E-BOOKING

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This report is submitted in partial fulfillment of the requirements for the award of Bachelor of Electronic Engineering (Computer Engineering) with Honours

Faculty of Electronic and Computer Engineering
Universiti Teknikal Malaysia Melaka

April 2009

UNIVERSTI TEKNIKAL MALAYSIA MELAKA
FAKULTI KEJURUTERAAN ELEKTRONIK DAN KEJURUTERAAN KOMPUTER

BORANG PENGESAHAN STATUS LAPORAN
PROJEK SARJANA MUDA II

Tajuk Projek : E-BOOKING

Sesi Pengajian : 2008/2009

Saya IDA IRMEELIA BINTI DAUD

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Special dedicated to my beloved parents, family and friends, who had strongly encouraged and supported me in my entire journey of learning.

ACKNOWLEDGMENT

Alhamdullilah, firstly I am grateful to almighty Allah S.W.T because at last I have finished my Bachelor Degree Project (PSM) without any problem. Secondly, I would like to thank to my beloved family because gave me an actuation and moral support since I was studying in UTeM. My supervisor, Mrs Noor Mazlina because giving me a lot of advices and ideas and automatically improve my knowledge and skills on designing this software. Not forgotten to all my friends that help and give me moral support. Finally, to all individuals where involved in this Bachelor Degree Project (PSM) which I have not mentions their name. Without all of you, this report will not be finished successfully. Thank you.

ABSTRAK

E-Booking adalah satu sistem tempahan untuk sumber-sumber pejabat seperti bilik kuliah, makmal, bilik mesyuarat dan alatan khas (contohnya komputer riba) yang berasaskan web. Motivasi pembangunan sistem ini adalah untuk menggantikan sistem tempahan manual yang digunakan oleh FKEKK yang tidak begitu terurus. Daripada system yang berasaskan tempahan manual iaitu tempahan di dalam buku yang tidak cekap kepada isu-isu tempahan bertindan yang mengecewakan, kerap kali staff tidak tahu mereka mempunyai masalah dengan bilik yang mereka tempah sehingga masalah itu muncul. Ia adalah satu cara yang lebih mudah bila menggunakan sistem ini, staff boleh mencari sumber pejabat yang tersedia berdasarkan keperluan mereka di mana sahaja dan pada bila-bila masa. Mana-mana staff mengetahui status semua sumber ini.Selain itu sistem ini membolehkan staff menentukan jadual mesyuarat , mengesahkan temu janji dan sebagainya. Ciri utama lain bagi sistem ini adalah ia membenarkan pihak pentadbiran untuk meluluskan tempahan yang dibuat oleh kakitangan dan pengesahan tempahan atau penolakan tempahan boleh dilihat sejurus selepas disahkan.

ABSTRACT

E-Booking is a web-based booking system for office resources such as lecture room, laboratory, meeting room and special equipment (i.e. laptop). The motivation of the system development is to replace the current manual booking system used by FKEKK which is not well organized. From inefficient paper-based reservation systems to frustrating double-booking issues, often times staff don't know they have a problem with their room scheduling until the problem arises. It is an easier way when using this system, staffs can search for available resources based on their needs anywhere and anytime. Any staff can view at a glance, the availability of all the resources. This bird's eye view enables the staff to be decisive in scheduling meetings, confirming appointments and etc. The other main feature of this system is it allows the administration to approve the booking request made by the staff and confirmation note can be viewed by user / staff instantly after approval.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDIX

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

E-Booking is a web-based booking system for office resources such as lecture room, laboratory, meeting room and special equipment (i.e. laptop). The motivation of the system development is to replace the current manual booking system used by FKEKK which is not well organized. From inefficient paper-based reservation systems to frustrating double-booking issues, often times staff don't know they have a problem with their room scheduling until the problem arises. It is an easier way when using this system, staffs can search for available resources based on their needs anywhere and at anytime. This system will integrate the office resource booking. Any staff can view at a glance, the availability of all the resources. This bird's eye view enables the staff to be decisive in scheduling meetings, confirming appointments and etc. The other main feature of this system is it allows the administration to approve the booking request made by the staff and confirmation note can be viewed by user / staff instantly after approval.

1.2 OBJECTIVE

In accordance with the needs of new systematic booking system for office resources e-Booking aims to achieve the following objective:

1. To built efficient resource management.
2. To give real-time access to resources.
3. To provide more accurate and neat data / information according to specific format standardization.
4. To build a database-driven system to organized the data storage for easier and better data handling, searching and retrieval.
5. To develop a client-server system for easier accessibility.

1.3 PROBLEM STATEMENT

After analyzing the current manual booking system for office resources such as lecture room, laboratory, meeting room and special equipment in FKEKK, there are a lot of problems and drawbacks occur mostly in data and time management. The problems and drawbacks identified are as follows:

1. Data redundancy
2. Difficult to retrieve data / record
3. Messy data format
4. Data management is not systematic and less accuracy
5. Consume a lot of time and energy

So, this system is built for efficient resource management.

1.4 SCOPE

The project scope will define:

1. User:

   E-Booking user is limited to FKEKK's staff and also administrator.

2. Operating Location / Availability:

   E-Booking is a web based system that can be used in WWW which gives real-time access to information.

3. System Functionality:

   The system functionalities of e-Booking will cover from user registration, the form of bookings system, database-driven system to organize the data storage for easier and better data handling, searching and retrieval and also generates a system where admin can approve user's request and user can view the result automatically.

1.5 THE IMPORTANCE OF THE PROJECT

E-Booking is important because it ensures systematic and efficient operation than the manual transaction. The importance of e-Booking than the current manual booking system can be classified as follows:

1.5.1 Data Management

1. Data handling will be easier, systematic and efficient
2. Data retrieval will be faster, easier and accurate
3. Higher data integrity, reliability and security (Ensure no data redundancy, data lost and scratch)
4. Standardized data format and ensure data consistency

1.5.2 Ease of Use / User Friendly

1. The user input is the same as the manual forms and the display format is standardized (button and icon is consistent)
2. User can retrieve information and generate report automatically.
3. User can manipulate and update data easier, faster and accurate

1.6 METHODOLOGY OVERVIEW

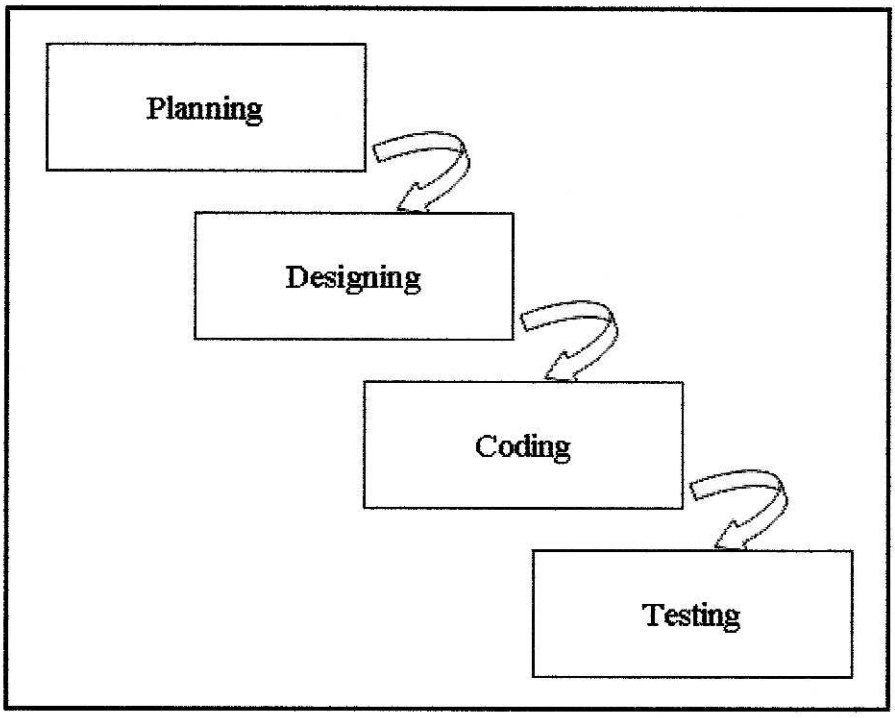

Figure 1.1 Flow of Methodology

1.7 REPORT STRUCTURE

The report structure is as follows:

Chapter 1:

This chapter provides an introduction of this project including objectives, scope of project, problem statement, importance of project and methodology overview.

Chapter 2:

This chapter consists of research done for this project. It explained and reviews the projects and also that have been done before. It mostly consists of the products in the market which can be found through World Wide Web and also tools used for this project.

Chapter 3:

This chapter will explain about the project's methodology that is used in developing the system. The methodology of a project is a guideline that will explain about the project path from the beginning until it is completed.

Chapter 4:

This chapter consists of result and discussion of this project.

Chapter 5:

This chapter summarizes this report and also future planning for this project.

CHAPTER 2

BACKGROUND STUDY

This chapter consists of research done for this project. It explained and reviews the projects and also that have been done before. It mostly consists of the products in the market which can be found through World Wide Web and also tools used for this project.

2.1 SYSTEM COMPARISON AND READINGS

2.1.1 FIRST REVIEW: ROOM BOOKING SYSTEM

The online Room Booking System maximizes the usage of rooms and facilities within your school by increasing efficiency while eliminating double bookings. This System is unique as it will integrate with your current timetable (Single, Bi-Weekly, X-Day) accounting for timetabled lessons so the room can only be booked when it is free of lessons. On 18/08/08, Room Booking System Version 2.0 was released for the new school term. The Room Booking System currently handles more than 100,000 bookings between 4,700 users in 7 countries. Version 2.0 brings a simple, modern interface which users find easy to use. Booking a room is simple - choose when you wish to book and

what room, the system takes care of the rest. Despite the simple interface, a wealth of features adapts the system for your school. [1]

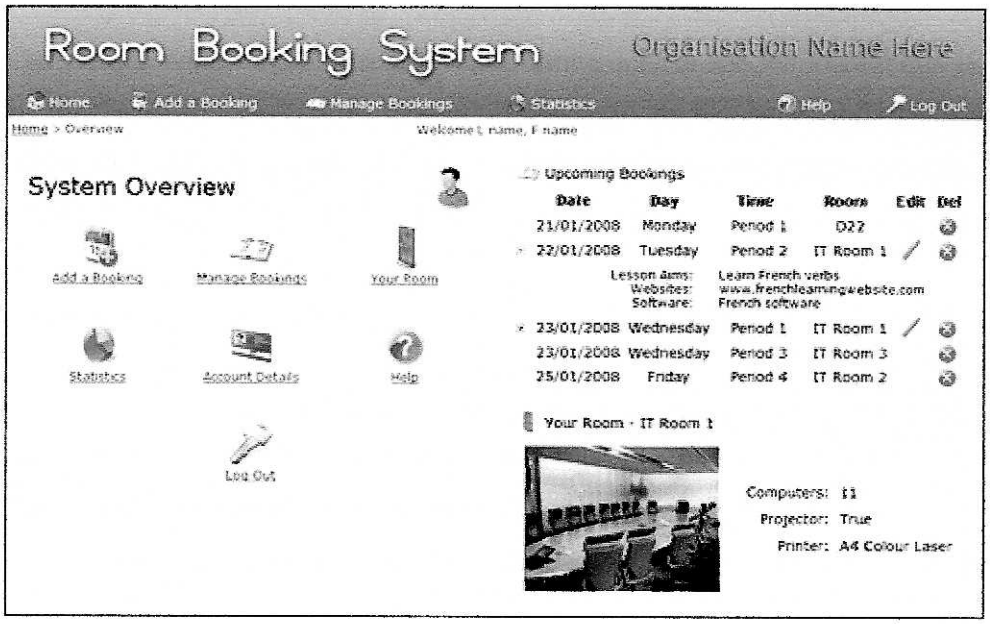

Figure 2.1 Room Booking System Main Page

2.1.1.1 FEATURES OF THE ROOM BOOKING SYSTEM

The Room Booking System can be inputted with timetable information therefore rooms can be booked only when free. Although there are many features of the system, the simplicity is not compromised. Users will find booking rooms quick and easy while administrators can tweak the system to their needs. Please request a demo for your own school to fully evaluate and try all the features listed below.

1. Simple set up and integration

We host the system on secure, fast UK servers with a daily backup to the USA. There is nothing to install at your end, only a modern web browser is required. Single and biweekly timetables are supported and unlimited timeslots, eg "8am –

9am" or "Period 1". Timetable data can be imported from SIMS and users can be bulk uploaded.

2. Timetable View

Our unique color coded timetable view allows you to see the availability of all rooms for the week ahead in one simple screen. Days are displayed horizontally and timeslots vertically. The color of the cell reflects room availability. Rooms are arranged into categories such as 'IT Rooms' or 'Conference Suites' which can be searched individually for availability.

3. Powerful administration section

Some of the features the administrator can control are: active bookings, pending bookings, print bookings, add bookings, booking exceptions, booking details, timetables, timeslots, booking limits, term dates, users, administrators, technicians, departments, rooms, resources, statistics, status, system name and data exports.

4. User accounts

Each user has their own account. Bookings are automatically added in their name and previous bookings are shown. No other user can modify or remove their bookings.

5. Statistics

Different statistics show many reports such as the distribution of bookings between different days and rooms or the number of bookings by each member of staff. Each statistic can be customized with a date range.

6. Transfer bookings

Should a user wish to book a room which is already booked, a request for that room can be sent. The user selects a room to request and inputs a message. The user

who originally booked the room is notified by email and can then accept or decline the request.

7. Recurring Bookings

Users specify the type of recurring booking they wish and all available rooms are shown. When the room is selected, one click finalizes the booking.

8. Booking Details

Administrators can specify information fields which are displayed to the user when booking a room. These can be renamed to anything, for example "Lesson Aims" or "Number of expected attendees".

9. Pending Bookings

Bookings can be added as pending, meaning they have not been confirmed. The administrator can confirm multiple bookings at a time. This is useful if you wish to check and confirm each booking.

10. Email Notifications

System administrators can specify whether emails are sent to room owners and users when bookings are created or deleted.

11. Booking Exceptions

A booking exception enables a user to make a one off booking in a room where there is normally a timetabled class.

12. Booking Limits

To stop certain users booking too far in advance, there are several limits that can be enforced. For example, only the current month, a set number of weeks in advance or a specific date limits.

2.1.2 SECOND REVIEW: LOCAL CALENDAR SYSTEM

One of the most popular and yet unheralded uses of the web has been for online booking and reservation of resources. These resources are widely varied; anywhere from a professor reserving a classroom for a lecture, a student requesting that a library book be held, or a traveler checking availability of a flight. The key to the success of this kind of use is its inherent simplicity. The whole purpose is for accessibility, the same way the WWW gives real-time access to information, and it also can give real-time access to resources, be it booking of personnel, instrumentation or other resources. One particular useful implementation of online booking is web-based reservation systems for scientific instrumentation. Scientific Instrumentation can be costly to purchase and maintain and thus is often only available in centralized facilities. The Internet has provided real accessibility to these resources with HTML pages describing the facility and the equipment available, and in some cases remote use of the instrument itself. Web-based reservations have become another powerful way to improve accessibility to a instrument. There are several programs and methodologies available for microscope booking systems. Described on the pages within is the system we developed. As well links to other systems are provided. [8]

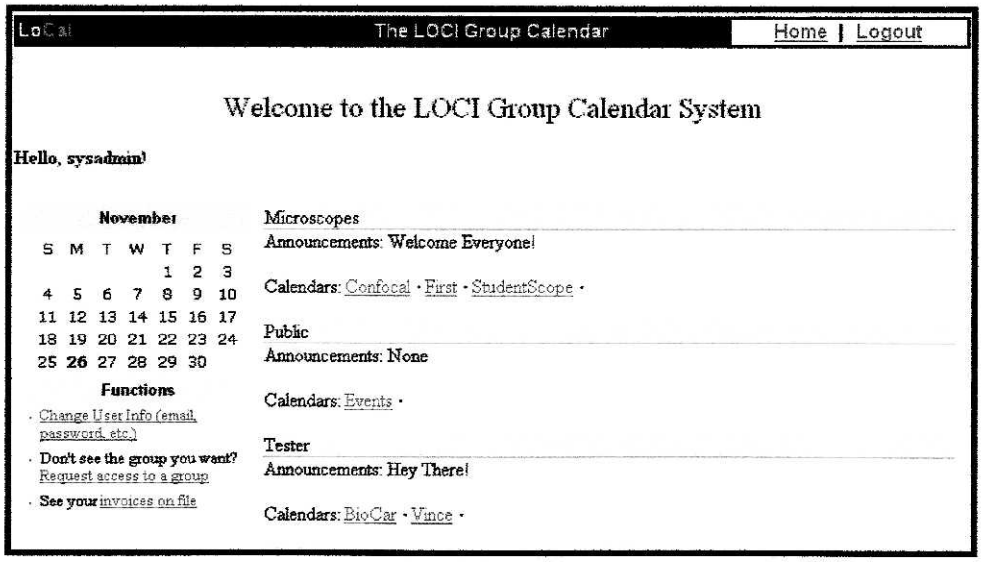

Figure 2.2 LOCI Group Calendar System

2.1.2.1 FEATURES OF LOCAL CALENDER SYSTEM

1. USERS

Signing Up

Users signup by going to /local/signup.php or simply clicking the link on the splash screen. After filling in all the fields, the user will be forced to login for the first time using his/her password. The first page a user will see is the Request Group Access page, which is the first step in asking access for groups. Once the user checks the groups of interest and clicks "request", emails will be sent to the primary group administrator of each group.

The Main Page

Once logging in from the splash screen, users will be presented with their home page, which lists all the calendars that the user has access to. At the end of the list, users can see which calendars that they do not have access to and have been specified as "guest viewable". Users can request access to groups that they are not in by clicking on the link under "Functions" on the side bar of the home page. From the same link users can also change their user information, such as email, passwords, etc.

Once clicking on a calendar name from the home page, users will be presented with a month view of the corresponding calendar.

Clicking on a date in the month view will, quite intuitively, bring users to a daily view of the date, which lists in detail the events and times that have already been signed up.

Add Event

Under the day view users can add events through the submission form towards the bottom of the page.