

CONTENTS

APPROVAL	ii
SELF DECLARATION AGAINST PLAGIARISM	iii
ABSTRACT	iv
ABSTRAK	v
DEDICATION	vi
ACKNOWLEDGMENTS	vii
CONTENTS	viii
LIST OF TABLES	x
LIST OF FIGURES	xi
1 INDTRIBUTION	1
1.1 Rationale	1
1.2 Theoretical Framework	2
1.3 Conceptual Framework	2
1.4 Statement of the Problem	3
1.5 Objective and Hypotheses	5
1.6 Scope and Delimitation	5
1.7 Significance of the Study	5
2 REVIEW OF LITERATURE AND STUDIES	6
2.1 Related Literatures	6
2.1.1 Handwritten Character Recognition	6
2.2 Related Studies	8
2.2.1 Hierarchical Classification	8
2.2.2 Line Simplification	9
3 RESEARCH METHODOLOGY	11
3.1 System Design	11
3.2 Graph Representation	12
3.3 Hierarchical Graph Matching	13
3.3.1 Structural Property of Sub Graph	14
3.3.2 Class Hierarchy	16

3.3.3	Graph Similarity	17
4	EXPERIMENT AND ANALYSIS	19
4.1	Experiment Design	19
4.1.1	Data Specification	19
4.1.2	Performance Metrics	19
4.1.3	Data Validation	20
4.1.4	Experiment Scenario	22
4.2	Experiment Result and Analysis	23
4.2.1	Experiment Result on Validated CEDAR Database	23
4.2.2	Experiment Result on Default CEDAR Database	25
4.2.3	Performance Comparison with Earlier Works	27
5	CONCLUSION AND RECOMMENDATIONS	29
5.1	Conclusions	29
5.2	Recommendations	29
	BIBLIOGRAPHY	30
	Appendices	31
	A Confusion Matrices	33
	B Invalid Test Sample Recognition Result	37
	C Curriculum Vitae	39