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PATIENT INFORMATION SYSTEM

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**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
2008**

DECLARATION

I hereby declare that this project report entitled

PATIENT INFORMATION SYSTEM

is written by me and is my own effort and no part contained in this report were plagiarised from any source unless stated.

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DEDICATION

To my family that has always been my pillar of strength.

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Alhamdulillah to Allah SWT for this gratefulness and kindness for allowing me and has help me in so many ways in completing my Project Sarjana Muda.

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Last but not least, I would like to conclude my thanks to my parents, family and all my friends for all their support.

ABSTRACT

Patient Information System is specifically designed to assist the treatment management in Poliklinik Perdana located in Taman Tasek Utama, Ayer Keroh, Melaka. Generally there are six (6) topics in development of this system. The first topic is the introduction consisting of the file detail description of the project background, problem description, objective, scope and the important of this project. The second topic captured the Literature study and Project Methodology whereby all the supporting facts about the system that is using web based application is analyzed and studied to assist the system designer in designing and completing a good system. The third topic is the Analysis, the result of the analysis on the current system and design of the system that is going to be developed is being studied and compared. Forth topic covers the Design whereby the new system that is going to be developed is design relate to several phase followed by the detail design. The fifth topic is the Implementation where the system will be fully developed based on the results of the phase before. This topic explained the development of the design application and the software development that has been planned in topic four. All the strength and weaknesses of the system are analyzed in last topic.

ABSTRAK

Patient Information System dibangunkan khas bagi memudahkan pengurusan rawatan bagi Poliklinik Perdana yang terletak di Taman Tasek Utama, Ayer Keroh, Melaka. Secara amnya, terdapat enam (6) topik dalam menghasilkan sistem ini. Topik yang pertama (I) ialah pengenalan dimana menerangkan secara terperinci latar belakang projek, pernyataan masalah, objektif, skop dan kepentingan projek. Topik kedua merangkumi kajian Literature dan Projek Methodologi dimana fakta-fakta sokongan tentang aplikasi-aplikasi sistem dikaji bagi membantu pereka bentuk sistem merekabentuk dan menyiapkan sistem dengan baik. Dalam topik yang ketiga (III) iaitu Analisis, keputusan analisa terhadap keadaan sistem semasa dan rekabentuk sistem yang akan dibangunkan di kaji dan dibandingkan. Topik keempat (IV) merupakan topik merupakan Rekabentuk di mana sistem yang akan dibangunkan direkabentuk mengikut beberapa fasa seperti rekabentuk secara terperinci. Topik kelima merupakan topik implementasi dimana sistem akan dibangunkan sepenuhnya berdasarkan keputusan pada fasa-fasa sebelumnya. Topik ini menerangkan pelaksanaan rekabentuk aplikasi dan pembangunan aturcara perisian yang telah dirancang didalam topik (IV). Segala kekuatan dan kelemahan system turut di semak di dalam topik terakhir.

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LIST OF ABBREVIATION

ABBREVIATION	DESCRIPTION
PIS	Patient Information System
DBA	Database Administrator
UTeM	Universiti Teknikal Malaysia Melaka
SDLC	Systems Development Life Cycle
SSADM	Structured Systems Analysis and Design Methodology
OOAD	Object Oriented Analysis and Design
RAD	Rapid Application Development
JAD	Joint Application Development
DFD	Data Flow Diagram
BSO	Business Systems Options
LDM	Logical Data Mode
LDS	Logical Data Structure
DBLC	Database Life Cycle
ERD	Entity Relationship Diagram
EERD	Enhanced Entity Relationship Diagram
DDL	Data Definition Language
3NF	Third Normal Form

DBMS	Database Management System
DDL	Data Definition Language
DCL	Data Control Language
PSM	Projek Sarjana Muda
IC	Identity Card
PHP	Personal Home Page
PC	Personal Computer
CPU	Computer Processor Unit
LAN	Local Area Network
SQL	Stuctured Query Language.
PK	Primary Key

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CHAPTER I

INTRODUCTION

1.1 Project Background

Patient Information System (PIS) is developed to help the Poliklinik Perdana, Taman Tasek Utama, Ayer Keroh in treatment management. This clinic use manual system in recording their patients' information and treatment report. This record is stored in a specific file.

This system is fully computerized system that develops to overcome the manual business problems using paper and filing system. In current systems, most record is written. These written records have their own disadvantages, where it is easily destroyed and the life-time of patient record are short. This system will give the advantages for users and patient in handling treatment process. It enables users to make a patients registration and management, record patient treatment, controlling an appointment scheduling. This system also contains list of disease and its symptom and information, and list of nutrition information.

This system are controlled by the administrator and can be access and update by the registered user. This system contains a few tables to store the collected data and

report and it contains database to locate all the tables. The data in the tables can be update when it has a modification data.

With this information, PIS will be able to monitor, check, verify, validate information from each patients. In addition, each district will be able to send/update their data online.

1.2 Problem Statement

This system is developed based on the problems that occur from the current manual system. The problems are stated below:

I. The current procedure is done manually.

The current system does not have a systematic and secure system that is organize the patient record. Patient records are stored in a form of paper and will be put into a specific file which is depends on first letter of patient name. The doctor records the patients' treatment report in a form of paper that will attach with patients' record and record the appointment in a card. The treatment card will be added when the patient come to get the treatment. Clinic staff also needs to rewrite the patients' data if there is any modification.

Hence, the clinic needs a lot of space to store all the patients' record. This may causes some of the record will be throw away if the patients never come to the clinic for a few years.

II. Information achievement

In using the filling system, we cannot control the data from unauthorized person. The data can be view by anybody.

III. The system cannot generate report systematically.

Clinic staffs need to generate report manually. They only can write a simple report weekly and the record are stored a log book. Beside that, the payment receipt also generate manually.

IV. No database administrator (DBA) facility

Poliklinik Perdana does not have database administrator to manage the clinic database. All the data and report are controlled by staff and doctor. It will make the management process become difficult.

1.3 Objective

This clinic system is implemented in order to achieve the objectives that benefits to the clinic management. The objectives of this project are:

I. To generate computerized system.

PIS will be generating in order to record and stored all the data and information in a specific tables. This system will contain patient data, patient treatment report, and

appointment schedule. Patients need to fill the information form then the staff will insert the data in the system.

II. Information achievement

Only authorize user can access the information in this system. In order to access this information, system users are provided with user id and password.

III. To generate report systematically.

This system can help the staff and doctor to generate the report. This system is allowed to generate the report automatically. It also provides to generate the payment receipt after the payments are calculated automatically by this system.

IV. Facility for database administrator (DBA)

This system provides function to enable DBA to create table base on information given. The table requirements are table name, attributes data types and contains.

1.4 Scope

The scope of Patient Information System will be focused on user and the system itself. The scope of user is based on the user that will used and control this system who is clinic staff and doctor. While, for scope that focused on system is based on the function of the system. The scopes are described as below:

1.4.1 Scope of user

The main users of this system are the clinic staff, doctor and patients. Clinic staff and doctor will react as the administration while a patient is the user who gets the service from this clinic.

1.4.2 Scope of system

This system will be focused on seven (7) major module based on the main task that will carried out. The modules are DBA facility, login, registration for users and customers, computerized appointment scheduling, payment, search and generate report.

1.5 Project Significance

Project significant shows the benefit to the user while using this system. The target users of this system are the clinic staff and doctor. This system will controlling by computerized.

In this system, all the data and record are stored in the database that can support a lot of data. It can help the clinic staff and doctor to organize the clinic management. Clinic staff and doctor can save a lot of time while using this system because all the transaction are controlled computerizing such as finding the patients record and also the treatment record. Other than that, doctor can check his schedule in this system when his patient needs to make an appointment. This system also has information about the disease and nutrition where the patients can get the information from the doctor. Beside that, all the payment will be count by the system and the transaction will be stored in the database.