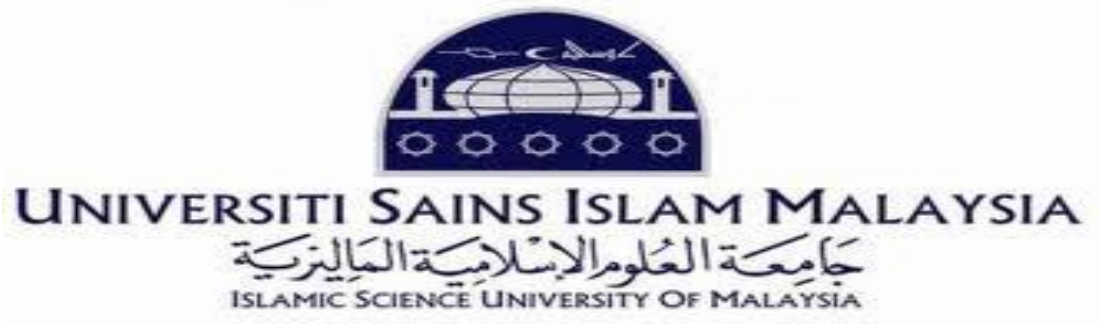

FACULTY OF SCIENCE AND TECHNOLOGY

PROTOTYPE OF SECURED HOSPITAL MANAGEMENT SYSTEM (HMS)

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AUTHOR DECLARATION

I hereby declare that the work in this thesis is my own, except for quotations and summaries which have been duly acknowledged.

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BIODATA

Gumma Abdelsalam Magrisi was born on December 2, 1975 in the Libyan city of Benghazi and has the passport number of 694 532. He was a former student at the College of the Seventh of April Sciences majoring in Technical Electronics and Communications Engineering, and graduated in 1996. Then he joined the Faculty of Computer Science and Technology at the College of the Tenth of March Benghazi in the field of computer science techniques and graduated in 2003. After that, he works at the information centre and medical documentation at the Ministry of Health Libya with the post as software engineer in the management cooperation and training department. He is the member of the International Libyan Centre for Studies and Research of Cyber-crime, starting from the year of 2011 and also member of the Centre of Excellence in Information Assurance. He is currently a student in the Universiti Sains Islam Malaysia (USIM) majoring in computer and specializing in information security and assurance (ISA).

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ABSTRACT

New technologies, including hospital management system spread across the World Wide Web and promises a number of significant benefits. In contrast, the unintended consequences of a serious implementation of these systems have emerged during the exchange of information and data. Poorly designed system and improper use can cause problems related to Electronic Medical Record (EMR) mistakes that endanger the integrity of the information, leading to errors that threaten patient safety or reduce the quality of healthcare. The main objective of this research is to develop a secured hospital management system that implemented various security and privacy techniques with encryption using Triple DES as the main security tool for electronic medical records. There were five steps involved in the research; First, the research started with collection of principle data that have been used in the research from previous studies; Second, pre-test questionnaire was developed and distributed for analysis of system requirements; Third, researcher develop the system using a Visual Web Developer 2010 and Visual Basic.Net scripting language based on Active Server Pages (ASP.NET) technology for the purpose of a prototype development with Triple DES as the main security requirement for the system; Fourth, the system was tested at Khaled Bn Alwalid hospital in Benghazi, Libya; Fifth, pre-test questionnaire was distributed to collect data on effectiveness of the system. Results showed that HMS is highly recommended to be implemented in a hospital for various benefits in term of manipulating, managing, and controlling the electronic medical records.

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