UNIVERSITI TEKNOLOGI MARA

ELECTRONIC MEDICAL RECORD WITH NEAR FIELD COMMUNICATION (NFC) AUTHENTICATION AND TELEGRAM BOT REMINDER

MUHAMMAD AIZAT BIN KAMARUDIN

BACHELOR OF COMPUTER SCIENCE (Hons)
DATA COMMUNICATION AND NETWORKING

JANUARY 2018

Universiti Teknologi MARA

ELECTRONIC MEDICAL RECORD WITH NEAR FIELD COMMUNICATION (NFC) AUTHENTICATION AND TELEGRAM BOT REMINDER

MUHAMMAD AIZAT BIN KAMARUDIN

A Thesis submitted in fulfilment of the requirements
for
Bachelor of Computer Science (Hons) Data Communication and Networking
Faculty of Computer and Mathematical Sciences

JANUARY 2018

SUPERVISOR APPROVAL

ELECTRONIC MEDICAL RECORD WITH NEAR FIELD COMMUNICATION (NFC) AUTHENTICATION AND TELEGRAM BOT REMINDER

By

MUHAMMAD AIZAT BIN KAMARUDIN

2015182569

This thesis was prepared under supervision of the project supervisor, Miss Nurul Najwa Binti Abdul Rashid. It was submitted to the Faculty of Computer Science and Mathematical Sciences and was accepted in partial fulfilment of the requirements for the degree of Bachelor of Computer Science (Hons) Data Communication and Networking.

Approve by,

……...

NURUL NAJWA BINTI ABDUL RASHID

Project Supervisor

JANUARY 2018

STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own work and any idea for quotation from the work of other people, published or otherwise are fully acknowledged in the accordance with the standard referring practices of the discipline.

……

MUHAMMAD AIZAT BIN KAMARUDIN

2015182569

JANUARY 2018

ABSTRACT

Some of medical center still using manual method for recording and manage their record. This manual method works by writing the finalized of treatment have been done to the book or a sheet Manual record system is not efficient and brings more disadvantages to the doctor, patient and their clerk. Moreover, it also found that the manual record system has a high vulnerability of personal information stored on it. The findings that has been established has become the basis for the design and development aspect of this project. As this project's aim to build a computerized record system, a Waterfall SDLC approach were used which includes six phases which are planning, analysing, design, development, testing and documentation. This project focuses on the NFC tag authentication with the off-line tag authentication technique while securing personal information stored in the database using Blowfish Encryption technique. Functionality testing has been done in order to test the system functionality and data security in these Electronic Medical Record System. Based on the testing result, it can be concluded that this project has successfully created Electronic Medical Record System prototype and improve the security of the data management in the Electronic Medical Record System. For future recommendation works, this project can be extended further by applying the encryption method to the patient record in order to protect the prevention of leak information inside that record. Lastly, added some features such as patient can receive their own record after finish the treatment for their own references in order to enhance the process understanding what the patient have or will been through. Based on the result of testing, the developed system is very helping clerk in the management of record compared to paper record system which is take a long time and hard to manage.