STUDENTS RESIDENTIAL COLLEGE MANAGEMENT

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BORANG PENGESAHAN STATUS TESIS*

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STUDENTS RESIDENTIAL COLLEGE MANAGEMENT

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This report is submitted in partial fulfillment of the requirements for the
Bachelor of Computer Science (Software Development)

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JUNE 2010

DECLARATION

I hereby declare that this project report entitled

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is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ Date: 25/6/2010

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SUPERVISOR: _____ Date: 25/6/2010

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DEDICATION

This thesis is dedicated to my beloved parents, Tan Kong Hoey and Lim Siew Ying for all the wonderful things they do for me and supporting me all the way.

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ABSTRACT

Students Residential College Management (SRCM) is a web-based system which aimed for first year and second year students of Universiti Teknikal Malaysia Melaka (UTeM) who are compulsory to stay in residential college and admin and staffs who are responsible to manage the residential college. The objectives of SRCM is to provide an automated residential college registration, handle data in an effective way, provide input data at anytime, provide security and provide room allocation priority. Iterative development in Object-oriented Analysis and Design (OOAD) approach is used as project methodology. The system architecture for SRCM is presented in three-tier which are client, application server and database server. The scope of SRCM range from view residential college information, login, set registration period, make registration, check out room, manage applications, manage students, manage staffs, manage announcement to manage upload and download. As the result, the development of SRCM will increase the accessibility of students, admin and staffs. In the future, it is hope that SRCM can be expanded and improved with more features and functions to make the works of managing residential college in a better and easier way.

ABSTRAK

Students Residential College Management (SRCM) adalah sistem berasaskan web yang bertujuan untuk pelajar tahun pertama dan tahun kedua Universiti Teknikal Malaysia Melaka (UTeM) yang wajib untuk tinggal di kolej kediaman serta admin dan staf yang bertanggung jawab untuk menguruskan kolej kediaman. Tujuan SRCM adalah untuk memberikan pendaftaran asrama universiti yang automatik, mengendalikan data dengan cara yang berkesan, menyediakan data input pada bila-bila masa, memberikan keselamatan dan menyediakan peruntukan keutamaan dalam pendaftaran bilik kolej kediaman. Pembangunan iterative dalam Object-oriented Analysis and Design (OOAD) digunakan sebagai pendekatan metodologi projek. Seni bina sistem untuk SRCM melibatkan tiga-lapis yang merangkumi *client*, *application server* dan *database server*. Skop SRCM melingkupi paparan maklumat kolej kediaman, login, penetapan tempoh pendaftaran, pendaftaran masuk bilik, pendaftaran keluar bilik, pengurusan fasiliti, pengurusan pelajar, pengurusan staf, pengurusan pengumuman untuk pengurusan muat naik dan muat turun. Akibatnya, pembangunan SRCM akan meningkatkan interaksi antara pelajar, dan kakitangan admin. Pada masa depan, saya berharap SRCM boleh diperluas dan dipertingkatkan dengan lebih banyak ciri dan fungsi sehingga mencapai pengurusan kolej kediaman yang lebih baik dan lebih mudah.

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1NF	-	First Normal Form
2NF	-	Second Normal Form
3D	-	Three Dimensional
3NF	-	Third Normal Form
CGPA	-	Cumulative Grade Point Average
Cls	-	Class
CPU	-	Central Processing Unit
CS3	-	Creatuve Suite
ERD	-	Entity Relationship Diagram
FR No.	-	Functionaly Requirements Number
Frm	-	Form
GB	-	Gigabyte
GHz	-	Gigahertz
HEP	-	Hal Ehwal Pelajar
HTTP	-	Hypertext Transfer Protocol
IIS	-	Internet Information Services
IP	-	Internet Protocol
IS	-	Information System
K	-	Kilobyte
LAN	-	Local Area Network
MB	-	Megabits
MySQL	-	My Structure Query Language
NFR No.	-	Non-functional Requirement Number

OOA	-	Object-oriented analysis
OOAD	-	Object-oriented Analysis and Design
OOD	-	Object-oriented design
OOP	-	Object-oriented programming
PHP	-	Personal Home Page or PHP: Hypertext Preprocessor
R	-	Registered
RAM	-	Random Access Memory
SMS	-	Short Message Service
SRCM	-	Students Residential College Management
TCP/IP	-	Transmission Control Protocol/Internet Protocol
UML	-	Unified Modeling Language
UTeM	-	Universiti Teknikal Malaysia Melaka
WAN	-	Wide Area Network
XAMPP	-	X (for the four operating system supported) A (Apache) M (MySQL) P (PHP) P (Perl)
XP	-	eXPerience

APPENDICES

CHAPTER I

INTRODUCTION

1.1 Project Background

The Students Residential College Management (SRCM) is aimed for first year and second year students of Universiti Teknikal Malaysia Melaka (UTeM) who are compulsory to stay in residential college and admin and staffs who are responsible to manage the residential college. Currently, there is no residential college registration system for students exist in UTeM. The residential college registration procedures of students are done manually. Once the manual process is end, the staffs of each residential college will enter the registration record of students with Portal HEP of staffs.

Prior to the beginning of a new semester, students will receive an announcement letter from UTeM to inform about the residential college name, registration date and time. It is very inconvenient to students from other state to come early to strive for a good placement in residential college. Besides that, mostly of the residential college management is done in paper form. To apply any facilities in the residential college, student has to take the form during office hour to fill in and pass up to residential college staff for approval. Also, the announcement and bus schedule are stick on the announcement board. Students may overlook the announcements which are stick on the announcement board.

In order to make it convenient to the students, this web-based system will be developed. Through this system, students can register residential college at anytime and anywhere during the registration period as long as they access to internet. Meanwhile, students can apply any facilities provided in the residential college through internet. With this system, the manual work of staffs will be reduced. Request and respond between students and staffs will be done by using this proposed system.

Other than setting residential college registration date, admin can post announcement about residential college activities. Besides that, admin and staffs can also upload document such as bus schedule to enable students to download it. Staffs can check the registered students' record and room status. Every end of semester, staffs are responsible to de-allocate student from a room. At the end, SRCM will generate a statistical report on residential college allocation to show the occupied and unoccupied capacity.

1.2 Problem Statements

The existing system and practices arise many problems. Below are the problem statements of SRCM.

1.2.1 Time Consuming of Manual Registration

Existing system requires students to register themselves at the office according to the registration date and time. It cause inconvenient to students from other state because they need to take a long journey for residential college registration where the procedure only completed within about 5 minutes.

1.2.2 Difficult in Sorting and Rearranging Paper Files

The applications of residential college facilities are provided in paper form. Students have to fill in the form and pass up to residential college staff to approve it. Paper form is not a convenient way to keep data because it may easy get lost or hard to find when the paper is compiled in a large amount.

1.2.3 Availability of Paper and Submission of Paper

Students need to report any problem or submit any application form to residential college staffs. The students' time may not meet with office hour. It may cause students hard to find the staffs.

1.2.4 Disclosure of Students' Information to Unintended Parties

Students register residential college in paper form manually. Students' details maybe reveal to unauthorized people if the paper is lost.

1.2.5 Difficult in Setting Room Priority

Residential colleges in UTeM are offered to first year and second year students. Students above second year are difficult to get a room in residential college due to room's availability.

1.3 Objectives

The objectives to be achieved are stated as below:

1.3.1 To provide an Online Residential College Registration

With online residential college registration, students can register at anytime as long as the registration period is valid. It will save the time of students from other state for taking long journey to reach the residential college just for a moment of registration.

1.3.2 To Handle Data in Eletrical Form

Students' information and room allocation of each residential college will be stored in SRCM. With this system, it will ease the staffs to monitor the residential college management.

1.3.3 To Provide Input Data at Anytime

Since SRCM is a web-based system, students can report any problem or apply any facilities provided in the residential college in the system at anytime. Students can also update their personal details in the system at anytime. Besides that, admin can update residential college or room status of students at anytime too.

1.3.4 To Provide Security of Student's Details and Residential College Information

In SRCM, users will be authenticated before using the system. Only valid user with valid password can login to the system. Thus, students' information and residential college information will be protected by unauthorized users.

1.3.5 To Provide Room Allocation Priority

Priority will be given to first year and second year students to register the room. If the residential college is registered by student above second year, SRCM will check the student's CGPA. CGPA equals to or above 3.5 can only register for room. Their registration will be confirmed by staff of the registered residential college. First, staff will check their qualification in order to approve their registration. If their qualification is approved, staff will check the required room availability. If the required room is no longer available, staff will assign an available room to them.

1.4 Scope

The project will cover the following scope:

1.4.1 Modules to be Developed

1.4.1.1 View Residential College Information Module

This module is used for students, admin and staffs. They can view information of each residential college without login to the system.

1.4.1.2 Login Module

This module is used for students, admin and staffs. Students have to sign up to the system to login into the system. Meanwhile staffs are added by admin in the system. Once the admin add in the students into the database, the staff can login to the system with staff ID and default password set by admin. These three users can retrieve their password if they forget their password to login to the system. Staffs login to the system to manage only the residential college that has been assigned by admin. Only authorized users are able to login to the system.

1.4.1.3 Set Registration Period Module

This module is used for admin. Admin is responsible to set and update the registration period. Once the registration period is invalid, students are unable to register for residential college.

1.4.1.4 Make Registration Module

This module is used for students and staffs. Once the admin set the valid registration period, the students only can make residential college registration. The

system can automatically detect the gender of the student to display the residential college blocks for different gender. Then, students can select their desired residential college and room type according to the availability of residential college and room type. Once the student register successfully, they have to print out a slip as a proof to collect room keys from residential college warden once they go back to residential college. Staffs can also help the corresponding residential college students to register room at anytime without valid registration period constraints.

1.4.1.5 Check Out Room Module

This module is used for staffs. Every end of semester, students will return keys to the office. Once the keys are returned, staffs will de-allocate students' room from the system.

1.4.1.6 Manage Applications Module

This module is used for students and staffs. Students can fill in application forms for facilities such as complaints, equipment requirement and storage that provided in the residential college. Staffs will approve or reject corresponding residential college students' facilities application in the system. Students will be notified with the status updated by staffs. Besides that, students can print out these application forms as a provident.

1.4.1.7 Manage Students Module

This module is used for students. Students have to sign up in order to login to the system. Students can also update their own profile in the system.