

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF AN ONLINE REPORT
CARD SYSTEM (ORCS) USING CLUSTERING
INDEX TECHNIQUE**

SITI HASMAH BINTI ISMAIL

Thesis submitted in fulfillment of the requirements for
Bachelor of Science (Hons.) Information System Engineering
Faculty of Information Technology and
Quantitative Science

November 2008

ACKNOWLEDGEMENT

Bismillahirrahmanirahim, in the Name of ALLAH, The Most Majestic and The Most Judicious. Alhamdulillah, I am really grateful to Allah S.W.T for giving me strength and opportunity to complete my final year project as a fulfillment of the requirements for the course ITS 690 (IT Project). I would like to acknowledge people who are involve for giving helps and supports throughout my research.

First of all, I would like to express my special thank to my supervisor, Madam Nalini Dharmarajan for his support, patient, advice, guide and willingness to help. Your helps, advices, and thoughts are greatly appreciated.

Secondly, I want to thank to my lecturers who are teaching me for course ITS 675 (Knowledge Integration III) and ITS 690 (IT Project), thank you so much for their helps, lessons and supports during my research project, ProfMadya. Aishah Ahmad @ Abd Mutalib, Mdm. Wan Nor Amalina Wan Hariri, ProfMadya. Rashidah Rawi and Mdm. Jamaliah Taslim. I am really respected them with their great knowledge and experience.

Next, to my family, thank a lot especially to my mom and dad for encouraging through the difficult times, supported when needed, and believed in me throughout my research. Thank you also to all my friends who are helping me during my research project until it has completed. Thank you so much for sharing the idea and thought.

Lastly, thank you again to them who are involve for giving help and cooperation in order to meet my research goals.

ABSTRACT

The teachers at Sekolah Kebangsaan Seksyen 7, Shah Alam are using a report card system to key in examination data. But the system is stand alone system. The reports still need printed out for the parent's information. All students' examination results are kept in difference file based on their class. In order for parents to monitor the children's academic progress, and their social development and also for the teachers to key in the student's data like examination results, assignments and tests mark and also about social behavior, the development of an online report card is necessary. Online Report Card System is a system to manage and monitor the student's academic performance and also their social behavior. The clustering index technique in data organization for the database has been implemented in the Online Report Card System, since it has been improved the storage and retrieval of data. This technique can give benefits in increasing performance of query to search for range of data. Thus, the effective use of online report card could possibly improve the way for report card management and the way for parent monitoring their child's.

TABLE OF CONTENTS

APPROVAL.....	ii
DECLARATION.....	iii
ACKNOWLEDGEMENT.....	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
LIST OF APPENDICES.....	xii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Research Background.....	1
1.3 Problem Statement.....	3
1.4 Research Objectives.....	3
1.5 Research Scope.....	4
1.6 Significance of Research.....	4
1.7 Conclusion.....	5
CHAPTER TWO: LITERATURE REVIEW.....	6
2.1 Introduction.....	6
2.2 Report Card System.....	6
2.3 Advantages of an Online Report Card System.....	10
2.4 Limitation of Using Microsoft Excel.....	12
2.5 Clustering Index.....	13
2.6 Difference between Clustered Index and Non-Clustered Index.....	14
2.6.1 Advantages of Clustered Index.....	17
2.7 Query Analyzer.....	19
2.7.1 Function of Query Optimizer.....	22
2.7.2 Analyzing an Execution Plan.....	24
2.8 Microsoft SQL Server (MSSOL).....	26
2.9 Active Server Page (ASP).NET.....	26
2.10 Conclusion.....	26

CHAPTER THREE: METHODOLOGY	29
3.1 Introduction.....	29
3.2 Problem Identification and Planning.....	30
3.3 Requirement Gathering.....	30
3.4 Requirement Analysis.....	30
3.5 Design Analysis.....	32
3.6 Development and Testing.....	32
3.7 Software Specifications.....	33
3.8 Hardware requirement.....	34
3.9 Conclusion.....	34
CHAPTER FOUR: CONSTRUCTION	35
4.1 Introduction.....	35
4.2 Hardware and Software Requirements.....	35
4.2.1 Hardware Requirements.....	35
4.3 Requirements Analysis.....	36
4.4 Design Phase.....	37
4.4.1 System Design.....	38
4.4.2 Detailed Design.....	39
4.4.3 Develop Phase.....	40
4.5 Interfaces Design of Online Report Card System.....	46
4.5.1 User Login Page.....	46
4.5.2 Register Account Page.....	46
4.5.3 Maintain Student Information Page for Teacher.....	47
4.5.4 Search Student Page for Teacher.....	49
4.5.5 Manage Examination Result Page for Teacher.....	49
4.5.6 Maintain Class Information Page for Teacher.....	50
4.5.7 View Student Page for Parent.....	52
4.5.8 View Examination Result Page for Parent.....	53
4.5.9 Maintain Profile Page for Parent.....	54
4.6 Conclusion.....	55
CHAPTER FIVE: RESULTS AND FINDINGS	56
5.1 Introduction.....	56