
· · · ·	-List of references/ literature							<u> </u>	<u> </u>						
;	-Project Planning	1			1	1	1						1	1	
 . '	· · · · · · · · · · · · · · · · · · ·	1	1	1	<u>† </u>	[·	· · · · ·		1		1	1		1	
3	Submission of Preliminary Report			• . •											
	(Initial Proposal)				· . · ·		1	<u> </u>		· · · · · · · · · · · · · · · · · · ·	[.			
4	Project Work	1	1	1		1	1	l	1 ¹		<u> </u>				
	- List of reference/ literature								-						
	- Practical/ Laboratory Work														
·5	Submission of Progress Report		-	:			97		•						
			: <u> </u>		·	1			<u> </u>					<u> </u>	
6	Project work continue									!	!	1			
	- Practical/ Laboratory Work											1			
		1			1	1						·		<u> </u>	
7	Submission of Dissertation Final Draft						- The second	and a second		a la contract de la contracta de	a mana da manga ang m				
											<u> </u>		ļ	<u> </u>	
8	Oral Presentation								-	r Jahrstein - A				•	
9	Submission of Project Dissertation						-								

Appendix B User Manual

MRBS V.1.0.0 User Manual

Introduction

Currently, PCSB SKO is using piles of books and papers to book meeting rooms. Manual recording the log sheet, searching for schedule conflicts and available room deleting the cancelled meeting are tedious and time consuming. Most of all it can only be made at the receptionist desk.

The Meeting Room Booking System (MRBS) is a web based application systems that simplify the receptionists and secretaries tasks. This system enables the user to book, edit or delete the record searching and admin page to add the meeting room database entry and valid user this system promises a better functionality, more efficient utilization of resources and time saving.

This MRBS v1.0.0 comes with 5 modules, which are:

- Room Reservation log-sheet module
- Reporting and searching module
- View Log Feature
- Updateable meeting room database
- Security elements

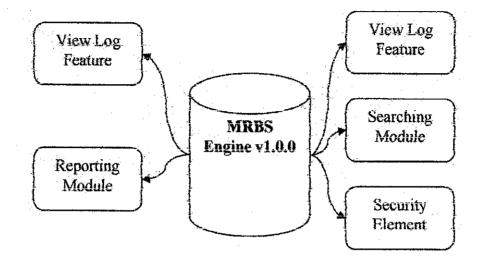
MRBS Engine V1.0.0

MRBS engine v1.0.0 is consisting of 5 modules. Room reservation log sheet module for room booking data entry, search engine to find the booking record, reporting module to view the reservation record and the secure admin page to update meeting room database, edit validated user id and password and view log features to track the login record based on user id. The features in the admin page are strictly for security purposes.

MRBS Overall Process Flow

Process	Explanation
Accessing application	Using internet browser. Type in the specified
	address. (Refer details section)
Login	Enter user password and user id.
	If login failed – check id and password cases.
Select modules	Perform desired task from selection of menus:-
	• Reservation – to book meeting room
·	• Report - to view the booking record
	• Admin - to add/edit user id, to view log
	and to add room
	About - for more information on MRBS
Logout	If task completed logout from the system.
New session	Re-enter user id and password on 2 conditions:
	• If session expired and task not completed
	• Want to start another session after a
	successful logout.

Module Diagram



1. User Access Admin.

Please consult your system administrator to get your Id and password. Only when you have the id and password then you can log into the system.

2. Details

Accessing the application

- Open internet browser (Internet Explorer/Netscape)
- Type address (<u>http://160.0.107.129/MRBS/</u>)
 Note: screen resolution should be set to 800 x 600
 The final backslash (/) is required

3. Users log in

- Enter User name
- Enter user password
- Click Login button or <Enter>

No	1 A marine	and an		
مستشبه مشرف مرجع بالموقفين ومرور ومرود الارتباط المست	🖞 🛟 🔎 Search 🎲 Favorie	s e ricus en la constanta de	ا نے ان 🖼 😵 😵	
tess (E) D: If YP PROSITIPAL	Contractional Contraction of the local State	e desserve e ell'entré set		🔄 🔁 🐼 🗉 Link
c! e-1	Search Web (+) (5) Search	lins Sile 🖌 Haylaght 🕯 🚇	× Soolmadis → (Sign In +	Jest
Seurce -	Google =/ Arav	fista 🛨 Ack Jeeves Allthe	Helo 🔹 LookSmañ , Føes	* 🏶 Controuine - Mor
About	Search: Q Web	Anderence - Dishoper	ng • 🖗 havel 🚱 amer	e Que ta Ale
websearch +	, ↓ Search → 1	🖗 PopSwelter 🔘 Seeley C	nna 🍋 Curur Maria 🚺	Ny inio Ma
	电影电子 化氯化化化化			ala sa 🖉
E Se States.				
				and the second sec
			and and and an and a second	About
		i i se se se	1	FRITAL
		ate and a state of a		er login
		· · · · · ·	(Isomana)	;
			Pesnanazi	
				ABY.j
	<u> Carto d'Charlenn Schulart</u> (201	THE PARTY IN A COMPANY OF A	iner i consector conse	STREET C
الكلي في المانية في من يستعد الله المانية (المتعرب المتعرب المانية). والموجد المانية المانية المحمد المانية (المانية مانية المانية).		المراجع المراجع المراجع المراجع	A State of the Sta	Thy Congester

Figure 1

• Successful login will produced the interface as figure 2

	ols Help	han ha na sa sa ƙwallon ƙwallon Canada a ƙasar	n an an ann an
) Rani 🗤 🖾 🛃 🛃	🕼 💭 Search 🎧 Pavorites 🕯	🕈 Matar 🧭 💭 👘 👼 🖩	I
àcss 🛃 (r.)FYP/WRAS]134FA2#50	theo71km		x 2 a
et 2-1	Search Web 🔹 💱 Search This !	ike 🖉 Hüshirit 🕮 : Bookaariu	• San In -
3.5000 - 	Googie 🔹 Áltavista	• Ask Jeeves Alliheiweb • Looi	Smart Files - 🕼 Customize Him
Abrut		elarna - (Doggag - Pha	ni ()Games
ywebsearch 🤫	🖉 Search 🔻 💷 P	opSwatter (OSmiley Central)A Curs	a Mona 🛈 My Izla Mar
N.C. for Firm	41613910	8 9 10 11 12 13 14	23210111212
KO-2ndFlor	11.12.13.14.15.16.17	15世纪世纪22	14 15 16 17 18 19 20
	18 19 30 31 22 23 24	22 25 34 25 25 37 28	21 22 23 24 25 26 27
	25 26 21 28 29 20 31	2 <u>2</u>	28 20 30 31
	Thursday OL J	anuary 2004	영국은 여기가 많은 모양을 다.
< Go To Lay Before	<u>Ge Ta</u>	Teday	Go To Day Mar >>
Eine:	West Lating I	WestL	where A
1700	narran an rain an	the set of	
<i>1</i> 7.30	na fanana Arran Araba an		anders for a strand of a space and a strand of the strand for a state of the strand stran
B:(0)	*		F
8.30			5
680			🕅 an an an an Bheiltean a' bh
8 .3 0			Constitution of the second sec
0.00	*	1	6

Figure 2

4. Perform desired tasks from the selection of menus

5. Logout of the system

6. Room Reservation Log Sheet Module

This module consists of 2 options-room reservation and room description. These two modules enable the user to book the room by fill in the meeting calendar and to view the available facilities in the meeting room.

6. 1 Room Reservation

The Concept

- This module by default will show the calendar of the current date when selected.
- On the top-left corner of the screen is the Location/Area section to view the desired room location click on the floor number active link.
- On the top-right corner is the calendar section, which can link you to the desired day by clicking on the date.
- On the bottom of the meeting planner entry table is the daily/weekly/monthly planner view type. The function is to allow user allocate the availability of a particular room.

6.2 Step to book a room

- 2 | Meeting Room Booking System Microsoft Internet Explore le X File Edit View Favorites Tools Help 🕞 Datk + 🎲 🖈 🏩 🟠 🔎 Search 🖓 Tavurites 💓 Media 🧭 T 对刺法 Addance [0] D. FYPPPRES [RPLasSation7. Man • 5 6 1212 Search web 🕞 🖗 Search This Site 🧷 High light 🔟 * Bookmarks 🔸 Sign (h. -**Y!** 2 - [Search -Google - Ataliata - Ask Jeeves Athelwish - UnitSmat Files - W Costonice Man G Abore 🗟 Search: Q web 🗿 Feference - Manapara - P travel MGames mywebsearch + Present - 🗇 Press nother 🕑 Soudry Cerebiol 🌢 Classe Marine 🔘 Hydria More 7 42628210 8 2 10 14 12 13 14 2 8 9 10 11 12 13 SEO - 1st From SKO_2rd Filogr 11 12 13 (415) 18 151611118192021 14 15 16 17 18 19 20 13122222222 23245232 21 22 23 24 25 26 21 25 36 27 22 22 26 34 29 22231 Thursday 01 January 2004 Co To Day Balance Go To Today Oo To Day After: fest Luinny I Time: West Lutong H 01:00 Ŀ 33 07:30 * -M 08:00 1 -08.90 ŵ ٠ 99.00 滲 09 39 ÷ 80 10.00 . de, 10.20 My Computer ŝ. **B**MRC: ØSRIE NO WIT DIM TE Lates 9 Ma A SICIRC
- An interface (refer to figure 3) will appear.

Figure 3

- · Select the room name from the location/ area section
- Select date from the calendar section
- You will be shown the meeting planner of the selected date and location
- From the planner entry click on the time meeting begin
- An interface as (figure 4) will appear.

	化过敏器 建苯基苯基 医结核性 网络圣教教教教教教教教教教教教教教教教教教教教教教教			「智園る
inere 🛃 D.Y.W. P.R.BS (7498cmgm75	ki.htm			
DSearch -	Ecogie • AllaVista	· Ask Jasves AltheWeb	• LookSmart Fd	les - @Customico M
n and the second se	an a			and the second
and the same of the second	A Constant of the second second	Search	anim a straight ann an ann an ann ann an ann an ann an	(C) alan ana (C)
<u>118-1</u>	Search Web - 2 Highlight	action plang to refrere butt	oos from Yahoot	alaria una standariari elea
	22 V Mer 2 2004 V		E P	BASE
Matthe Corn Baston System		a start a start and a start a s	<u> Heir Lean</u>	a Esport Scatch
				<u>. La mada su s</u>
Administration				
Administration Atom	Rooms in Arre 2			
Ateri	, West Lating I (Edil) (Desein)			<u> </u>
	and the second se			
Aters SKO - Rimt Floor (Edit) (Dekte)	, West Lating I (Edil) (Desein)			
Aters SKO - Rimt Floor (Edit) (Dekte)	. West Loting I (<u>Edit)</u> (<u>Debu)</u> . West Loting II (<u>Edit</u>) (<u>Debus</u>) Add Recon			
Aters - SKO - Pint Floor (Edit) (Crists) - SKO - Second Floor (Edit) (Crists) Addi Area	West Latong I (<u>Edit)</u> (<u>Desh-)</u> West Latong II (<u>Edit)</u> (<u>Desh-)</u> Add Rease			
Atres - <u>SKO - First Floor (Edit) (Dekte)</u> - <u>SKO - Sensed Floor (Edit) (Dekte)</u>	. West Loting I (<u>Edit)</u> (<u>Debu)</u> . West Loting II (<u>Edit</u>) (<u>Debus</u>) Add Recon			

Figure 4

- Fill in the details of the meeting.
- Click save button.

7. Room Description

The Concept

• This option enable user to view the available facilities in each room. This interface is for view only and there are no link related to this page.

7.1 Steps to view room description

- Point the cursor towards the reservation button.
- Click the room description.

8. Goto

The Concept

• This module is to search the meeting calendar of a selected date. It required the user to enter the date, month and year of the calendar needed. By default it will show the calendar of current date.

8.1 Step to search the meeting planner entry

- Point the cursor towards the reservation button. A pull down menu will appear.
- Click the Goto option.
- Fill in the desired record date, month and year.
- Click Goto button.
- You will be shown the meeting calendar of the selected date.

9. Reporting Module

This module consists of 1 option-view record. This option enables the user to view the record by several options from user specification.

The Concept

- This module will generate a report according to what the user had specified.
- By default it will generate a report from date start up to date end.
- To get a specific report, there are four options to be filling-up by user. you can get a report by specifying the
 - Match area e.g. "SKO 1st Floor"

- Match room e.g. "West Lutong I"
- Match brief description e.g. "Morning Meeting"
- Match full description e.g. "Azlena Arabi"
- There are 3options on how the record features should be:
 - The report only
 - o The summary only
 - o Report and summary
- The summarized by options enable user to view the summary only part by:
 - Brief description
 - Creator (in terms of IP address)

9.1 Step to view record

- Point the cursor towards the report button.
- Click the report option.
- An interface as figure 5 will appear.

	e e ?						a fille		29.44.44		North States	<u> Stead is air</u>	<u>_</u> 6
ies Eloiry/pau Search -	nin≞rodð≳v(xð		Googe *	AlteVist	- A	k Jeeve s	Althey	(eb •)	.ookSmad	Files •	STE CH	approximation of the	A
							. @	Sear	ch	<u>_</u>]]#	54 W&	9 9	13
12-1		Search We	6 -) Ø1	iciacht	stie	n pli ng lo	retrieve L	extons fr	om Yahcol				
				in di seri di mili ne ini	- 	4 19 49 19 19 19 19 19			*****	nartin pout o		ftenine en instant	
teport on Me	etings:				-		en e					.1.	
eport start date:		2004				· · ·				.'		÷.	
epoil end doie:	Andrew	× 2004 ×				н 1 м		• • •				•	
latek area:													
laich nom:											·		
Aatch brief description	,	· · · · · · · · · · · · · · · · · · ·					1.5		a tata				
fielch full description;			;									• •	
nchule:	(C) Report on	y () Summar	yonly O	Report or	d Sunan	uy		· .		i de la		d de	
innanze by:	🛞 Brief desca		ator					j.					
el de la definita. Notas en la composita de la com	<u>_ 8</u>	n Report		11111	•	1 - 1 - 1 1 - 1 - 1 - 1							- 11

Figure 5

- Fill in details of record needed.
- Click run report or <enter>.
- Scroll down the page to view the record.

10. Admin Page

This module is strictly for administrator only. There are 3 options available in this module – add room to update the meeting room database, view log to check over the user that have log into the system and add user options to enter new user record.

11. Add Room

The Concept

• This module is use to update the room database. You can edit and delete the room if you are an authorized user.

- To add room, first you need to add the area.
- To delete area first you have to delete the room in it and clear of all the booking to be cancelled upon the deletion of the room.

11.1 Step to Add Room

- Point the cursor towards the report button.
- Click the New Entry option.
- From the add area column fill in the area name.
- Click add area button or <enter>
- The area name will be displayed at the location/area column. There will be an add room column entries on the bottom-right side.
- Fill in the details of the room.
- Click add room button.
- The room name will be displayed on the room column.

11.2 Step to Delete Room

- From the interface, click on the desired area link. (E.g. Sko-1st floor)
- The room list within the selected area will be displayed on the room column.
- Click <u>delete</u> link beside the room name.

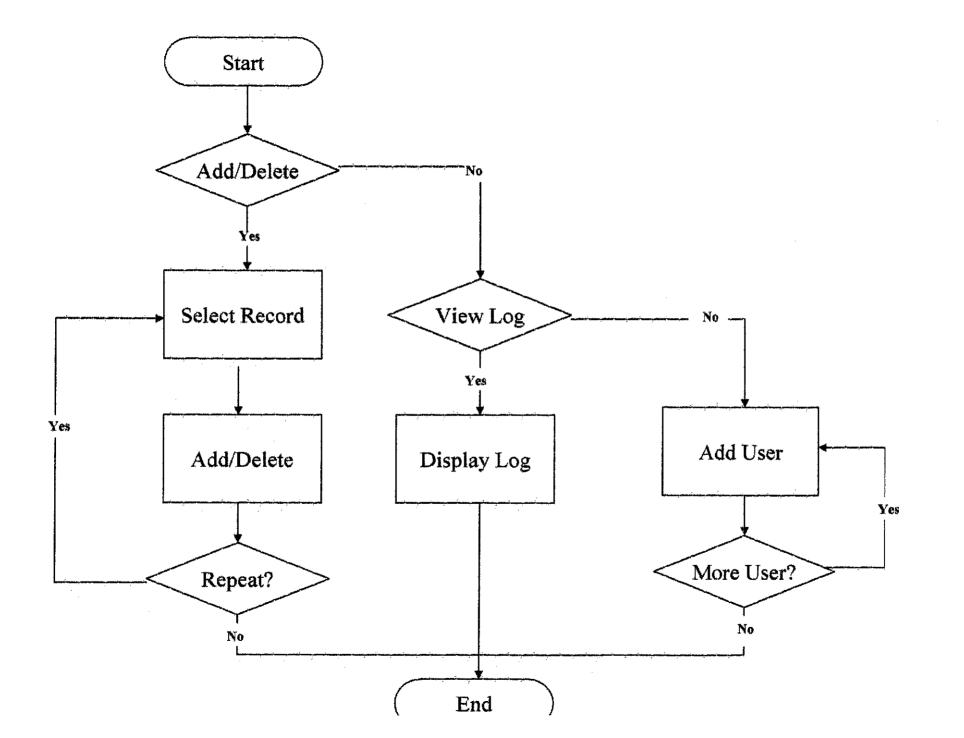
12. About

The Concept

- This section that can be divided into two about MRBS and about the Developer.
- It mainly consists of general information about the system and the developer.

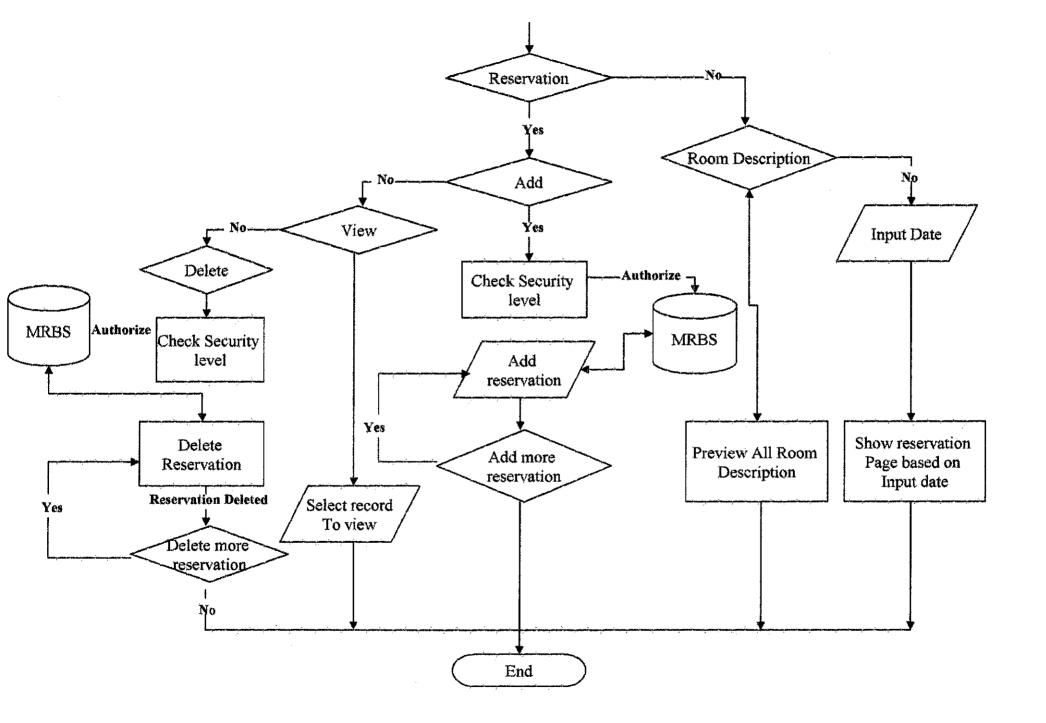
Appendix C Process Flow

MRBS Overall Admin Process Flow



MRBS Overall Presentation Flow

¥



MRBS Overall Reporting Process Flow

