

BORANG PENGESAHAN STATUS TESIS*

JUDUL : BLOOD BANK MANAGEMENT SYSTEM (BBMS)

SESI PENGAJIAN : 2012 / 2013

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(TANDATANGAN PENULIS)

88, Jalan Sekakap,
Alamat tetap: _____
Kampung Teluk Iskandar,

86800 Mersing, Johor

Tarikh: _____

(TANDATANGAN PENYELIA)

Puan Nor Mas Aina binti Md
Bohari

Tarikh: _____

CATATAN: * Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM).

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BLOOD BANK MANAGEMENT SYSTEM

AKALILI BINTI ABDULLAH

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

DECLARATION

I hereby declare that this project report entitled

BLOOD BANK MANAGEMENT SYSTEM

The written was made by me and it's my own effort and there is no plagiarized without citations.

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SUPERVISOR: _____ DATE: _____

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DEDICATION

Alhamdulillah with blessed from Allah easy to develop this system completely. Developing this system needs to struggle and full commitment towards the project. Special thanks and dedicate to my beloved supervisor of this Final Year Project, Madam Nor Mas Aina binti Md Bohari for any suggestion or ideas and also the valuable guidance and advice that encourage me to complete the system successfully.

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ABSTRAK

Perkembangan teknologi maklumat telah mempunyai kesan amat mendalam terhadap pelbagai aspek kehidupan di seluruh dunia. Sebagai salah satu hospital pusat penyimpanan darah (rujuk Lampiran C) ia jugak tidak terlepas dalam 'angin perubahan' ini. Ia telah menggunakan teknologi maklumat dalam pengurusan pentadbirannya. Jadi, Sistem Pengurusan Pusat Penyimpanan Darah (BBMS) telah dibangunkan untuk mengurus entiti dalam aktiviti pendermaan darah termasuk kakitangan, penderma, acara pendermaan, paket darah dan tempat penyimpanan darah. Terdapat banyak sistem telah wujud tetapi masih tidak sistematik dan tidak praktikal untuk digunakan. Melalui sistem pengguna, ia adalah agak sukar untuk mencari maklumat kerana dari setiap hari ke hari ia akan menjadi semakin banyak sehingga ia boleh hilang sebagai rujukan pada masa hadapan. Kebanyakan masalah mungkin boleh terjadi apabila menggunakan sistem yang sedia ada, mereka menyimpan maklumat itu dengan memfailkan dan dimasukkan ke dalam rak. Melalui pemerhatian dan penyelidikan yang telah dibuat, mereka akan kehilangan data penting dan data boleh menjadi rosak. Jadi, sistem yang akan dibina adalah sistem yang kurang menggunakan kertas dan sistem pemfailan manual. Sistem berkomputer ini akan membawa banyak faedah terutama menyimpan semua maklumat data yang berkaitan dengan pengurusan derma darah dalam cara yang lebih sistematik. Sistem ini memerlukan sebuah komputer dan semua operasi akan dipasang ke dalamnya dan melibatkan semua aktiviti akan dilakukan oleh sistem. Semua aktiviti yang terlibat dalam menyimpan semua maklumat dan butir-butir kakitangan penderma, mengemaskini acara yang akan diadakan, menyimpan butiran paket darah yang lengkap untuk dikemaskini dan akan disimpan ke dalam tempat penyimpanan darah. Maklumat acara yang diperlukan dan ia amat penting bagi memastikan semua paket darah yang disimpan akan diketahui dan diperiksa untuk beberapa kali jika ada kes yang berlaku. Kemudian, sistem ini juga menyediakan pengiraan untuk jumlah paket darah yang telah disimpan ke dalam tempat penyimpanan darah mengikut setiap jenis darah iaitu + A, A-, B +, B-, AB +, AB-, O + dan O- yang akan dikemaskinikan. Kemudian, semua data yang dikumpul dalam sistem boleh digambarkan dan dianalisis melalui penghasilan laporan atau diwakili oleh gambarajah graf. Akhir sekali, melalui sistem ini adalah diharapkan dapat membantu bagi pentadbiran hospital pusat penyimpanan darah untuk membuat keputusan yang cepat dan berkesan melalui pengurusan aktiviti-aktiviti menderma darah dengan cara yang lebih sistematik.

ABSTRACT

The development of information technology has already had a profound on many aspects of life around the world. As one of the blood bank hospital (refer Appendix C) which is not missed in this 'wind of change'. It has used the information technology in its administration management. So, Blood Bank Management System (BBMS) had been develop for manage blood donation management entities include staffs, donors, events, blood packets and blood bank. There are many systems had been exist but still not systematic and also not practical to be used. Through the manual system, it is quite hard to find information because from each day to day it will become more and more until it can be lost as reference in the future. Most problems could be probably when using the existing system, they keep and storing the information by filing them and put into the rack. By observation and research that have been made, they might lose the important data and the data could be corrupted. So, the system that will be built is the system which using less paper and filing system manually. These computerized system will bring a lot of benefits especially storing all the data information related to blood donation management in more systematically way. The system needs a computer and all operations will be installing into it and among of all the activities will be performed by system. All the activities involved in storing all the information of staff and donor details, updating the upcoming events, storing the blood packets details for being updated and keep into the blood bank. The information of events is needed and important for make sure all the blood packet kept will be known and being checked for many times if any case happens. Then, this system also provide calculation for the total of blood packets which already stored into the blood bank according to each of the blood type which are A+, A- ,B+ ,B- ,AB+ ,AB- ,O+ and O- will be keep updated. Then, all the collected data in the system can be shown and being analyzes through generating reports or represent by a graph diagram. Finally, through this system it is hoped that can helped the blood bank hospital administration to make a fast and effective decision through managing the blood donation management activities in more systematically way.

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LIST OF ATTACHMENTS

ATTACHMENT	TITLE
1.1	Appendix A: Gantt Chart
1.2	Appendix B: User Manual
1.3	Appendix C: Real Case Document

LIST OF ABBREVIATION

PSM	-	Projek Sarjana Muda
BBMS	-	Blood Bank Management System
DFD	-	Data Flow Diagram
ERD	-	Entity Relationship Diagram
BITD	-	Bachelor of Database Management

CHAPTER I

INTRODUCTION

1.1 Project Background

The system to be developed is a Blood Bank Management System (BBMS) which is a web-based database application used by the hospital blood bank or blood centre. The system serves as a medium for public to increase their awareness and to promote the importance of blood donation especially in saving lives.

The system also provides many functions for the hospital administrators to manage the blood packets and event that have been created. This system also has an ability to keep track of donor records and the status of blood stock in the blood bank. The goal of this project is to computerize the blood donation management system in a hospital blood bank in order to cater the increasing number of information such as new records of donor.

Besides that, all information has been saved in the database and the user who wants to retrieve it, the necessary information which can be easily accessible from the file that can be made only by the authorized user. This user friendly system will be automatically updated all the information in order to manage them systematically.

1.2 Problem Statements

Below is the problem statement that had been identified:

i) Detect and searching for blood donation records.

The issues have been came out when the administration need to find and search all data about blood donation records. They have to search one-by-one and it is so complicated. The paper record can be lost or undefined.

ii) Overlapping or redundancy data.

This problem occur when the old system which using paper for blood donation records may introduce to data redundancy and one donor can have repeating records which be write by unauthorized staff.

iii) Difficult to make report for total blood packet by monthly basis.

It contains duplicate information and sometimes there are missing blood donation information records. Reporting is also needed to make sure all data will be easy to be display and view by users.

1.3 Objectives

Objective for this application system are as below:

- i) **To perform search on blood donation management functions to the blood bank by providing the logging functions in order to control and trace the workflow of system.**

This system is easy to use when the staff checking the blood donation information while key-in all the data and it will be updated in anytime.

- ii) **To allow authentic and authorized features to the current system where private and confidential data can only be viewed by authorized user.**

The situation can be seen where there is no more error or default that can be found in the data and be more secure because it will be edit by administration users.

- iii) **To provide a report on the efficiency of blood stock management of the system.**

By using this system, the administration staff can keeping all the data and save it into the database. The system will display all the report of result according to their problems.

1.4 Project Scope

The deliverable of this project is the BBMS, which is a web-based database application system. The scope of the project will cover the system functionalities, technology used, targeted users, system deployment and methodology. [18]

1.4.1 Scope of System Features and Functionalities

The scope of system functionalities is based on functions and features which available in the system. The first part describes the features available in the database system and another part will describe more on modules of the system. [18]

1.4.1.1 Database Features

For database features, the system needs to have data encryption and data integrity to ensure the effectiveness of the system. [17] Then, there are two main features which involved in the Blood Bank Management System (BBMS) which are:

1. Data encryption

This is very important to be applied into the system because it will protect all data from being manipulated by intruders which consists of sensitive and confidential data such as password matters. [18]

2. Data Integrity

For this feature, data integrity is enforced with the proper use of primary key and also foreign key rules where it will reduce duplicate records in the database of the system. [18]

1.4.1.2 System Functions or Modules

The functions or modules that involved in the Blood Bank Management System (BBMS) are described as follows:

1. User Authentication Management

This module allows the blood bank administrator or staff to be access into the Blood Bank Management System(BBMS) through validate username and password.

2. Registration Management

The users of system need to be register all their details information into the system through this module. Once they have been registered, they can view or update their data information based on they want to do either manage events, staffs, donor, blood packet or blood bank.

3. Event Management

Staffs or admin for this system can make or create and event for collecting more blood packets which needed by many receivers especially in Malaysia nowadays. They can set the venue and date for blood donation event to be held and produce a report which consist the highest total of blood packets that had been collected according to the event and start make promotion towards the place.

4. Blood Packet Management

The records of all blood packets which have been collected through many events will be saved into the database and it will reduce the redundant records. Then, the blood packets will be kept into the blood bank according to each of the blood type.