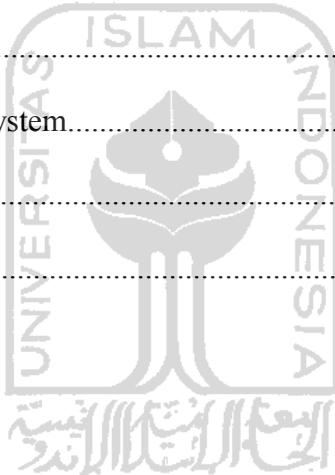


TABLE OF CONTENT

COVER.....	i
THESIS SUPERVISOR APPROVAL.....	ii
THESIS EXAMINER APPROVAL.....	iii
AUTHENTICITY STATEMENT.....	iv
DEDICATION PAGE	v
MOTTO.....	vi
ACKNOWLEDGEMENT.....	vii
ABSTRACT.....	ix
TABLE OF CONTENT.....	x
LIST OF TABLE.....	xiii
LIST OF FIGURE.....	xiv
CHAPTER I INTRODUCTION	
1.1 Background.....	1
1.2 Problem Formulation.....	3
1.3 Problem Boundary.....	3
1.4 Research Purpose.....	3
1.5 Research Benefits.....	4
1.6 Writing Systematic.....	4
CHAPTER II LITERATURE REVIEW	
2.1. Theoretical Review.....	6
2.1.1 Smart Phone Communication.....	6
2.1.2 Fuzzy Associative Memory.....	7
2.1.3 Genetic Algorithm.....	12
2.1.4 Fuzzy Associative Memory in Decision Support System.....	15
2.2. Previous Research.....	15

CHAPTER III RESEARCH METHODOLOGY

3.1	Research Object.....	17
3.2	Data Collection.....	17
3.2.1	Data Requirement.....	17
3.3	Research Flowchart.....	20
3.4.1	Problem Identification.....	21
3.4.2	Problem Formulation.....	21
3.4.3	Object Identification.....	21
3.4.4	Literature Review.....	21
3.4.5	Development of FAM System.....	22
3.4.6	Testing.....	22
3.4.7	Analysis.....	22



CHAPTER IV DATA COLLECTION, AND ERP SYSTEM DEVELOPMENT

4.1	Data Collection.....	23
4.1.1	Linguistic Variables and Smart Phone Specification.....	23
4.2	System Development.....	25
4.2.1	Smart Phone Fuzzy Set and Non Fuzzy Set.....	25
4.2.2	Smart Phones Rules.....	30
4.2.3	Vector Functional Requirement an Constraint.....	34

CHAPTER V DISCUSSION

5.1	Developed FAM System for Smart Phone.....	47
5.2	Genetic Algorithm.....	48
5.3	Testing.....	49

CHAPTER VI CONCLUSION AND SUGGESTIONS

6.1	Conclusion.....	50
6.2	Suggestion.....	50

REFERENCES

APPENDICES



LIST OF TABLE

Table 4.1	Smart Phone Database Blackberry.....	24
Table 4.2	Smart Phone Database Samsung.....	24
Table 4.3	Smart Phone Database Nokia.....	25
Table 4.4	Non-Fuzzy Set Attributes.....	26
Table 4.5	Domain Non-Fuzzy Set.....	26
Table 4.6	Functional Requirement.....	34
Table 4.7	Constraint.....	35
Table 4.8	Input and Output.....	35
Table 4.9	b Matrix.....	38
Table 4.10	Result before Optimization.....	40
Table 4.11	A value after Optimization.....	41
Table 4.12	Result after Optimization.....	42
Table 5.1	Validation system.....	49



LIST OF FIGURE

Figure 2.1	FAM Architecture System (Kosko,1992).....	10
Figure 2.2	General Structure of Genetic Algorithm (Gen and Chang,1997).....	13
Figure 3.1	Research Flowchart.....	20
Figure 4.1	Length Fuzzy Set.....	27
Figure 4.2	Width Fuzzy Set.....	28
Figure 4.3	Thickness Fuzzy Set.....	28
Figure 4.4	Weight Fuzzy Set.....	29
Figure 4.5	Price Fuzzy Set.....	29
Figure 4.6	Contrasts Fuzzy Set.....	30
Figure 4.7	Proposed Chromosome.....	43
Figure 4.8	One-cut point Crossover.....	44
Figure 4.9	Reciprocal Exchange Mutation.....	45
Figure 4.10	Final Population.....	45
Figure 4.11	History Graph.....	46