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**A GENERIC REQUIREMENT MODEL FOR  
E-LEARNING MANAGEMENT SYSTEM**

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**UNIVERSITI UTARA MALAYSIA**

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**A GENERIC REQUIREMENT MODEL  
FOR E-LEARNING MANAGEMENT SYSTEM**

**A thesis submitted to the College of Arts and Sciences  
in partial fulfillment of the requirements for the degree of  
Master of Science (Information Communication Technology)  
Universiti Utara Malaysia**

**by**

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## **ABSTRACT**

Requirement engineering is one of the important processes that need to be performed completely and accurately. The successful software development is highly depended on the outcome of this process. As we know, the development of electronic Learning Management System (e-LMS) is certainly required to improve and enhance learning environment in an education institution. Therefore, this study aims to propose a generic requirement model for e-LMS. The model can be used as a basis or guideline by the software developers so that the development process will be easier and faster. To achieve the identified goal, “Story Card” technique has been used for requirements collection. The collected requirements are the presented in several for draft of UML diagrams like use case and class diagrams. Additionally, to ensure the practically of the proposed model, this study has transformed the identify requirements into horizontal prototype. The finding of this study has been validated using expert review approach.

## ABSTRAK

Projek tesis ini membentangkan model keperluan umum untuk membangunkan Portal Sistem Pengurusan Pembelajaran (e-LMS). Portal pembelajaran secara atas talian memberi peluang kepada pengguna mencapai bahan pembelajaran secara terus tanpa perlu menghadiri kelas atau bertemu pensyarah. Walau bagaimanapun pengguna perlu memiliki kemudahan capaian ke internet sebelum menggunakan sistem tersebut. Fokus bagi projek ini ialah menyediakan panduan asas untuk pembangun sistem portal pembelajaran supaya tidak perlu lagi menjalankan kajian bagi fasa keperluan pengguna dan fasa analisis keperluan. Oleh itu pembangun sistem boleh terus menjalankan fasa reka bentuk dan pembangunan sistem. Objektif kajian ini ialah untuk mengenal pasti dan menghasilkan model keperluan umum bagi sistem pengurusan pembelajaran secara atas talian. Metodologi yang digunakan untuk kajian adalah menggunakan "*Story Card*" dan "*UML Diagram*" bagi menerangkan keperluan pengguna dan analisis keperluan sistem tersebut. Ujian terhadap model ini dijalankan oleh pakar dalam bidang pembangunan sistem dan pengguna yang mahir dengan portal pendidikan.

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## **LIST OF ABBREVIATION**

<b>e-LMS</b>	<b>e-Learning Management System</b>
<b>XP</b>	<b>eXtreme Programming</b>
<b>ASD</b>	<b>Agile Software Development</b>
<b>MAIS</b>	<b>Matriculation Information System</b>
<b>UML</b>	<b>Unified Modeling Language</b>
<b>PMC</b>	<b>Penang Matriculation College</b>
<b>PhMC</b>	<b>Pahang Matriculation College</b>
<b>CoE</b>	<b>Centre of Excellent</b>
<b>LMS</b>	<b>Learning Management System</b>
<b>MC</b>	<b>Matriculation College</b>
<b>CMS</b>	<b>Course Management System</b>
<b>VLE</b>	<b>Virtual Learning Environment</b>

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Overview**

E-learning is an educational process using ICT infrastructures as a medium to make education independent of the time and location. e-Learning Management System (e-LMS) allow student to download course materials, take online quizzes, submit homework or class work assignment and communicate with learning community members any time and any where when they have connected to Internet (Kakasevski, 2008). In producing an effective e-LMS, developer must completely identify all the requirement, modules and features that need to be included in the system.

Requirement identification is considered as a core activity in software development process. The success and failure of the system is depend on how does the requirement is gathered. A requirement model will provide a complete view of the system (Bennet, 2002). The purpose of this project is to create a generic requirement model for e-LMS. The activities that involved in this are defining requirement, construct requirement and validate requirement

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