

**UNIVERSITI TEKNOLOGI MARA**

**DEVELOPING A GENERAL SCHEMA OF  
REUSABLE LEARNING OBJECTS FOR LEARNING  
MANAGEMENT SYSTEM**

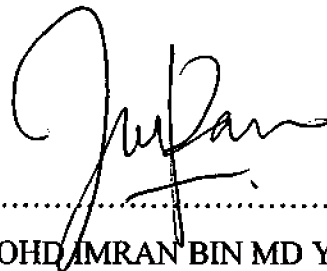
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Thesis submitted in fulfillment of the requirements for  
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**Quantitative Science**

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## DECLARATION

This declaration is to clarify that all of the submitted contents of this thesis are original of my own work excluding those, which have been, admitted specifically in the references. All of the contents of this thesis have been submitted as a part of partial fulfillment of BSc. (Hons.) in Information System Engineering program. I hereby declare that this is work of my own and except for summaries, literature reviews, which have been acknowledged.



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In the name of ALLAH, who is the Most Gracious, Most Merciful and HIM alone is worthy of all praise. To HIM all praise go and to HIM all the thankfulness of giving me the opportunity to live day in and day out.

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## **Abstract**

E-Learning has become more and more popular since the introduction of the World Wide Web. The emergence of a huge number of Learning Management Systems shows that E-learning growing rapidly due to huge support by online and computer users. The number of different Learning Management Systems causes a need to standardize the learning content development in order for the content to be reusable. SCORM standard helps resolve this issue by providing the specification of learning content development that are called as learning objects in SCORM, which is a small chunk digital resource that can be reused to support learning and are represented by a metadata file in XML format using IEEE LOM metadata standards. Problem arises once more as the IEEE LOM standard are too complex and too detail making it hard for content authors to develop a learning object and this issue required an analysis of what are the most general annotation . Thus, this project will address this problem by developing a general schema of a learning object metadata file that can be followed as a guideline in developing a learning object metadata file. Furthermore, this research will also develop a system that uses the schema to automatically generate the metadata file for a learning object. The schema will serve as a guideline for content authors to develop a learning object while the system that will be developed can be used by authors with no metadata building background to create learning object and its metadata file.