



**UNIVERSITI SAINS ISLAM MALAYSIA**

**جامعة العلوم الإسلامية الماليزية**  
**ISLAMIC SCIENCE UNIVERSITY OF MALAYSIA**

**FACULTY OF SCIENCE AND TECHNOLOGY**

**PROTOTYPE OF SECURED HOSPITAL MANAGEMENT SYSTEM (HMS)**

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE  
MASTER OF SCIENCE (INFORMATION SECURITY AND ASSURANCE)**

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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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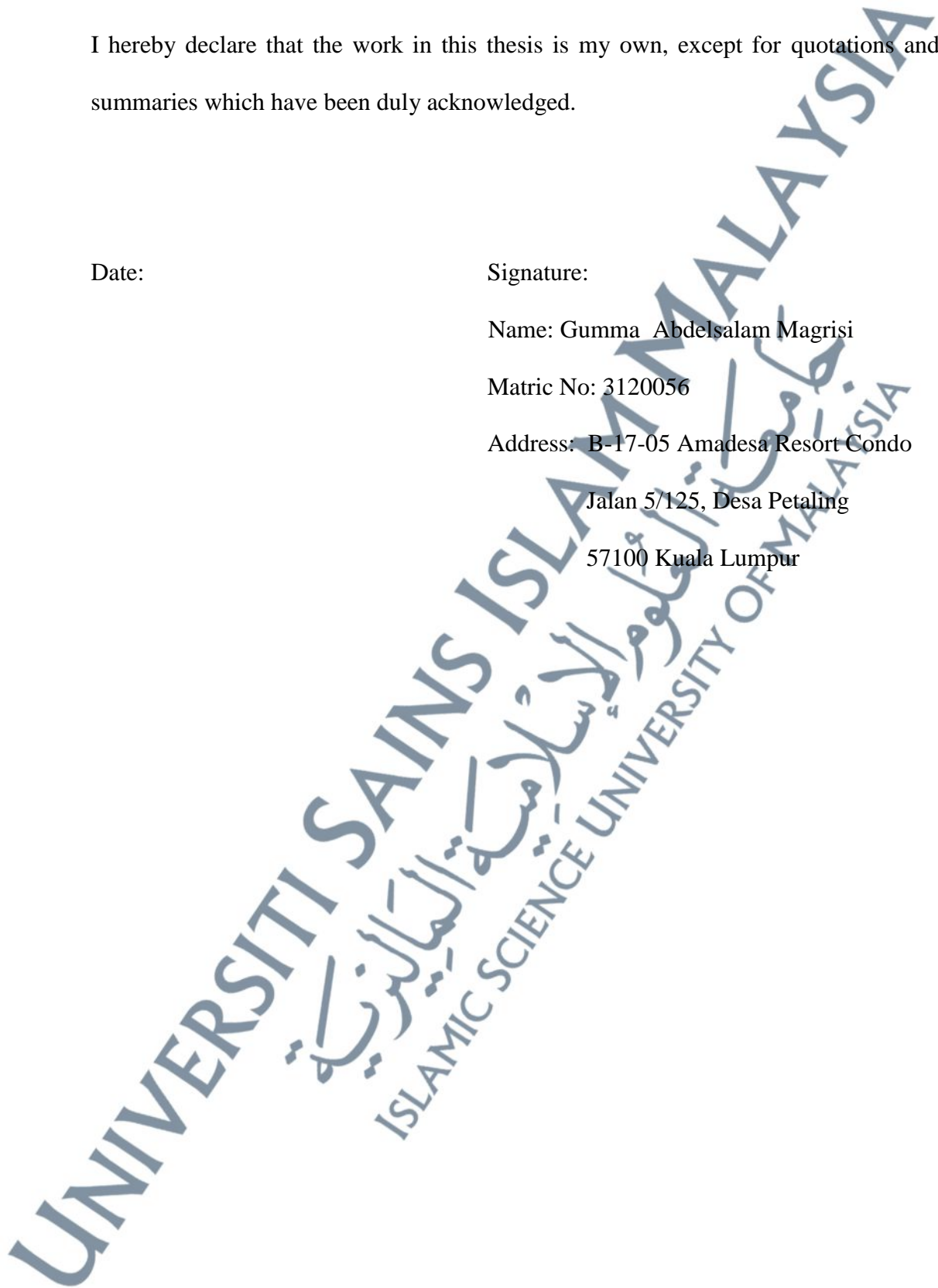
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## BIODATA

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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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