Universiti Teknologi MARA

System Requirements for Antenatal Clinical Information System

Ruhaizal Bin Mat Taruddin

Thesis submitted in fulfilment of the requirements for Bachelor of Science (Hons.) Information System Engineering
Faculty of Computer and Mathematical Sciences

July 2017

ACKNOWLEDGEMENT

I am grateful to the Almighty for His guidance and blessing throughout my pursuit of the Bachelor Science (Hons.) Information System Engineering. He made this journey possible by granting me the patient, the courage and the strength.

I would like to express my gratitude to my supervisor, Dr. Norjansalika Janom for her advice, guidance, support, encouragement and understanding throughout this final year project endeavour. It has been my privilege to have her as my supervisor. My sincere appreciation goes to Madam Jamaliah Taslim as my lecturer for CSP650 course and to Associate Professor Dr. Wan Adilah Wan Adnan as my examiner, for the knowledge and wisdom that they willing to share with me. This project may have not been possible without their guidance and encouragement.

My gratitude goes to the Universiti Teknologi MARA (UiTM) for giving me the opportunity to pursue my bachelor degree study. Also, thank you to the Faculty of Computer and Mathematical Science management, who help and facilitate me throughout this project.

A special thank you to all the interviewees who have kindly provide their time and effort to participate to this project.

Finally, I would like to thank my wife Murzidah and son Rafa and Ayman, I'm thankful and blessed to have a very strong support system and my source of motivation. Lastly, thank you so much to my family and friends for the love and support.

ABSTRACT

The information system has becoming increasingly important in managing data and record. Making the data and information available in a concise and uniform way is important to the users. The method currently used in Government Health Clinic (Maternal and Child Health Clinic – KKIA) for the data record management is not efficient for users including doctor (medical officer), medical assistant, nurse, and patient (pregnant women) in the procedure of antenatal care. Currently all information being recorded using books, and documents kept in rack. It will lead to time consuming in record keeping and may result in mishandling. Nurses especially need to record same data into two (2) different books. It gives additional workload to the nurses, and at the same time the process takes extra time and delayed next patient check-up's turn. Patient as well need to keep their copy of booklet with them every time of check-up. For that reason, it is significant to have a comprehensive and reliable system in managing antenatal data. This is to ensure the improvement of the workflow efficiency in an organization. This project explores the requirements needed for Antenatal Clinical Information System. It is a crucial and complex parts in any system development project as the requirements have to be right and sufficient according to the users or stakeholders need. Choosing the right techniques for requirements gathering and analysis is very important in determining the effectiveness of the developed system. The objectives of this project are to identify the requirements of Antenatal Clinical Information System in Government Health Clinic (KKIA), and to analyse requirements of Antenatal Clinical Information System. The project used Requirements Engineering (RE) process adapted from Ishaya P. Gambo. This project methodology consists of 5 phases namely; Project Initiation, Problem Identification and Planning, Requirements Elicitation, Requirements Analysis and Specification, and lastly Requirements Validation. The techniques used in Elicitation are interview, and document analysis while the techniques used in Analysis and Specification are Use Case Diagram, Activity Diagram, Sequence Diagram, and Class Diagram by using StarUML as a tool for data modelling. The techniques used in Validation is prototyping. The requirements analysis findings suggested that the system to be developed must consists the functions of Login, Registration Management, Record Management, Appointment Management, View Record, Print Record and Logout. It is recommend for the next stage, the requirements need to be transform into detail design in Software Design Document (SDD), which include Data Design, Architectural Design, and Interface Design.

TABLE OF CONTENTS

CHAPTER THREE: METHODOLOGY