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KUTKM-PANEL CLINIC SYSTEM

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This report submitted in partial fulfillment of the requirement for the Bachelor of information and Communication Technology
(Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
APRIL 2006

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DEDICATION

Specially dedicated to my beloved parents,
Mohamed Bin Ismail and Rokiah Bte Othman

For my lectures and supervisor, Puan Noraswaliza Bte Abdullah at Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM)

And lastly to my entire friend who have
encouraged, guided and inspired me throughout my journey of education

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ABSTRACT

Nowadays, KUTKM is holding their motto to be the greatest technical university in Malaysia by using the Hands-On concept. To achieving their business target, there are a few points that need to emphasize during achieving the target as the establishing technical university in Malaysia. The point that should be looking for is KUTKM need to have the healthiest student physically and mentally besides giving the Hands-On education to their students. Then nowadays KUTKM already owned their panel clinic and also some private clinic to increase the health level among their students. Therefore they should need a systematic system to controlling and managing the patient care business in each of panel clinic that they have. The current patient care management of each panel clinic of KUTKM does not use any computerize system in managing all of the patient care management activities. All of the panel clinics are using the manual patient care management such as clinician need to fill up so many treatment forms and getting problem in controlling the file system. And at this moment, by having the KUTKM Panel Clinic System, hopefully it can be the problem solver for all the difficulty and hard-works job to all clinicians and doctors. Mostly, all of the patient care management and medicines task such as record incoming patient's data, arranging the appointments between the patients and the doctor also they need to records the medicines that has been used. By using this system, all of the previous system can be replaced to be more flexible, specific, and more efficient and effective system. Mostly all of the papers usages can be reduce and at the same time it also reduces paper costs. Besides that it can improve skills and knowledge among the KUTKM staffs and student in the IT technology from the system. Last but not least, by applying this system KUTKM also will give good impression to the other people that the clinic should have the best system in their daily management system.

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ABSTRAK

Sekarang ini KUTKM memegang prinsip untuk mencapai sebuah universiti yang ternama dalam bidang Berorentasikan Amalan maka beberapa perkara perlulah dititik beratkan untuk mencapai ke suatu tahap yang boleh dianggap membanggakan. Perkara yang dimaksudkan adalah KUTKM perlu memiliki pelajar-pelajar yang sihat dari segi mental dan fizikal disamping menerapkan ilmu yg berorentasikan objek kepada pelajar-pelajarnya. Bagi mencapai salah satu matlamat tersebut, KUTKM sudah pun mempuyai beberapa buah panel klinik dan juga klinik persendirian bagi meningkatkan kadar kesihatan dan kebajikan pelajar-pelajarnya. Klinik KUTKM yang sedia ada, ianya menggunakan kaedah sistem pengurusan maklumat pesakit secara manual di mana kesuluruhan aktiviti yang berkaitan dengan rawatan pesakit dilakukan dengan menggunakan pelbagai jenis borang atau dengan erti kata lain melibatkan kertas yang banyak. Selain itu tiada sistem yang sesuai untuk mengurus segala aktiviti merawat pesakit seperti penyimpanan maklumat pesakit secara digital atau sebagainya. Justeru itu, dengan wujudnya Sistem Klinik Panel KUTKM ianya akan dapat membantu mengurangkan kadar penggunaan kertas di dalam sistem pengurusan klinik panel KUTKM yang sedia ada. Dan secara tidak langsung ia juga dapat meningkatkan mutu perkhidmatan rawatan kepada pesakit. Sistem yang akan dibangunkan bagi panel klinik KUTKM ini juga berkeupayaan untuk menguruskan pendaftaran dan pengurusan pesakit, pengurusan temujanji, pengurusan ubat-ubatan, pengurusan laporan dan juga kemudahan penganalisaan laporan kesihatan dan ubat-ubatan. Banyak impak yang bakal diberikan kepada organisasi panel klinik KUTKM secara khususnya dan kepada KUTKM secara amnya. Diantaranya adalah dengan meningkatkan mutu kesihatan dikalangan warga KUTKM justeru menambahkan mutu kualiti kemahiran pelajar yang akan dihasikan oleh KUTKM dalam melahirkan graduan yang mahir dengan aplikasi berorentasikan amalan.

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LIST OF ABBREAVIATIONS

PSM	-	Projek Sarjana Muda
KUTKM	-	Kolej Universiti Teknikal Kebangsaan Malaysia
OOAD	-	Object-oriented Analysis Design
OOD	-	Object-oriented Design
RAM	-	Random Access Memory
WWW	-	World Wide Web
IHS	-	Indian Health Service
EHR	-	Electronic Health Record
CMR	-	Computerized Medical Record
IT	-	Information Technology
CASE	-	Computer Aided Software Engineering
VB.NET	-	Visual Basic.Net
ISO	-	International Oraganization for Standadization
SQL	-	Structured Query Language
ACID	-	Atomic, Consistent, Isolated, Durable
TDS	-	Tabular Data Stream
ODBC	-	Open Database Connectivity
NIC	-	Network Interface Card

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APPENDIX	TITLE
A	Gantt chart
B	Test Case Standard Naming Convention

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CHAPTER I

INTRODUCTION

1.1 Project Background

KUTKM Panel Clinic System is the project for Projek Sarjana Muda (PSM). The purpose of this project is to meet the requirement of Bachelor of Information and Communication Technology course. This project will be implemented in KUTKM clinic centre. Besides that, from this project is helps to increase the health quality management among the KUTKM citizens.

KUTKM Panel Clinic system is a strategic plan in enhances the technology level health care in the newest technical university in Malaysia. This system is an automatic and fully computerized system that develops to solve the manual business problems using form paper and manual data storages. This system will benefits the clinical management in KUTKM and also target patients. It enables the users (clinicians and doctor) to make the patient registration and management, consultation, drugs management, controlling the appointment scheduling and managing the medical and patient health records. Clinic staff can carry out the assign task such as patient registration and management, dealing the appointment, managing records and drugs. As for doctor, he or she can managing the consultation process, lookup on patient records, controlling the appointment schedule and also controlled the drugs inventory in a convenient way. Also a complete database is built up to store all related data for each process.

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1.2 Problem Statement

Existing of this system is basically based on the problems occur from the current system. Therefore, some observation has been done to capture the problems which is directly influence the motives of this project. The problems are stated as below:

i) Patient records are kept manually

For this moment, the current system does not own the systematic system that can organize the patient records. Each of the patient records is stored in paper form and finally the records stored into a specific file. This can cause the life-time of patient records shorter and may be in future these records can't be uses anymore in case of the records are rotten. By using this system, the patient records will be stored in a computer and the entire records life-time is longer also could be use for many years.

ii) Appointment is scheduled manually.

From current system, all the appointment that is requested by the patient to the doctor or clinic staff will be noticed and stored in the piece of paper which has the appointment schedule. When an appointment has been approved by the doctor, the appointment time will be joke down in an appointment schedule. With this system, the requested time will be verified automatically by the system. And this also can reduce time operation of appointment process.

iii) No system to check the storage of medicine.

Nowadays, there procedure that has been applied in keeping the storages of medicine is using the manual filing system. This procedure is not suitable because it

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