BORANG PENGESAHAN STATUS TESIS *

JUDUL: ONLINE ORGAN DONATION MANAGEMENT SYSTEM

SESI PENGAJIAN: 2007

Saya CHITRA A/P RAMASAMY
(HURUF BESAR)

mengaku membenarkan tesis (PSM/ Sarjana/ Doktor Falsafah) ini disimpan di Perpustakaan Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajiab tinggi.
4. ** Sila tandakan (/)

_____ SULIT	(Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)
_____ TERHAD	(Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/ badan di mana penyelidikan dijalankan)
___/___ TIDAK TERHAD	

R. Chitra

(TANDATANGAN PENULIS)

Alamat tetap: No.53 B, Ladang Bagan Datoh, 36100 Bagan Datoh, Perak.

Tarikh: 31/10/2007

(TANDATANGAN PENYELIA)

SYAHIDA BINTI MOHTAR

Nama Peyelia

Tarikh: 31 / 10 / 2007

CATATAN: * Tesis dimaksudkan sebagai Laporan Akhir Projek Sarjana Muda (PSM)
** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.

ONLINE ORGAN DONATION MANAGEMENT SYSTEM

CHITRA A/P RAMASAMY

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2007

DECLARATION

I hereby declare that this project report entitled

ONLINE ORGAN DONATION MANAGEMENT SYSTEM

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

STUDENT : R. Chitra **(CHITRA A/P RAMASAMY)** Date: 31/10/2007

SUPERVISOR : **(PUAN SYAHIDA BINTI MOKHTAR)** Date: 31/10/2007

DEDICATION

A special dedication goes to my beloved parents Mr. Ramasamy A/L Krishnasamy and Mrs. Letchumy A/P Ramachandran because giving support in completing my final year project which is entitled Online Organ Donation Management System (OODMS).

I also would like to dedicate to the people who help and support direct or indirect in finishing my project successfully.

ACKNOWLEDGEMENTS

I would like to gratefully acknowledge the contribution of several people who helped me to complete this thesis. First, I would like to convey my grateful thanks to Pn.Nurul Akmar Binti Emran, my former supervisor and Pn. Syahida Binti Mokhtar, my current supervisor at Faculty of Information Technology and Communication, Universiti Teknikal Malaysia Melaka (UTeM) for their valuable contribution and assistance in the preparation of this thesis and development of my "Online Organ Donation Management System" (OODMS).

A note of thanks is dedicated to few lecturers in UTeM in giving me some ideas, information and also for spending their valuable time and effort. Their generosity can only be expressed by me by being thankful for having such kind lecturers who are supportive.

Last but no least, to all might have involved directly or indirectly in developing this system is much appreciated and a note of thanks from me.

ABSTRACT

The Online Organ Donation Management System (OODMS) is developed mainly for general hospitals (GH), clinics and other health centers to manage the donor registration and user maintenance. It is an online system which only can be access or valid in Malacca state. The public can retrieve information about organ donation in this web site. People who interested can register themselves through this system. The application will be processed by the administrator and each donor will receive feedback about their application status. Furthermore, the authorized user's account will be maintained by the administrator. The donor record will be managed by four main users such as administrator, doctor, medical assistant and management staff. Only administrator has the authority and privileges to print organ list report and total donation report according to district from this system. 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. Moreover, OODMS is three tier architecture system which involves client tier, business tier and database management tier. The interfaces for OODMS 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 Online Organ Donation Management System will help to improve the performance of current situation and overcome the problems that arise nowadays.

ABSTRAK

Online Organ Donation Management System (OODMS) telah dibangunkan khasnya untuk hospital besar, klinik dan pusat-pusat kesihatan yang lain untuk menguruskan pendaftaran penderma organ. Sistem ini boleh diakses melalui internet dan hanya sah untuk digunakan di negeri Melaka. Para pengguna boleh mendapat maklumat mengenai pendermaan organ menerusi laman web ini. Selain itu, orang awam yang berminat boleh mendaftar sebagai penderma organ melalui sistem ini. Borang pendaftaran yang telah lengkap diisi dan dihantar akan diproses oleh pentadbir sistem. Setiap penderma yang memohon akan menerima maklum balas daripada pihak pentadbir tentang status permohonan mereka. Tambahan pula, pentadbir mempunyai kuasa untuk menguruskan maklumat pengguna yang lain. Selain daripada itu, maklumat penderma akan diurus oleh empat pengguna yang penting iaitu pentadbir, doktor, pembantu perubatan dan staf. Hanya pentadbir sistem mempunyai kuasa and hak istimewa untuk mencetak laporan senarai organ dan laporan pendermaan organ mengikut daerah Melaka. *Structured System Analysis and Design (SSADM)* telah pilih sebagai metodologi untuk OODMS. Satu analisa telah dijalankan terhadap sistem semasa untuk mengenalpasti keperluan dan pernyataan masalahnya. Antaramuka bagi OODMS telah direka berdasarkan keperluan dan permintaan pasaran semasa. Sejajar dengan itu, sistem ini telah diuji di persekitaran yang sebenar. Sistem ini diharap dapat membantu dan menyokong dalam meningkatkan prestasi sistem semasa dan mengatasi masalah yang wujud pada masa kini.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

OODMS	Online Organ Donation Management System
GH	General Hospital
DBMS	Database Management System
SSADM	Structured Systems Analysis and Design Methodology
PHP	Personal Home Page
ASP	Active Server Page
LDS	Logical Data Structure
DFD	Data Flow Diagram
DBLC	Database Life Cycle
ERD	Entity Relationship Diagram
NIC	Network Interface Card
RAM	Random Access Memory
PSM	Projek Sarjana Muda
AJK	Ahli Jawatan Kuasa
CSS	Cascade Style Sheet
GUI	Graphical User Interface
OS	Operating System
LAN	Local Area Network

MAN	Metro Area Network
WAN	Wide Area Network
NF	Normal Form
PK	Primary Key
FK	Foreign Key
RDBMS	Relational Database Management System
SQL	Structured Query Language
DDL	Data Definition Language
DML	Data Manipulation Language
DBA	Database Administrator
DCL	Data Control Language
FTP	File Transfer Protocol
TCP	Transmission Control Protocol
IP	Internet Protocol
ODBC	Open Database Connectivity

LIST OF ATTACHMENTS

CHAPTER I

INTRODUCTION

The chapter is an overview of the proposed system which will be included in project background. The problem statements of the existing system also will be defined together with objectives, scopes, project significance, expected output and conclusion for the chapter.

1.1 Project Background

Organ donation is a gift of ones body parts after death for the purpose of transplantation. The transplantation process is an operation which involves the replacement of diseased and defective organs and tissues with healthy one from donors. There are four main organ transplant resource centers in Malaysia which are as follows:-

- National Transplant Resource Centre, Kuala Lumpur Hospital.
- Organ Donation Resource Centre, Ipoh Hospital.
- Transplant Resource Centre, Penang Hospital.
- Johor Transplant Resource Centre, Sultanah Aminah Hospital.

Organ donation also can be defined as the ultimate humanitarian act of charity. The commonly donated organs are kidney, heart, liver, lungs and pancreas while the tissues are eyes, bones, heart valves and skin. In this modern day, not many people who is willing to donate their organs after they die. Furthermore, public also do not no the procedure and the way to register. There are less advertisement and awareness about organ donation among the community. Besides that, the interested people facing many problems to register themselves because they busy with works and need to get the application form from the nearest hospitals or medical centers.

The current Organ Donation System still using the manual file system which is also known as a simple database. Ledgers and logbooks are wisely used to record the information and events of the donors. Moreover, the current online system is only for retrieve information about organ donation and donor's registration. There are fewer functions for administrators where they need to calculate and organized the total registration of donors manually. Rather than that, there is no response or feedback to donors regarding to their registration. This Online Organ Donation Management System (OODMS) will help the donors, administrators and staffs of the organ donation department for a better performance.

This proposed system is the enhancement for the current Organ Donation Management System. This system can be a single point of access for the donors and administrators. The donors can be registered online just by clicking the mouse button in front of their computer at home and save their time. The additional feature of the system is the donors will get feedback about the registration.

In addition, the improvement part for this system is to help the administrators to easily retrieve the donor's details. Other than that, it also supports the data integrity for each and every change which is done on the system. Moreover, all kind of queried can be done within a minutes. As a solution and to fulfill the needs this system use the MySQL database management system. This system also assures the data integrity and helps the management handle the donor's registration more efficient. The data also can be shared by other applications and also known as reusable.

The another enhancement part for this system is to help the organ donation management or administrators to generate donor report and produce statistic with graphical representation such as bar chart and pie graph. The system able to calculate the total number of donors according to the district and type of organ they want to donate. This calculation process will be represented statistic graph. These analysis results will be hand in to the directors of the hospitals.

1.2 Problem Statements

There are several problems that identified in current manual system. The proposed enhancement system can prevent and overcome the existing problems. First of all, the public are less publicity and knowledge about organ donation due to the unattractive web sites. Moreover, the current system is lack security. It is not protected and responsible by certain people.

Most of the donor's registration processes still using the manual system where the donors need to complete pledge form and the donor's card. Then they need to post or forward the form to the National Transplant Resource Centre and keep the donor card in the wallet all the time. The donors are not sure whether their registration is succeeded or not. They do not receive any feedback or confirmation about their application.

In additional to that, there is no single point access for both donors and administrators or management. The current web based application for organ donation system is more on giving information about organ transplantation and its processes. There are fewer functions for the management to handle the donor's registration with more efficient.

There is no reporting function where the management need to done manually about the donor's record. All the analysis part has to complete by hand where the probability to make mistakes are very high. For example, the management staff

makes a mistake during categorized the donors, calculate wrong amount and so forth. This can lead to operational problems and human issues.

1.3 Objective

The objectives of the system are as follows: -

- To have a single point of access for donors, administrators or management.
  - Both donors and management will access the application to perform different action or transaction.

- To secure the data in proper way and protect from unauthorized person.
  - This system is password protected where the unauthorized people cannot access the data. Each level of users will have their own privileges to access the data using this system.

- To provide two way communication between donors and the management
  - After the registration the donors will received a feedback from the administrators or management about their status.

- To make the record keeping more efficient.
  - All donors' information will keep more systematic and populated in a stable database.

- To retrieve the donor's information easily and faster.
  - The management or administrators can retrieve the donor's details just by enter their IC number or name.

- To generate statistics about the donors according to the district and organ that they want to donate in future.
  - The system also can generate statistic graph about the donors and show percentage.

- To generate donor report.
  - Based on the analysis that has been done, this system will produce report about the donors and organs.

1.4 Scope

This system is enhancement of the manual and web based Organ Donation Management System. The current system has features of giving information and donor's registration. The additional feature of the proposed system is to generate the statistic graph about the donors according to the district and organs. After the analysis process, a report about the whole donor's details will be generated. This system only limited in the Malacca state.

The specific users for this system are: -

- Public
- Administrators
- Doctors
- Medical Assistant
- Management Staff

The modules that will include in the Online Organ Donation Management System are:-

i) Login and password function to access the system
ii) Donor Registration
iii) Donor Maintenance
iv) Feedback for the donors
v) Generate statistic graph
vi) Generate report of donor's information.

1.5 Project Significance

This Online Organ Donation Management System (OODMS) will computerize the existing system with better performance. This system will ease the donors and administrators to get a single point of access regarding to organ donation. This will save the donors time to register online.

Donor's information and record can be managed more efficiently when they are stored in database. This project is fully computerized by using XAMPP which is combination of MySQL and Apache Server. A collection of data will build a block of information. Information is can be produce by processing data. Good relevant and effective information is a key to make a good decision-making. Good decision-making can lead and guide an organization to survive in a global environment.

Moreover, this system also will help the management and administrators to track the total number of donors who have been registered. This enhanced system will have the capability to generate report which is consistent and precise and a powerful DBMS in analyzing the donors according to the district and organ that they want to donate in future. This function will be fast and effective with minimum human errors.