

UNIMAS E-BALIK MANAGEMENT SYSTEM

Puvanamala Sivavikkraman



PUVANAMALA SIVAVIKRAMAN

This project is submitted in partial fulfilment of the
Requirements for the degree of
Bachelor of Computer Science with Honors
(Information Systems)

Faculty of Computer Science and Information Technology
UNIVERSITI MALAYSIA SARAWAK

2015

SISTEM PENGURUSAN UNIMAS-E-BALIK

PUVANAMALA SIVAVIKKRAMAN

Projek ini merupakan salah satu keperluan untuk
Ijazah Sarjana Muda Sains Komputer
(Sistem Maklumat)

Fakulti Sains Komputer dan Teknologi Maklumat
UNIVERSITI MALAYSIA SARAWAK

2015

UNIVERSITI MALAYSIA SARAWAK

THESIS STATUS ENDORSEMENT FORM

TITLE UNIMAS E-BALIK MANAGEMENT SYSTEM

ACADEMIC SESSION: 2014/2015

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*Dedicated to my own perpetual sources of energy; my loving late-grandparents, my parents,
family and friends.*

ACKNOWLEDGEMENT

"Yellam pugzhalum iraivanukku"- Unknown

"All praises to God"- Unknown

I would like to take this opportunity to convey my sincere gratitude and appreciation to those who gave me the opportunity and strength to complete this thesis and the system. Sincere thanks to my final year project supervisor, Dr. Johari Abdullah, Dean of the faculty. I am grateful for his guidance, assistance and encouragement throughout my final year project journey. I deeply appreciate his patience and valuable insights to improve this project.

I would also like to acknowledge the participation of En. Idzhar Shaffarrul Hasli, Security officer at the UNIMAS Security Division and Cik Siti Noor Ain bt Musa, Sakura College principal who have cooperated and provided me with much needed information regarding the current manual method and participating in the user testing.

Lastly, I would like to thank my beloved family, friends and everyone who has positively encouraged me to complete this journey. Apart from that, they have cared and tolerated my edgy mood swings and still saw me through this journey. For that, I am deeply in debt to them.

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ABSTRACT

Security is of crucial importance to any organization especially when dealing with the safety of students. Likewise, UNIMAS gives a lot of attention to the safety of the students especially during the curfew hour although the university management is quite lenient and allows the students to exit and enter the university vicinity during the curfew hours. However, these students are required to write down their particulars at the guard post. Many students take advantage of this situation and falsify their data as there is no proper way of validating the student's data. Thus, a web-based system is proposed to scan the student's matric card using a barcode scanner to allow true data to be submitted to the database so that college principals and the system administrator can easily access these names anytime and anywhere.

Abstrak

Keselamatan adalah amat penting kepada mana-mana organisasi terutamanya apabila berurusan dengan keselamatan pelajar. Begitu juga, menitikberatkan keselamatan pelajar terutama pada waktu malam walaupun pengurusan universiti membolehkan pelajar untuk keluar dan masuk ke kawasan universiti pada waktu malam . Walau bagaimanapun, pelajar dikehendaki menulis butir-butir mereka di pos pengawal. Ramai pelajar mengambil kesempatan daripada keadaan ini dan memalsukan butiran mereka kerana tidak ada cara yang betul untuk mengesahkan butiran pelajar. Oleh itu , satu sistem berasaskan web dicadangkan untuk mengimbas kad matrik pelajar menggunakan pengimbas kod bar untuk membolehkan butiran benar dihantar ke pangkalan data supaya pengetua kolej dan pegawai keselamatan boleh mengakses nama-nama ini bila-bila masa dan di mana sahaja.

CHAPTER 1

INTRODUCTION

1.1 Project Title

UNIMAS E-Balik Management System

1.2 Introduction

UNIMAS is one of the public universities in Malaysia. It has 7 residential colleges inside the main campus vicinity which houses more than 6,000 students in total. UNIMAS has three entrance gates namely the main entrance, the East campus entrance and the South gate entrance (TAZ entrance) which operates 6am till 12am daily as only the main entrance operates 24 hours.

UNIMAS' security unit is a very important unit in the safe being and safety of all the students, academic and non-academic staffs during working hours and also after working hours. They are often seen patrolling the perimeters of the main campus often especially between 12am till 6am. These security unit personnel are also responsible to screen those who enter and exit the campus vicinity.

1.3 Problem Statement

UNIMAS students are allowed to exit and enter the university at any time of the day. However, after 12am, students who exit and enter the university are required to present their matric card to the security personnel and then proceed to fill in a log book with their particulars and the students usually have to fill it by the college they are staying in. Outsiders would also have to leave their identity card (IC) at the security booth when they enter and collect it upon exiting UNIMAS.

After some alarming events that involve the safety and life of UNIMAS students that occurred in UNIMAS recently, the college administrations have agreed to include coming back into UNIMAS before 12am as one of the requirements to continue staying in college for the next semester. College residents who violate this rule face possible chances of being denied residential college placement for the following semester although they are active in the college activities.

There are different procedures for different category of people (students or outsiders) who enter UNIMAS after 12am. Currently, data collection of the student's particulars are done manually which is the student is required to fill in their particulars while being supervised by a security personnel after getting their matric card checked by another security personnel. Meanwhile, outsiders are required to leave their identification card and are given a 'Visitor' pass. This pass will then be returned to the security personnel when the outsider is exiting UNIMAS. No information of the outsider is collected for further reference.

The manual way of data collection gives these students an opportunity to falsify their data in the log book and this is a common way students use to escape from being taken action upon since their actual name or matric number is not recorded. There is a lack of efficiency in the current method as there is long waiting time to fill in the log book when there a lot of students at the same time. A few other implication of this way is a repetition of names could lead to duplicate data, the college administration cannot authenticate if such student is a resident of that college. Other than that, since the security personnel have to transfer the students' information from physical data to electronic data which is then forwarded to the principal of the residential colleges for action to be taken, spelling errors and typing errors occur. Hence, the credibility of these data is compromised and the student can deny that it is them in the list.

1.4 Objectives

The main objective of the project is to design and develop a web based platform to aggregate, analyze, and present the student list to the respective residential college principal.

Other objectives include:

1. To design and develop an online system that transforms the current data collection method from manual to a computerized system.
2. To provide role-based access which limits the type of activities and information presented to the end-users.
3. To integrate reporting and analysis module for illustration and analysis of student movement data.

1.5 Methodology

Methodology is the models which there are preset guideline and description of methods defined to successfully complete development of a project or conduct a research. In order to ensure the completion and success of this project, the rapid application development (RAD) is adopted. RAD can accommodate changing requirements and reduced development time. The time frame for FYP 2 which is focused on the development of the project is very short and a whole project needs to be delivered within 3 months.

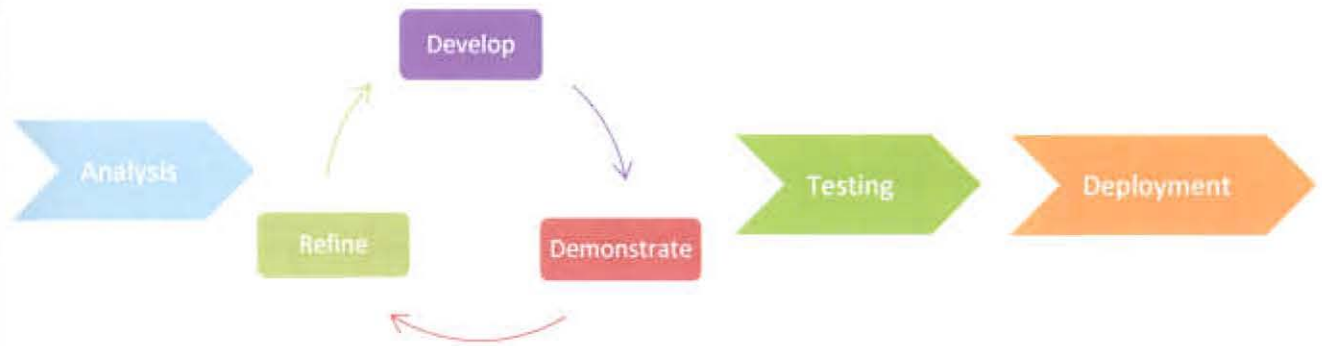


Figure 1.1: Rapid Application Development methodology

In the analysis phase, the preliminary requirement analysis will be carried out by querying and gathering information from users. The next phase involves developing the project by coding. This is seen to be an iterative phase whereby there is a need to develop and gain feedback from the stakeholder, ie. the FYP supervisor through the demonstrate phase and then refine it accordingly. This is repeated for all the functions that are to be incorporated into the project and until the results of the refinement is good, only then there will be thorough testing process of the project and next would be the deployment of the project.

The last aspect will be the tools where RAD uses both computerized tools such as web based system development such as PHP and human techniques such as the way of planning to achieve the goals of high speed and high quality. The database of the system is developed using MySQL database and Apache server.

1.6 Scope

This system is designed to monitor and record the movement of students entering and exiting UNIMAS between 12am-6am daily. This system also enables the residential college

principals to access the system, print out the name list of students from their college and take necessary actions.

The researcher would limit the scope of the project to only recording and monitoring the movement of students entering and exiting UNIMAS. Recording outsider's information is the limitation for now considering the timeframe given for the FYP project. Other than that, the system is not accessible to students as their only role is to scan their matric card.

1.7 Significance of Project

This project would solve a real world problem and would benefit the university in many ways. Firstly, it would avoid students from falsifying their data when they enter or exit UNIMAS. Secondly, the system will enable the residential college principals to have direct access to the name list. Thirdly, there will be minimal error during data collection unlike in the manual method.

1.8 Project Outline

1.8.1 Chapter 1: Introduction

Chapter 1 describes the introduction of the proposed system. This chapter is inclusive of the problem statement, objectives of the study, the methodology used, project scope significance of study, project schedule and the expected outcome of the project. The problem statement describes the obstacles faced by the current system and provides justification on why this project has to be developed. The objectives explain about the project's goal. The scope clarifies the limitations of the project to be developed.