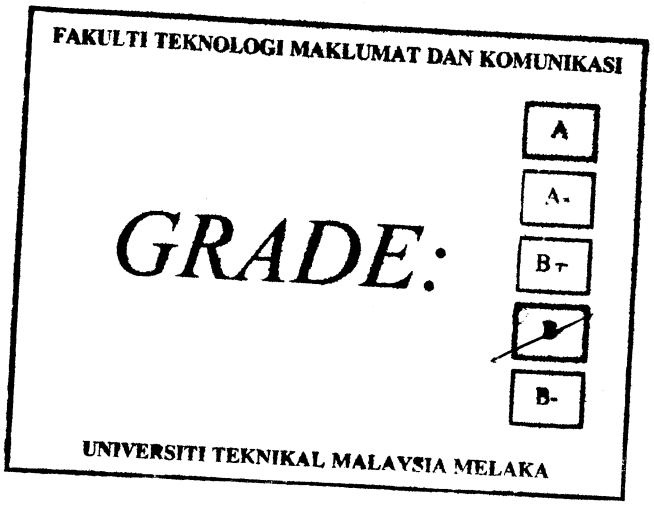
PATIENT REGISTRATION SYSTEM

MOHD ZHARIF BIN A. RAHIM



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MOHD ZHARIF BIN A. RAHIM

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
2010

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DECLARATION

I hereby declare that this project report entitled

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

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ACKNOWLEGEMENTS

Firstly I would like to thank my supervisor, Dr. Khanapi B Abd Ghani for giving assistant and guidance to complete this project.

I would also like to thank my beloved mother who always give me so much support in financial, time, and motivation during developing my project.

I would like to thank my lecturers who giving me direct and indirect assistant throughout my projects and to my friends, thanks for your helps.

Lastly, I need to thank to all beloved friends for their helps and support to complete this system.

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ABSTRACT

The aim of this project is to develop a generic Patient Registration System. The development of this system is purposely to manage healthcare services and overcome problems faced by hospital during managing their business. Currently, many hospitals have no computer system to help them in managing their business. This will cause several problems occurred such as loss of data, data cannot be analyzed and also large amount of data cannot be managed at one time. This system is also composed with seven modules provided purposely to overcome the problems faced. This system is developed by using Java language and JavaDB as database management software. The methodology that is used to develop this project is System Development Life Cycle (SDLC). The study has been made during developing the system and among of the study are by searching on the internet about existing system that is similar with the system that want to be developed. The output from this project will be a computerized system that can help any types of hospitals in order to manage their business process easily.

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TABLE OF CONTENTS

CHAPTER	SUBJECT		PAGE
	ACKNOWLEDGMENTS		**ii**
	ABSTRACT		**iii**
	ABSTRAK		**iv**
	TABLE OF CONTENTS		**v**
	LIST OF TABLES		**ix**
	LIST OF FIGURES		**xi**
CHAPTER I	**INTRODUCTION**		
	1.1	Project Background	1
	1.2	Problem Statements	1
	1.3	Objective	2
	1.4	Scope	2
	1.5	Project Significance	3
	1.6	Expected Output	4
	1.7	Conclusion	5

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CHAPTER II	**LITERATURE REVIEW AND PROJECT METHODOLOGY**		
	2.1	Introduction	6
	2.2	Facts and findings	8
		2.2.1 Domain	8
		2.2.2 Existing Systems	9
		2.2.3 Technique	10
	2.3	Project Methodology	12
	2.4	Project requirements	17
		2.4.1 Software requirements	17
		2.4.2 Hardware Requirements	18
	2.5	Project Schedule and Milestones	19
	2.6	Conclusion	19
CHAPTER III	**ANALYSIS**		
	3.1	Introduction	20
	3.2	Problem analysis	21
	3.3	Requirement analysis	24
		3.3.1 Data Requirement	25
		3.3.2 Functional Requirements	27
		3.3.3 Non-Functional Requirement	30
		3.3.4 Other Requirement	32
	3.4	Conclusion	34
CHAPTER IV	**DESIGN**		
	4.1	Introduction	35
	4.2	High-Level Design	36
		4.2.1 System Architecture	36
		4.2.2 User Interface Design	36
		4.2.2.1 Navigation Design	43
		4.2.2.2 Input Design	44
		4.2.2.3 Output Design	46
		4.2.3 Conceptual and Logical database design	46

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	4.3	Detail Design	52
		4.3.1 Software Design	53
		4.3.2 Physical Database Design	53
	4.4	Conclusion	57
CHAPTER V	**IMPLEMENTATION**		
	5.1	Introduction	58
	5.2	Software Development Environment Setup	59
	5.3	Database Implementation Setup	59
	5.4	Software Configuration Management	60
		5.4.1 Configuration Environment Setup	60
		5.4.2 Version Control Procedure	62
	5.5	Implementation Status	62
	5.6	Conclusion	63
CHAPTER VI	**TESTING**		
	6.1	Introduction	64
	6.2	Test Plan	65
	6.3	Test Strategy	68
	6.4	Test Design	70
	6.5	Test Result	72
	6.6	Conclusion	74
CHAPTER VII	**PROJECT CONCLUSION**		
	7.1	Observation on Weakness & Strength	77
	7.2	Proposition for Improvement	79
	7.3	Contribution	79
	7.4	Conclusion	80

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LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Requirements-Gathering technique applicable	11
2.4	Software Requirement	17
2.5	Hardware Requirement	17
3.1	Data dictionary	25
3.2	Software requirement	31
3.3	Hardware requirement	33
4.1	Input Design	45
4.2	Output Design Table	46
4.3	Data type of Patient Table	50
5.1	Implementation Status Specification	61
6.1	Test Environment Specification	61
6.2	Test Environment Specification	65
6.3	Test Schedule	66
6.4	Test Data for Login	69
6.5	Test Data for Search	70
6.6	Test Data for Register Visit	70
6.7	Test Data for Register New patient	71
6.8	Test Data for Login	72
6.9	Test Data for Add New Patient	72

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6.10	**Test Result and Analysis for the Login Module**	**73**
6.11	**Test Result and Analysis for the Login Module**	**74**
6.12	**Test Result and Analysis for the Register New Patient**	**74**

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LIST OF FIGURES

DIAGRAM	TITLE	PAGE
2.2	Model of System Development Life-Cycle The	13
2.3	Database Development Life-Cycle model	16
3.1	Context diagram of the current system	21
3.2	DFD level 0 of the current system	22
3.3	Context diagram of the to-be system	27
3.4	DFD level 0 of the to-be system	28
3.5	Functional Requirement	29
4.1	System Entrance	37
4.2	Login Form	38
4.4	Patient Registration	39
4.5	Database Utility	41
4.6	Patient Search	42
4.8	Patient registration Navigation Design	43
4.9	Entity Relationship Diagram	47
5.1	Configuration Location.	60
5.2	File of Java database (Java DB).	60

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CHAPTER 1

INTRODUCTION

1.1 Project Background

The system that will be building is for the hospital or clinic. The system will have a better registration method which is by using MyKad. The current system that being used is only on paper and the information is not shared among doctors. After the registration, all the information will be send to Clinical Management System / Hospital Management System. The server that will restore all of this information will be connected through a network. Somehow if the network failed, the system will be running on local drive by using the distributed database method. The system will only update when there is network connection.

1.2 Problem Statements

- The current system which is the filing system has high risk of data loss.
- Unauthorized person can easily manipulate the clinic's data.
- There is no backup and recovery for all data storage.

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1.3 Objective

- To replace current manual system, filing-based, with a computerized system and database.
- To make sure the privileges to access certain data in the database is authenticated to a certain type of user only.
- To aid in doing backup and recovery for the system to ensure the availability of the data at any time and can be restored if the event of system crash to happen.
- To lessen the time taken for the user to access and retrieve data.
- To make a fast method for inserting the data by integrates the card reader.

1.4 Scope

- This system is about patient registration system which can be use by a hospital and clinics to register their patient.
- Through this system they can make a faster registration method by using the card reader.
- The system will also save the data of a patient to the centralize system which can be used by many other application or system.

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1.5 Project Significance

This project is to replace the current manual system with computerized system. Currently all data and information are kept in files which then stored in the office. With a computerized system, these data can be kept into the database. The organization that will use this system is either clinics or hospital. This organization will have a computerized system that will ensure the security, easy to retrieve data and have back up procedure. This computerized system, the management of the data will be more efficient and less time consuming.

Many of the clinic or hospital is currently using the manual system that has many disadvantages. With security features, the privileges to access the data is only accessible by authorized person such as doctors and the head of nurses. Currently, when a patient came to the clinic, the nurses need to go into the office to get the student's information file. But with this system, the retrieval of the patient information becomes less hassle.

The patient record system ensures that there will be no occurrence of data loss. If currently, the data kept in the office can be damaged by any means. With this system, the data not only is intact, it also can be copied and saved as backup if system crash happens. So the availability of the data is ensured and can be restored at anytime.

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1.6 Expected Output

After this system being developed, it is expected that this system can make the management becomes more efficient. The procedures can be done in a short time and less hassle. The time consume would be less. There would not be a long queue of patient waiting to make a registration.

A patient does not need to take lots of their time for each visit. The usage of this system would make everything paper less. So, the place of storage is not to be bothered anymore as all data are safely stored into the database. The problem of data loss will not happen.

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1.7 Conclusion

This system would be useful for usage at the clinic or hospital. It enhances the old manual system with a computerized one. There is lots of advantage which is helpful in running the clinic's management. The literature review and project methodology of this system will then be explained in the next chapter.

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CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

This section will explain the literature review and the project methodology of the Patient Registration System starting with the introduction, facts and findings, project methodology, project requirements, project schedules and milestones and lastly, the conclusion.

2.1 Introduction

There are a few ways to do a review. That would be by doing researches, collecting data, studying and analyzing sources be it from the web pages, journals or others.

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The existing system need to be studied to figure out the advantage(s), disadvantage(s), and problem(s). These reasons lead to the development of an enhancement of the existing system. Once the researching, collecting and analyzing the sources are done, the next step would be to identify the project methodology as the guidance to accomplish the system by meeting the objectives and scopes that had been stated.

Project methodology is a system development procedure to identify the sets of method, activity and tools to be used to develop and maintain the system. Methodology is a specific way of performing an operation that ensures the user requirements are fully met and implies specifies deliverables at the end of each stage to control the development of the project execution. This part will explain the appropriate methodology that can be used to develop and maintain the system.

Project requirements are the prerequisite that are needed to build the system. There are two which are the software requirements and hardware requirement. To build a system effectively, choosing the right tools to be used are very important. This part will explain the appropriate software application and hardware specification that was to be used to build the system.

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2.2 Fact and findings

In this division, the findings of the Patient Registration System will be explain according to the domain, existing system and technique for searching and collecting sources and analyzing the current system.

2.2.1 Domain

The domain for this project is Healthcare Services because it related to Hospital management process. This application is developed to help the organization raise or measure their productivity. This process consists of storing, retrieving and updating information in database.

2.2.1.1 Hospital

The main domain of Patient Registration System (PRS) is hospital management for the Clinic or Hospitals. The clinic provides its services to the patient and if it is critical, then they would be referred to other hospital or department. The Patient detail need to be record first in order to do that.

The importance of this domain is to make an enhancement from the current system to be more manageable and well used.

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2.2.2 Existing system

To start the progress of the development, references such as on the existing system or similar system can be made. These sources are good to contribute guidance or example in building a new system. The existing system is the Integrated Patient Information System (ISIS) but it is still partly uses the manual paper-based. The needed hardware and software used will be identified if is compatible or suitable with the methods.

2.2.2.1 Paper- based system

The concept of paper-based system can be portrayed as the method of manually records the data in paper form. The staff at the registration counter has to retrieve patient information in files from the office. Then, he or she has to give it to the nurses so that the nurses can write down their observation while screening the patient or patient. Later, after the patient had seen the doctor, he will get a prescription card so he can get his medication from the pharmacy counter. The whole process involves the usage of paper.

Using paper-based system is not very reliable. This is because papers can damage easily and cannot be kept for a very long period. There could be data anomaly because data errors are not easy to be detected. Furthermore, the usage of paper-based system can be seen as 'yesterday' because of the availability of new technology which evolves rapidly around the globe.

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2.2.2.2 Computerized system

The troublesome of using the paper-based system leads to the usage of a computerized system called Integrated Patient Information System (ISIS). This system records all the patient information, their registration, diagnosis, medical leave information, appointments, medical reports, lab test results and statistics report. The information is kept in a digital database instead of the old way which is in files kept at the shelves. The management of the data becomes much simpler and less time consuming.

On the other hand, this system is a stand-alone system. The clerk at the registration counter still has to retrieve the patient's document from the office and gives it to the doctor in charge. The current system also still needs the nurses to write down their screening observation in a paper form.

2.2.3 Technique

To develop a system, it does not depend solely on a precise approach as there are many other alternative techniques that can be applied rather than the specified method. For this project, the technique chosen as an approach to deliver the content of this project are interview and review.

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2.2.3.1 Requirement-Gathering Technique

While in the process of looking for the possible requirements needed, information gathering plays important role to acquire the functional requirements similar to the previous design and implementation of the proposed system. The ways of information-gathering are as listed in the Table 2.1 but not all are listed. The questionnaire technique is not applicable to define the requirement in developing the system. This is because the user for this system only involves the doctors, nurses or staff of the Patient Clinic where the number is quite small gathers information using the questionnaire technique.

The main user of this system would be the doctor and nurse or staff. Interview session is required to gather the needed information. From the interview, the requirement of the system can be identified easily. For example, what data to be kept into the database, how it done and the problems were arises during the usage of the current system. With this questionnaire technique, one can get the information needed directly from the person in charge instead of using a third party view. This technique is more preferred because the information gathered is more precise and concise.

Table 2.1: Requirements-Gathering technique applicable

Requirement-Gathering Technique	**Applicable**
Questionnaire	NO
Research	YES
Interview	YES
Observation	YES

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2.3 Project methodology

There are many types of methodologies in building a system. Each method has its own pros and cons, so the chosen methodology would be the System Development Life-Cycle (SDLC) and Database Life-Cycle (DBLC). This method is adopted in building the proposed system.

2.3.1 System Development Life-Cycle (SDLC)

Systems Development Life Cycle (SDLC), or *Software Development Life Cycle*, in systems engineering and software engineering relates to the process of developing systems, and the models and methodologies, that people use to develop these systems, generally computer or information systems. It is a framework to construct, plan, and monitor the process of developing a system.

Systems Development Life Cycle (SDLC) is a logical process used by the system's analyst to build an information system, including the requirements, validation, training, and user ownership. An SDLC should produce a high quality system that meets or surpasses customer expectations, within time and cost estimates and works effectively and efficiently in the current and planned infrastructure. It should be cheap to maintain and cost-effective to enhance.

There five phases in System Development Life-Cycle. The first phase would be the initiation or planning phase. It is to generate a high level view of the proposed system and to determine the objectives of building the system.

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