

UNIVERSITY EXAM HALL ATTENDANCE SYSTEM

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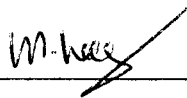
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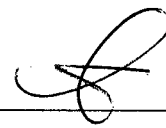


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UNIVERSITY EXAM HALL ATTENDANCE SYSTEM

LOGANATHAN A/L MUNIANDY

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

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2009**

DECLARATION

I hereby declare that this project report entitled

UNIVERSITY EXAM HALL ATTENDANCE SYSTEM

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

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DEDICATION

My dedication goes to my beloved parents Mr. Muniandy A/L Kumarasamy and Mrs. Vijaya A/P Letchumanan. They give continuous support to complete my final year project. I really thank to them and dedicate this project to them as symbol of my love to them. Furthermore, a special thanks to my supervisor Mohd. Fairuz Iskandar Othman, my loved girlfriend Usahrani A/P Tarmalingam and all my class mate for support me direct and indirect to finish my project successfully.

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I would like to thank lecturers, friends, and to all might have involved directly or indirectly in developing this system in giving me some ideas, information and also for spending their valuable time and effort.

ABSTRACT

The University Exam Hall Attendance System (UEHAS) is developed mainly for university to manage the exam attendance management. The staffs that wish to access to system needs to register them to system via authorize staff. Registration will be processed by the system and each staff will receive own password to access system. Students who seat for exam need to register them through this system before enter to exam. Furthermore, the registered student's record will be managed and maintained by the staff. Staff has the authority and privileges to print student detail, subject detail, exam detail and attendance report. The staff can retrieve information about student's attendance via system. UEHAS will use student thumb print to take student attendance. If any student absent to exam, he will alert by sending alert message via system after the exam start. The methodology of this system is Structured System Analysis and Design (SSADM). An analysis study has been done based on the current manual system and all the problems statements and requirements have been identified. The interfaces for UEHAS have been designed according to the requirement and needs of the current market. Rather than that, this system also has been tested and evaluated in real life. This University Exam Hall Attendance System will help to improve the performance of current facing problem

ABSTRAK

University Exam Hall Attendance System (UEHAS) adalah sistem yang direka khas untuk mengurus kedatangan pelajar ke peperiksaan khususnya di universiti. Pengawas peperiksaan yang ingin menggunakan sistem ini hendaklah terlebih dahulu mendaftar dirinya sebagai pengguna sistem. Pendaftaran pengawas peperiksaan akan diproses dan setiap pengawas peperiksaan yang layak mendapat capaian ke sistem akan mendapat katalaluan daripada sistem. Pelajar yang layak menggunakan sistem ini adalah pelajar yang telah mendaftar dirinya sebagai pelajar dalam sistem ini. Seterusnya, semua rekod pelajar yang telah daftar akan diuruskan oleh system melalui pengawas peperiksaan. Beliau boleh mendapatkan rekod kedatangan pelajar daripada sistem dengan mudah. Beliau boleh print rekod-rekod tersebut untuk urusan pejabat. UEHAS menggunakan cap jari untuk mendapatkan kedatangan pelajar. Sekiranya, ada pelajar yang gagal menghadirkan diri ke peperiksaan, satu peringatan akan dihantar ke telefon bimbit pelajar tersebut. Metodologi pembangunan system yang digunakan dalam UEHAS adalah Structured System Analysis and Design (SSADM). Struktur metodologi SSADM merangkumi kajian terperinci ke atas sistem sedia ada dan mengenal pasti masalah-masalahnya dan cara mengatasinya. Antaramuka untuk UEHAS direka berpandukan keperluan semasa dan kehendak sistem. Selain itu, sistem ini dinilai dari pelbagai aspek untuk menjamin keberkesanan. Sistem ini dipercayai akan meningkatkan lagi mutu pengurusan kedatangan pelajar ke peperiksaan pada masa yang akan datang.

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LIST OF ABBREVIATIONS

UEHAS	University Exam Hall Attendance System
ICT	Information and Communication Technology
DBMS	Database Management System
SSADM	Structured Systems Analysis and Design Methodology
DBLC	Database Life Cycle
DNA	Deoxyribonucleic acid
GSM	Global System for Mobile communications
RFID	Radio-frequency identification
UTeM	Universiti Teknikal Malaysia Melaka
EMS	Examination Management System
DFD	Data Flow Diagram
ERD	Entity Relationship Diagram
NF	Normal Form
PK	Primary Key
FK	Foreign Key
RDBMS	Relational Database Management System
DDL	Data Definition Language
SDK	Software Development Kit

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CHAPTER I

INTRODUCTION

1.1 Project Background

Nowadays, Information and Communication Technology (ICT) brings a tremendous new technology to change and ease of the management to get the information system more systematic and efficient.

However, most of the education systems in Malaysia are using less computerized system in their exam attendance management. They still widely using manual system to monitor the student's exam attendance in the attendance slip, and then during the exam officer is responsible to update the record by calculating the percentage of student's attendance. This showed that the manual system is not really friendly and trouble the student.

Therefore, a computerized system that will be named University Exam Hall Attendance System has become one of the important things and major concern to the management part. As a solution, a lot of techniques are used and devices have been designed and developed in order to improve the current manual system

1.2 Problem Statement

The attendance is most important and became one of most essential aspect in current days. There is a lot of crime like buddy punching occur widely in real working environment. As a result a lot of problem arises every day. It courses the attendance management officer facing a big problem to overcome this problem. As an alternative for this, I like to introduce this University Exam Hall Attendance System as a solution to reduce the rising problem.

This system will read student thumb print and use it to record the attendance. Once the student scans, the system automatically record the attendance and fill up the student detail in form. Then this system will, immediately will print out an attendance slip.

In addition the system will alert the absent student by sending a message after the 15minute of the exam time. Furthermore, this system was quickest and easiest way to overcome problem on student exam attendance issues.

1.2 Objectives

The objectives of the project consist of:

- To computerize the current exam hall attendance system
- To reduce time & errors processing attendance management
- To eliminate buddy punching
- To alert student when they forget to came for exam
- To print student detail and avoid to waste time by writing his personal detail in attendance slip and answer paper

1.4 Scope

In the beginning of the project development, several factors were considered to determine the limitation or final outcome of the system. For this project, it is aim to get the detail of student from scanning thumb print and use the detail for record the present of student to exam.

From the research, there are four module available and suit the project requirement. First is attendance module. This module will be control by system to manage the process while attendance will be record. All the data will be saved in a specific database. Using this module, administrator will saved and monitor the data clearly and easy.

Second module is SMS alert to absent student. This can be done using GSM modem. When the system detects an empty attendance, the system will automatically generate a message that will be sending to the hand phone via SMS. While student get this SMS, they can refer directly.

The next module is report generating module. At this module, the statistic report creating process occur. The number of present student amount and absent student list are represent in list form. It make analysis process of student exam attendance became fast and more effective.

Finally, the slip printing module. At this stage, student's personal detail are print out as slip form. It used to attach together answer paper. By doing this, student no more require to write down his personal detail during the exam. It can safe the student time and allocate time to student relax before answering the exam question.

1.5 Project Significance

The project mainly focus on staff and students who involve in examination process. Staff play major role in the UEHAS system, however the student use the system just to sign the attendance and print out the attendance slip only. Student don't have authorize to access the staff page in system.

Staff can simply view student attendance record on time and do statistic to make administration work done effectively and to reduce time & errors processing attendance management. All records are in computerized form, thus data reduncy or human error can be avoid.

In the current system there are problem in buddy punching, but in UEHAS it can be overcame. Since the attendance are taken via scanning the thumb print. Furthermore system provide printing option to print student detail and avoid wasting time by writing his personal detail in attendance slip and answer paper.

1.6 Expected Output

This thesis represent by five chapters. Chapter I will focus on brief introduction of the project carried. The important overview or description including the problem statement, project objectives and project scopes are well emphasized in this part.

Chapter II will be based on the literature review of the project. It is mainly focused on the Biometric based attendance system. It also defined the details including the source and effect of the Biometric based attendance system to real envirmment .

Chapter III will explain on the concepts, theories and principles used in order to complete the project. This part consists of the methodology and also the information on research and experiment carried during the project development.

Chapter IV mainly focused on the result and analysis done using the device. All testing and verification result are attached with the aid of figure, table and statistic related to the project.

Chapter V is a complimentary of previous four chapters. It describes on the overall project, discussion and suggestion for the project. All matters arise including the problems and unachieved objectives will be described clearly in this part.

1.7 Conclusion

As a conclusion, the University Exam Hall Attendance System is a system that will make the management of the exam hall attendance system become more efficient. This system will overcome the entire problems that occur before. This system also more secure compared to the manual system. When using this system, the redundant and inconsistent data will not happen when they handling large group of student. The processing data process also becomes faster than before. Even there are some weaknesses but the advantage of the system is more obvious to the organization for the development in the future. Further implementation on this system in office will track employee attendance time automatically and eliminate current attendance problem.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

The chapter will give a detailed description about what has been published on a topic by scholars and researchers. The project methodology is an approach for meet the goals and objectives for this project. The project requirements are such as software, hardware and other related requirement will be identified in this session.

2.1 Introduction

A literature review is an evaluative report of information which related to the University Exam Hall Attendance System (UEHAS). The main purpose of writing this literature review is to get knows knowledge and ideas that have been established about University Exam Hall Attendance System and other attendance related system. It also will show the strength and weakness of the system.

Besides that, there are resources on the topic of Attendance System have been widely published. The information has been collected from different resources such as published documentation, whitepaper and journals in web site.

A project methodology tells what have to do, to manage projects from start to finish. It describes every step in the project life cycle in depth; it helps to complete tasks faster than before. In the proposed project, Structured Systems Analysis and Design Methodology (SSADM) has selected as the main methodology. Structured Systems Analysis and Design Method (SSADM) is a systems approach to the analysis and design of information systems. Database Life Cycle (DBLC) is chosen as the database development for this project.

2.2 Literature Review

Basically Literature Review is a result after reading, analyzing different types of resources, collecting information from websites, books, and other materials. Furthermore, the facts and finding also can based on the major components of the enhanced system such as backup and recovery, system architecture, export and import data and the integrity within different application.

2.2.1 Domain

UEHAS is ICT in education and training based domain. ICT in attendance management is becoming very important aspects nowadays. Compared to other fields, management field has many innovative changes which have a high social impact. There has already been a long standing tradition for computer-based decision support, dealing with complex problems in management such as school and office management. Recent trends in any management, focus is on computerize and electronic applications in their organization. The current manual system used in most of organization still unsatisfied the need. Proper plan in ICT can be a best solution to overcome these kinds of problems from occurs in future.

2.2.2 Keyword

1.) Biometrics

Biometric authentication refers to technologies that measure and analyzes human physical and behavioral characteristics for recognition and authentication purposes. The main benefit of the biometric technology is that is more safe and comfortable that the traditional systems. There are different types of identification and authentication software like eye iris, hand geometry, fingerprint, and extra. The brief information on Biometric System can be referred in Appendix F.