

## TABLE OF CONTENT

BACHELOR THESIS.....	1
APPROVAL PAGE .....	iii
STATEMENT .....	iv
DEDICATION PAGE.....	v
FOREWORD.....	vi
ABBREVIATIONS AND ACRONYMS .....	vii
TABLE OF CONTENT .....	viii
LIST OF FIGURES .....	x
LIST OF TABLES.....	xii
ABSTRACT .....	xiv
CHAPTER I. INTRODUCTION .....	1
1.1 Background.....	1
1.2 Research Problem.....	2
1.3 Problem Limitation .....	2
1.4 Objective.....	3
1.5 Thesis Organization.....	3
CHAPTER II. LITERATURE REVIEW.....	4
CHAPTER III. BASIC THEORY .....	7
3.1 Decision Support System.....	7
3.2 Simple Additive Weighting (SAW) .....	8
3.3 Geographic Information System (GIS) .....	9
3.3.1 Google Map API.....	10
3.3.2 Haversine Formula .....	11
3.4 Climate Effect on Livestock Production .....	11
3.4.1 Temperature .....	12
3.4.2 Humidity .....	12
3.4.3 Altitude .....	13
3.4.4 Fodder Condition.....	13
3.4.5 Water Condition .....	13
3.4.6 Access/Mobility.....	13
3.5 Animal Comfort Zone .....	14
CHAPTER IV. ANALYSIS AND DESIGN .....	15
4.1 Parameter and Criteria .....	15
4.2 Weight Determining Process .....	19
4.3 Simple Additive Weighting .....	20
4.4 Entity Relationship Diagram (ERD) .....	23

4.5	Block Diagram .....	29
4.5.1	Flowchart .....	30
4.6	User Interface Design .....	40
4.7	Testing Method .....	46
CHAPTER V. IMPLEMENTATION .....		47
5.1	System Implementation .....	47
5.1.1	Hardware and Software Specifications .....	47
5.1.2	Data Input Process .....	47
5.1.3	Main process .....	54
CHAPTER VI. TESTING AND DISCUSSION .....		70
6.1	Testing location with same regency .....	72
6.1.1	Kulon Progo regency .....	72
6.1.2	Bantul Regency .....	81
6.1.3	Gunung Kidul regency .....	88
6.1.4	Sleman regency .....	94
6.2	Take one location from each regency .....	101
CHAPTER VII. CONCLUSION AND FUTURE WORKS .....		106
7.1	Conclusion .....	106
7.2	Future Work .....	106
BIBLIOGRAPHY .....		107
APPENDICES .....		109