



PROJECT REPORT

**Improving the efficiency of storage space
compression method based on
Markov Algorithm and
Improving the efficiency of time based on
Shift Or Algorithm**

Nicomedis Yossie Rinawan

07.02.0076

2010

FACULTY OF COMPUTER SCIENCE

SOEGIJAPRANATA CATHOLIC UNIVERSITY

Jl. Pawiyatan Luhur IV/1, Bendan Duwur, SEMARANG 50234

Phone. 024-8441555 (hunting) Web: <http://www.unika.ac.id>

Email: ikom@unika.ac.id

APPROVAL AND RATIFICATION PAGE

PROJECT REPORT

Improving the efficiency of storage space compression method based on Markov Algorithm and Improving the efficiency of time based on Shift Or Algorithm

This Project Report has been approved and ratified by Dean of Computer
Science Faculty on

With the approval,

Examiner,

Examiner,

Suyanto EA, Ir, M.Sc
NIP: 058.1.1992.116

Robertus Setiawan Aji, ST, M Comp IT
NIP: 058.1.2004.264

Examiner,

Examiner,

Gregorius Hendita Artha Kusuma, S.Si.M.
NIP: 058.1.2008.277

Rosita Herawati, ST, MIT
NIP: 058.1.2004.263

Supervisor,

Dean of
Faculty of Computer Science,

Marlon Leong, S.Kom, M.Kom
NIP: 058.1.2007.273

Marlon Leong, S.Kom, M.Kom
NIP: 058.1.2007.273

STATEMENT OF ORIGINALITY

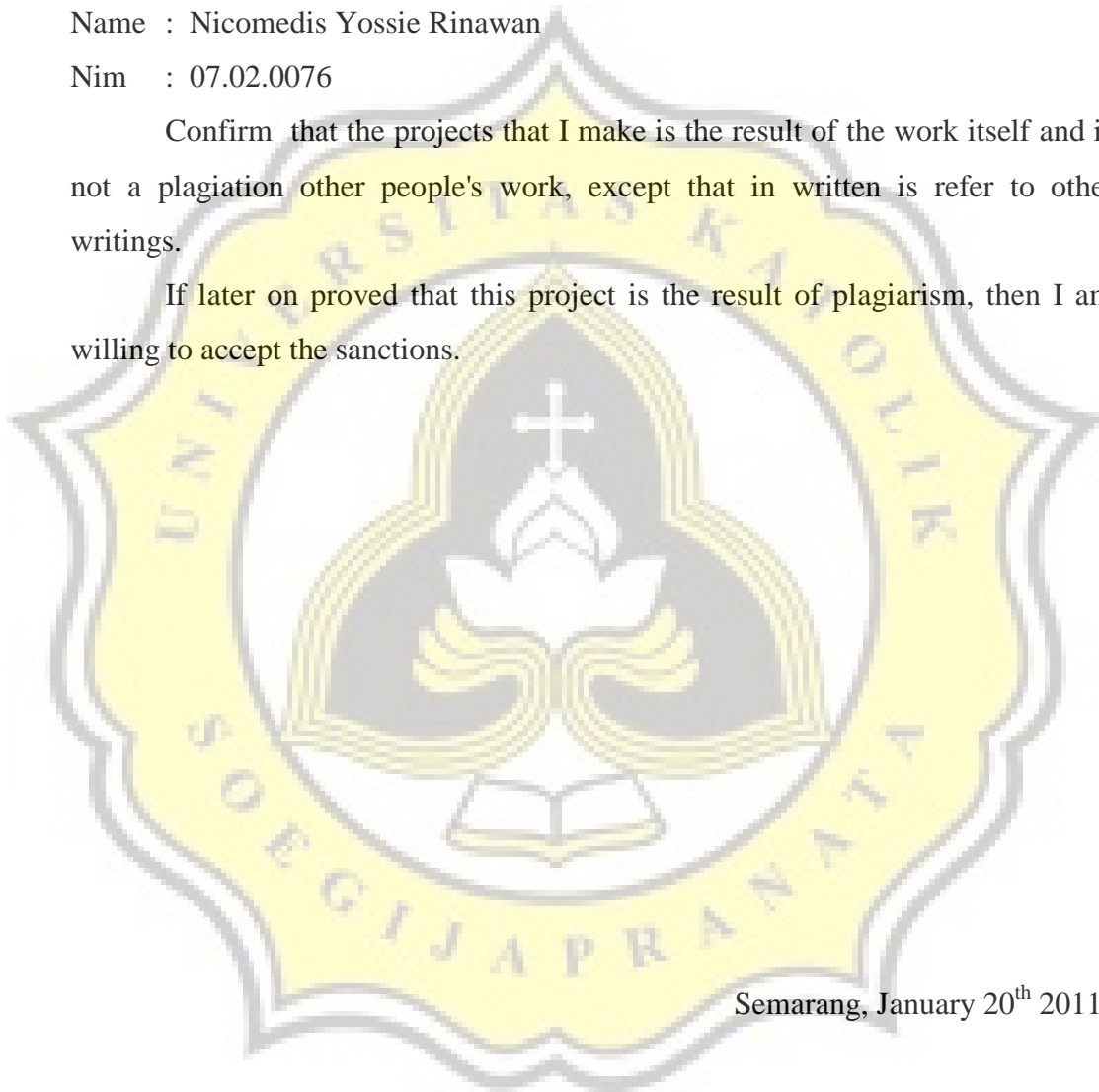
Here with, I

Name : Nicomedis Yossie Rinawan

Nim : 07.02.0076

Confirm that the projects that I make is the result of the work itself and is not a plagiation other people's work, except that in written is refer to other writings.

If later on proved that this project is the result of plagiarism, then I am willing to accept the sanctions.



Semarang, January 20th 2011

Nicomedis Yossie Rinawan
07.02.0076

ABSTRACT

Text Editor is application to open, save, and read a file. A Text Editor has ability to edit a file which can be save to same or diferent ekstention. Quality of text editor can be shown from text editor feature.

Compression of data and increase data searches are 2 ways to improve quality of the text editor. Use of the algorithm is best choice to improve quality. The results obtained will also be more effective and efficient. Two algorithms that can help to improve the quality of the Markov algorithm and Algorithm Shift Or.

Markov algorithm can reduce the size of space a file. And Shift Or algorithm can improve the efficiency of time in search word in a text. Combination of two algorithms are expected to improve the quality of a text editor would be more effective and efficient.

Keyword : *string matching, shift or algorithm, markov algorithm, compression, texteditor.*

FOREWORD

Praise and gratitude to God Almighty for His blessings and mercy so that the preparation of Project report titled " IMPROVING THE EFFICIENCY OF STORAGE SPACE COMPRESSION METHOD BASED ON MARKOV ALGORITHM AND IMPROVING THE EFFICIENCY OF TIME BASED ON SHIFT OR ALGORITHM " can be resolved properly.

In the implementation of the Project until compiled this report, the writer got a lot of help and support both morally and materially from various parties. Therefore, to thank you and appreciation goes to :

1. God who always accompany and guide each step I take.
2. The beloved Dad dan Mom who always support me all the times.
3. My Sister (Shinta) who always keep encourage and support whenever I need.
4. My Grand Mother who always support me.
5. Mr Marlon Leong, S. Kom, M. Kom as Dean of the Faculty of Computer Science Soegijapranata Catholic University, as well as Project Supervisor who has provided much so that writer can finish the project well.
6. All Lecturers of the Faculty of Computer Science, laboratory staff, and the TU that has helped up to the author can complete her education at Soegijapranata Catholic University, Semarang.
7. My friends Arhika, Vero, Bagas, Temmy, Purba, Nindy, Aurel, Didimus, Doni, Tika, Iya, Imelda, Fani, Beni, Bayu, Galuh, Pamungkas, Andeas N., Herman, Andreas Y, Ryco, Tanto, Harmoko, Lutfi, Edi, Dinda ,Yon , other ikom friends, and other my friend that always accompany, entertain and support.

This Project report is far away from "perfect", therefore the writer need the criticism and suggestions. Finally, the writer hope that this Project Report can give benefit for fellow students and everyone.

Semarang, January 20th 2010

Nicomedis Yossie Rinawan
07.02.0076

Table of Contents

APPROVAL AND RATIFICATION PAGE.....	ii
STATEMENT OF ORIGINALITY	iii
ABSTRACT.....	iv
FOREWORD	v
Table of Contents	vi
Table of Figure.....	viii
Table of Tables.....	ix
CHAPTER I INTRODUCTION	
1.1 Background.....	1
1.2 Scope	2
1.3 Objective.....	2
CHAPTER II LITERATUR STUDY	
2.1 Markov Algorithm.....	3
2.2 Shift Or Algorithm	5
2.3 Array List.....	7
2.4 Double Linked List.....	9
2.5 Tree.....	9
2.6 Implementation of Data Struct Markov Algorithm	10
2.7 Implementation of Data Struct Shift Or Algorithm	17
2.8 Implementation Hash Table	21
CHAPTER III PLANNING	
3.1 Research Methodologies	24
3.2 Project Management.....	25
CHAPTER IV ANALYSIS AND DESIGN	
4.1 Analysis.....	27
4.1.1 Use Case	27
4.2 Design.....	28
4.2.1 Class Diagram.....	28

CHAPTER V IMPLEMENTATION AND TESTING

5.1 Implementation.....40
5.1.1 Shift Or Algorithm40
5.1.2 Markov Algorithm44
5.2 Testing46

CHAPTER VI CONCLUSION AND FURTHER RESEARCH

6.1 Conclusion.....53
6.2 Further Research.....53
REFERENCES.....54

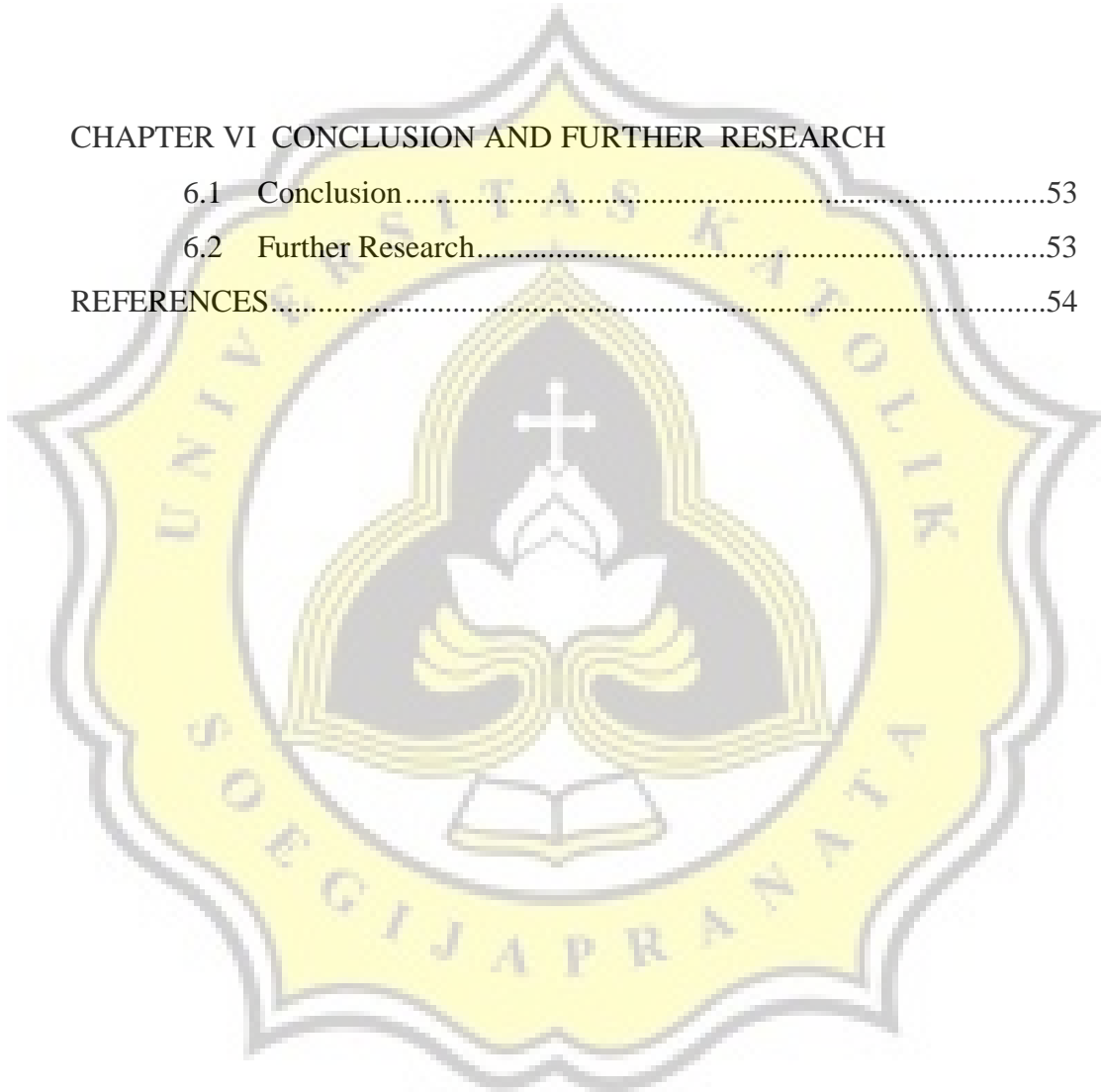


Table of Figures

Figure 2.3.1	Array List	8
Figure 2.3.2	Example application of array list	8
Figure 2.4.1	Illustration of double link list	9
Figure 2.5.1	Illustration of Tree	10
Figure 2.6.1	Link List of dictionary	13
Figure 2.6.2	Tree of text	14
Figure 2.6.3	Link List of dictionary	16
Figure 2.6.4	Tree of text	16
Figure 2.7.1	Link list of result	20
Figure 2.7.2	Link List of dictionary	21
Figure 4.1.1.1	Use case diagram	27
Figure 4.2.1.1	Full of class diagram	39
Figure 5.2.1	Text Editor Application	46
Figure 5.2.2	File menuText Editor Application	46
Figure 5.2.3	Blank document	47
Figure 5.2.4	Write text	47
Figure 5.2.5	Save	48
Figure 5.2.6	Alert of save document	48
Figure 5.2.7	Searching pattern	49
Figure 5.2.8	Block word of result of searching	49
Figure 5.2.9	Prosses save document in ntd extention	50
Figure 5.2.10	Manual user	51
Figure 5.2.11	Comparation txt with ntd	51
Figure 5.2.12	Structure menu of text editor application	52

Table of Tables

Table 2.7.1	Shift And table	19
Table 2.7.2	Management of project	25
Table 4.2.1.1	Aplikasi Class	28
Table 4.2.1.2	Searching Class.....	30
Table 4.2.1.3	Markov Class	31
Table 4.2.1.4	Shift Or Class.....	31
Table 4.2.1.5	Nodeku Class.....	32
Table 4.2.1.6	Link List Class.....	33
Table 4.2.1.7	NodeCr Class.....	33
Table 4.2.1.8	LinkListCr Class.....	33
Table 4.2.1.9	NodeHasil Class	34
Table 4.2.1.10	LinkListHasil Class	34
Table 4.2.1.11	Read Class	35
Table 4.2.1.12	Node Class.....	35
Table 4.2.1.13	Tree Class	36
Table 4.2.1.14	NodeMarkov Class	37
Table 4.2.1.15	LinkListMarkonv Class	37
Table 4.2.1.16	Hash Table Class	38