ANTIBIOTIC RECORD MANAGEMENT SYSTEM

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BORANG PENGESAHAN STATUS TESIS

JUDUL   : Antibiotic Record Management System

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ANTIBIOTIC RECORD MANGEMENT SYSTEM

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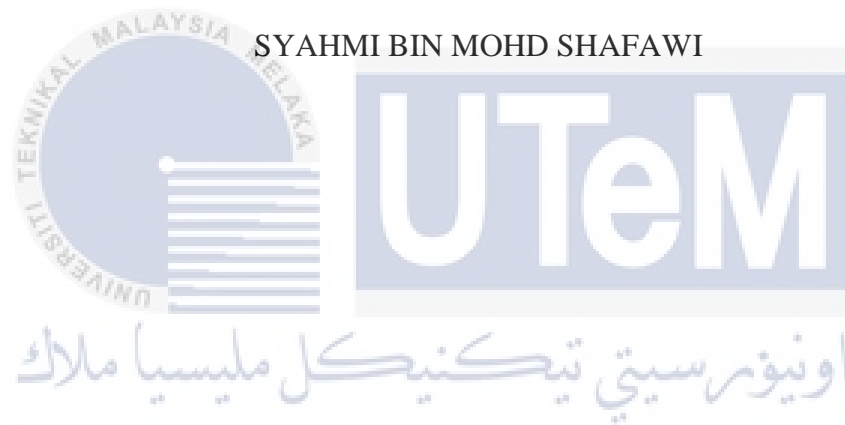
This report is submitted in partial fulfillment of the requirements for the Bachelor of
Computer Science (Database Management)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2016

DECLARATION

I hereby declare that this project report entitled

ANTIBIOTIC RECORD MANAGEMENT SYSTEM

is written by me and is my own effort and that no part has been plagiarized

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STUDENT : _____ Date : 25/8/2016

(SYAHMI BIN MOHD SHAFAWI)

I hereby that I have read this project report and found

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SUPERVISOR : _____ Date : 25/8/2016

(EN YAHYA BIN IBRAHIM)

DEDICATION

To my mother Jemayah Binti Hj Dorani.

To my supervisor, Mr Yahya Bin Ibrahim.

To my friend and family.

ACKNOWLEDGEMENT

Firstly, I would like to express my grateful to the Almighty Allah S.W.T for giving me the opportunity to complete my journey in making the thesis. Without the will of Him it would be impossible to finish the thesis. All of the strength and idea is form Him, He is the true knowledge Owner. Salutations and peace to His beloved messenger; Prophet Muhammad S.A.W.

Beside I would like to express my sincere gratitude to my supervisor Mr Yahya bin Ibrahim who taught me the basic of coding and problem solving, without him programming will be a set of problem but with his full dedication to teach his student, its transform the idea of problem into puzzle in which, there will be solution at every move.

I also want thank to my mother who always supporting me spiritually throughout my final year project, whiteout her prayer I would not be able to stood at where I am now. I also want to thank to my brother in law for giving me the guidance and idea for making the project. His help will not be forgotten.

Last but not least, I would like to thank to all my friend who has helping me directly or indirectly on the Antibiotic Record Management System.

THANK YOU

ABSTRACT

Antibiotic Record Management System is a web-based application that record antibiotic dispensary and faulty prescription that are made by doctor. It replace the traditional system which are using the Microsoft Excel. The purpose of this project is to solve the problem that are happen at the current system. Methodology Software Development Life Cycle (SDLC) used in the development of this project is Agile method. Software involved in the development of this system is WAMP Server, Sublime text editor, Adobe Photoshop CS6 and Oracle database 11G R2.

ABSTRAK

Antibiotic Record Management system adaalah sebuah sistem berasakan aplikasi web dimana diciptakan untuk merekodkan priskripsi ubat yang di keluarkan oleh doctor dan merekodkan prikripsi ubat yang salah. Ia mengantikan sistem yang sedia ada iaitu mengunakan *Microsoft Excell.* Tujuan projek ini dicipta adalah untuk menyelesaikan masalah yang berlaku pada sistem yang sedia ada. *Methodology Software Development Life Cycle (SDLC)* yang digunakan dalam pembangunan projek ini adalah kaedah *Agile*. Perisian yang terlibat dalam pembangunan sistem ini adalah *WAMP server, Sublime text editor, Adobe Photoshop CS6* dan *Oracle database 11G R2.*

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LIST OF ABBREVIATIONS

CPU   -   **Central Processing Unit**

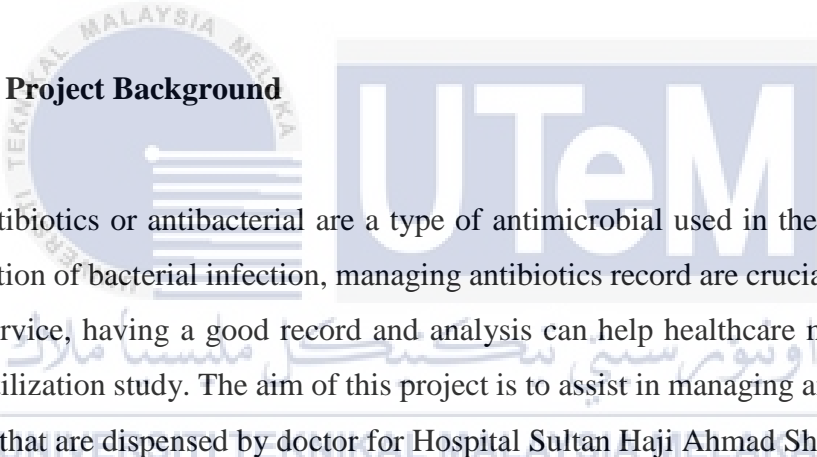**DBMS**   -   **Database Management System**

DFD   -   **Data Flow Diagram**

ERD   -   **Entity Relationship Diagram**

GUI   -   **Graphic User Interface**

RAM   -   **Random Access Memory**

SDLC   -   **System Development Life Cycle**

UTeM   -   **Universiti Teknikal Malaysia Melaka**

CHAPTER I

INTRODUCTION

1.1   Project Background

Antibiotics or antibacterial are a type of antimicrobial used in the treatment and prevention of bacterial infection, managing antibiotics record are crucial to any health care service, having a good record and analysis can help healthcare management in drug utilization study. The aim of this project is to assist in managing antibiotic faulty record that are dispensed by doctor for Hospital Sultan Haji Ahmad Shah (HOSHAS) in emergency department for some drug utilization problem and clinical analysis.

In hospital, all doctor can be working in Emergency Department (ED) but in ED the medicine is limited, just a certain medicine is allowed to be dispensed on ED department, for some case doctor dispense the medicine that are out of ED department care thus making the record of the dispense not existed in the system. Pharmacy had to consult the doctor to change the prescription but the faulty record that doctor had made are not recorded. Doctor also tend to prescribe antibiotic that are exceed the patience dosage. The faulty prescription from doctor should be recorded in order to trace the doctor who always making wrong dosage, this is due to their place of studies uses different medical guideline.

This action need to be recorded and analyse by the management in order to consult the faulty action made by the doctor. The current system that HOSHAS using

for managing antibiotics record are Excel and Drop Box. By using excel data that are writed by multiple drop box user can has concurrent data problem. HOSHAS IT department are also blocking the Drop Box IP due to security problem, thus making it hard to manage the antibiotic usage record.

1.2   Problem Statement

The current system that HOSHAS are being using has a serious problem on concurrent data. Data are being accessed by multiple user within same time can cause the data become inaccurate. Thus resulting the actual data not eligible for analysis. Current system also can't trace back the doctor who prescribe the faulty prescription.

Connectivity problem also become an issue because due to security purpose HOSHAS has blocked the Drop Box internet access making the current system become harder to use. User had to use their mobile internet. Only local closed network are available in the hospital.

Current system of Excel can be a tiresome to handle because of the amount of the data and time taken to process the data. Creating a report is time consuming and if the concurrent data are not fixed the analysed data also not accurate.

Any user that has the access to the Drop Box can alter the data in the Excel. Any deletion and alteration cannot be traced because of the current ways of data handling. This leave the system a big loophole in security.

1.3   Objective

The objective of developing Antibiotic Record Management System are identified based on the review of the problem statement. The purpose is listed below:

i.   **To solve the concurrent data problem**

- The system should be able to handle multiple user update on a single data without any problem.

ii.   **To develop a report generating system**

- Provide the report that are useful to the management of the hospital to ensure faulty medicine prescription can be reduced.

iii.   **To provide a security over the information**

- The system should be accessed by authorized personnel only to keep the data from tempered.

1.4   Scope

The scope that are involved in two part which are divided by module and user. The scope is described as the following:

1.4.1   User Scope

i.   **Admin**

Admin is the pharmacy that have higher clearance level, they can insert update, and delete of a record, they able to view generated report that are provided by the system.

ii.   Data Entry

Data entry is the pharmacy that have lower clearance level, their only job is to key in any faulty record that they encounter. The system will only allow them to see their entry record only.

iii.   Viewer

This mainly used for higher management, they only can use the report system that provided by the system.

1.4.1   Modules Scope

i.   Faulty Record

This module will record any faulty prescription that are made by the doctor, the data that will be recorded is antibiotic name, its strength, packing dose and frequency. This module also will provide report that can trace the doctor who made the prescription and help higher management to do root cause analysis.

ii.   Inventory

This module will help pharmacy to managing their antibiotic stock by providing infrastructure to insert the antibiotic detail with quantity and provide dispensary form. Real time antibiotic stock can be monitored and any running low antibiotic can be quickly restock.

iii.   Login

This Module authenticate the Pharmacy who login to the system. Pharmacy required to insert their Identity card number and password, correct combination is required if not the system will prompt message and redirect to main page. It is important to have secured system in order to protect the data from tempered by any unauthorized user.

1.5   Project Significance

The main beneficial of Antibiotic Record Management System is that it will ease the HOSHAS Emergency Department in managing their antibiotic stock and management can track the faulty prescription that are made by doctor. Error capturing that are provided by the system can help hospital management to take action and reduce faulty prescription that are made by doctor. It is important that patient doesn't taking antibiotic with access dosage. For each faulty prescription, pharmacy will have to contact the doctor and ask them to fix the prescription, this action takes time and reduce the work efficiency. By having this system future faulty prescription can be reduced and work efficiency can be improved.

1.6   Expected Output

The predicted outputs from Antibiotic Record Management System are;

i.   Able to replace the file based system
ii.   Admin should be able to produce report easily
iii.   Accurate data without any concurrency issue
iv.   Provide a secure system to protect he data
v.   Can trace the doctor who made the wrong prescription

1.7   Conclusion

In, conclusion Antibiotic Record Management System need to be develop in order to tackle faulty prescription and should be able to improve the efficiency of Emergency Department by reducing the hassle in correcting the prescription. The system report should be able to monitor the number of faulty prescription and action can be taken for any increasing activity of faulty prescription.

CHAPTER II

PROJECT METHODOLOGY AND PLANNING

2.1 Introduction

In this chapter the methodology is important because it help to estimate the system delivery. Agile methodology was used to develop the system. Agile method will significantly give an advantage to Antibiotic Record Management System because Agile model can produce working product quickly and is considered as very realistic development approach. The model produces ongoing releases with small incremental changes from previous release and at each iteration the product is tested. With agile method defect can be detected and corrected by several iterations. The big advantage using agile is, development can be made within short time and has schedule visibility and produce high reliable system

2.2 Project Methodology

The existing system have a lot of problem and it doesn't operate efficiently. It is important that Antibiotic Record Management System Replace the current system. In order to develop the system there will be a need of methodology that can be a guide. The Database Lifecycle is one of the guide to maintain the database. The Database