

**STUDENT INFORMATION MANAGEMENT SYSTEM:  
A CASE STUDY OF SEKOLAH MENENGAH KEBANGSAAN  
SERI MAHKOTA**

A dissertation submitted in partial fulfilment of the requirements for the awards of the degree Master of Science (Information and Communication Technology) in the Faculty of Information Technology, Universiti Utara Malaysia

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## ABSTRAK

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*Kejayaan pengurusan sesebuah organisasi bergantung kepada maklumat. Maklumat merupakan sumber yang paling penting kepada sesebuah organisasi dan individu. Oleh itu ia perlu diurus bagi menjamin penggunaan yang lebih dengan kos yang efektif. Untuk meningkatkan pencapaian organisasi, pengurusan maklumat mestilah ekonomi, efisien dan efektif. Sistem maklumat dan organisasi mempunyai hubungkait antara satu sama lain. Penggunaan sistem maklumat pengurusan (MIS) mengarah kepada perancangan, membuat keputusan dan penghasilan yang lebih baik. Kajian ini dibuat untuk menghasilkan satu prototaip Sistem Pengurusan Maklumat Pelajar Untuk Sekolah Menengah Kebangsaan Seri Mahkota berasaskan web. Pembangunan prototaip ini diharapkan dapat menggantikan kaedah tradisional dalam pengurusan maklumat pelajar, yang mana cara tradisional ini memberi beban kerja kepada guru dan juga pihak pentadbir sekolah. Prototaip ini dibangunkan sebagai satu prototaip yang boleh digunakan dan boleh dipertingkatkan di masa depan. Pembangunan prototaip ini direkabentuk dengan menggunakan kaedah Kitaran Hayat Pembangunan Pengkalan Data (DBALC).*

## ABSTRACT

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*Every aspect of management relies on information to succeed. Information has become a critical resource to organisations and individuals and should be properly managed to ensure its cost effective use. To improve the performance of the organisation, the management must be economical, efficient and effective. Information systems and organisations have been highly interconnected with each other. The development and the use of an information management system (MIS) leads to better planning, better decision-making and better results. This study was carried out in order to produce a prototype for Sekolah Menengah Kebangsaan Seri Mahkota Student Information Management System (SeriSPMP). The development of the web-based prototype would be able to replace the traditional way of managing student information, where this traditional way places a heavy burden on the teachers and school administrators. This prototype was developed as a working prototype where it can be enhanced in the future. The system development was designed using the Database Application Life Cycle (DBALC) approach.*

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## LIST OF ABBREVIATIONS

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CFML	ColdFusion Markup Language
DBALC	Database Application Life Cycle
DBMS	Database Management System
DDL	Data Definition Language
DML	Data Manipulation Language
ERD	Entity Relation Diagram
HTML	HyperText Markup Language
HTTP	HyperText Transfer Protocol
ICT	Information and Communication Technology
IIS	Internet Information Services
IS	Information System
J2EE	Java 2 Platform, Enterprise Edition
MIS	Management Information System
RDBMS	Rational Database Management System
SDLC	System Development Life Cycle
SeriSPMP	Sekolah Menengah Kebangsaan Seri Mahkota Student Information Management System
SMKSM	Sekolah Menengah Kebangsaan Seri Mahkota, Kuantan, Pahang
SMS	School Management System
XML	Extensible Markup Language

## CHAPTER 1

### INTRODUCTION

#### 1.1 Overview

With the increasing demands of the information age, computer technology plays an important role in education. The Malaysian Ministry of Education realises the importance of computer technology. Therefore, one of the main focused goals in the Education Development Plan 2001 - 2010 is the development of ICT in education. The development of ICT in education in the next 10 years includes upgrading the ICT infrastructure, widening the equity and access to ICT facilities, enhancing the assessment system using ICT, and using ICT in education management.

A computer is a powerful tool because of its ability to perform information processing cycles and its capability to store huge amounts of data, instructions, and information. The computer becomes more powerful when it is used with the internet. The internet is the world's largest network that links together millions of businesses, government offices, educational institutions and individuals. The World Wide Web is the most popular and powerful network information system of host computers that provides on-line information in a specific hypertext format. The web can be considered to be a very large semi-structured database that holds a vast amount of useful information.

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