


**INTEGRATION OF STUDENT INFORMATION DATA
USING XML**

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**INTEGRATION OF STUDENT INFORMATION DATA
USING XML**

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

By

Mohd Amar Maarof bin Ahmad



**KOLEJ SASTERA DAN SAINS
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ABSTRAK (BAHASA MELAYU)

Sekolah-sekolah di Malaysia telah dibekalkan dengan beberapa sistem untuk meningkatkan lagi keupayaan pengurusan data pelajar di dalam persekitaran sekolah. Sistem-sistem berkenan telah banyak memudahkan kerja-kerja para guru yang sentiasa dibebani dengan kerja-kerja di sekolah. Kajian ini dibuat bagi menghasilkan model integrasi data bagi semua sistem maklumat yang berkaitan dengan pelajar dengan menggunakan XML. Tiga fasa utama dalam kajian ini ialah analisa dan pemodelan, pembangunan prototaip dan pengujian. Model integrasi data tersebut berjaya dihasilkan. Prototaip telah dibangunkan berasaskan model tersebut. Akhirnya prototaip tersebut telah menjalani pengujian dan keputusannya sangat memberangsangkan. Beberapa cadangan telah disyorkan untuk kajian yang lebih lanjut pada masa akan datang.

ABSTRACT

Schools in Malaysia have been provided with few systems to increase their capabilities to manage student data in the schools environment. With so many workloads that teachers have to face, those systems really give a relief to the teachers. This study was carried out to formulate the integration model of student information data using XML. There are three main phases involved in the study which are analysis and modeling, prototype development and testing. Upon completion, models of data integration were formulated and prototype was developed based on the model. Finally the prototypes were tested and the results are promising. There are some recommendations also for future work.

ACKNOWLEDGMENTS

In the name of ALLAH, The Most Beneficent, The Merciful

I am thankful to Allah for granting me the strength to complete this project. I received lot of encouragement and support from many individuals.

I would like to express my heartfelt thanks to my supervisor, Mr. Nurnasran bin Puteh for his guidance and full support. I thank him for the assistance, inspiration and motivation to overcome the difficulties in completing the project. Also my gratitude goes to evaluator Madam Nur Fadziana binti Faisal Mohamed and Associate Professor Abdul Bashah bin Mat Ali for the valuable and constructive comments. To all the people in Sekolah Menengah Kebangsaan Padang Siding, Arau, Perlis, thank you for your cooperation.

It would not been possible for me to complete the program and this project without the support from my family. First and foremost, my gratitude goes to my loving wife, Nurhashila binti Abdul Rahman. To my daughter, Auni Balqis, thank you for understanding your father's life long passion for learning. To my father and mother, thank you for your pray, support and love.

Finally, I would like to thank other lecturers, librarians, course mates and friends who have in some way or other given me encouragement, motivation and assistance throughout the journey of completing this writing.

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LIST OF ABBREVIATIONS

DTD	Document Type Definition
HTML	HyperText Markup Language
IC	Identity Card
IE	Internet Explorer
IT	Information Technology
LAN	Local Area Network
MOE	Ministry of Education
PC	Personal Computer
SSDM	Sistem Sahsiah Disiplin Pelajar
SISTEK	Sistem Pinjaman Buku Teks
SMM	Sistem Maklumat Murid
USM	Universiti Sains Malaysia
VBA	Visual Basic Application
W3C	World Wide Web Consortium
XML	Extended Markup Language
XSL	Extended Stylesheet Language
XSLT	Extended Stylesheet Language Transformation

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CHAPTER ONE

INTRODUCTION

Information Technology is really helping teachers nowadays in their routine works. It makes things easier, faster and systematic. So teachers nowadays have to increase their knowledge in Information Communication technology (ICT) literacy to improve their teaching in class and also in managing student information system.

In Malaysia, managing student information has changed significantly. Previously teachers have to record all students' data in 101 card and 102 card manually. Lots of writing processes were involved to fill in both the cards. Now teachers only need to key in the data in the 'Sistem Maklumat Murid' (SMM), print out and keep them in the students files. SMM is a student information system developed by Mr.Md Yusoff Alaudin and Mr. Amat Sazali Abu Hassan from the Penang Education Department. This system has been accepted by Ministry Of Education to use by all schools in Malaysia since 2003.

In the process of borrowing text books, previously teachers need to fill in G Form with students names, tick the books they had borrowed and sign the form. Now with Sistem Pinjaman Buku Teks (SISTEK), using bar code reader, all the books need to be scanned and the system will record the books borrowed by the students. So the process becomes faster and more effective then before. SISTEK was developed by the Textbook Division under MOE. This system has been tested for the first time in

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