

## TABLE OF CONTENT

<u>COVER.....</u>	<u>i</u>
<u>AUTHENTICITY STATEMENT.....</u>	<u>ii</u>
<u>THESIS APPROVAL OF SUPERVISOR.....</u>	<u>iii</u>
<u>THESIS APPROVAL OF EXAMINATION COMMITTEE.....</u>	<u>v</u>
<u>DEDICATION.....</u>	<u>vi</u>
<u>MOTTO.....</u>	<u>vii</u>
<u>PREFACE.....</u>	<u>viii</u>
<u>ABSTRACT.....</u>	<u>ix</u>
<u>TABLE OF CONTENT.....</u>	<u>x</u>
<u>LIST OF FIGURE.....</u>	<u>xii</u>
<u>LIST OF TABLE.....</u>	<u>xiii</u>
<u>CHAPTER I.....</u>	<u>1</u>
<u>INTRODUCTION.....</u>	<u>1</u>
<u>1.1. Background.....</u>	<u>1</u>
<u>1.2. Problem Identification.....</u>	<u>4</u>
<u>1.3. Problem Limitation.....</u>	<u>4</u>
<u>1.4. Research Objective.....</u>	<u>4</u>
<u>1.5. Research Benefit.....</u>	<u>5</u>
<u>1.6. Systematic Research.....</u>	<u>5</u>
<u>CHAPTER II.....</u>	<u>7</u>
<u>LITERATURE REVIEW.....</u>	<u>7</u>
<u>2.1. Previous Research.....</u>	<u>7</u>
<u>2.2. Theoretical Background.....</u>	<u>8</u>
<u>2.2.1. Forecasting.....</u>	<u>8</u>
<u>2.2.2. Time Series Analysis.....</u>	<u>13</u>
<u>2.2.2.1. Simple Moving Average.....</u>	<u>14</u>
<u>2.2.2.2. Linier Regression (Linear Forecasting).....</u>	<u>15</u>
<u>2.2.3. Material Requirement planning.....</u>	<u>16</u>
<u>2.2.3.1. Input and Output System Material Requirement Planing.....</u>	<u>16</u>
<u>2.2.4. Basic Step of Material Requirement Planning.....</u>	<u>17</u>
<u>2.3. Determination of Lot Sizing.....</u>	<u>18</u>
<u>2.3.1. Lot fot Lot Technique.....</u>	<u>18</u>
<u>2.3.2. Economic Order Quantity (EOO).....</u>	<u>19</u>
<u>2.3.3. Part Period Balancing (PBB).....</u>	<u>19</u>
<u>2.3.4. Periode Order Quantity (POO).....</u>	<u>19</u>
<u>2.3.5. Algorithm Wagner-Whitin (WW).....</u>	<u>20</u>

2.4.	Roasting Profile of Coffee Beans .....	20
<b><i>CHAPTER III .....</i></b>		<b>23</b>
<b><i>RESEARCH METHOD .....</i></b>		<b>23</b>
3.1.	Research Objective .....	23
3.2.	Data Source .....	23
3.3.	Data Collecting .....	23
3.4.	Moving Avarage.....	24
3.5.	Linear Regression .....	25
3.6.	Data Processing .....	25
3.6.1.	Material Requirement Planning.....	25
3.7.	Flowchart .....	27
<b><i>CHAPTER IV.....</i></b>		<b>29</b>
<b><i>DATA ANALYSIS.....</i></b>		<b>29</b>
4.1.	Collecting Data.....	29
4.1.1.	Forecasting .....	29
4.1.2.	Data of Coffee Bean Demand .....	30
4.2.	Data Processing .....	31
4.2.1.	Inventory Record .....	34
4.2.2.	Lot for Lot.....	34
4.2.3	Opportunity Cost lost .....	35
4.2.4.	Key Performance Index .....	35
<b><i>CHAPTER V.....</i></b>		<b>37</b>
<b><i>RESULT AND DISCUSSION.....</i></b>		<b>37</b>
5.1.	Discussion .....	37
5.1.1.	Gross Requirement .....	37
5.1.2.	Standard Operational Procedure Development.....	37
5.1.3.	Work Cooperation Contact Development .....	38
5.1.4.	Coffee Beans Quality .....	40
5.1.4.1.	Supplier .....	42
5.1.4.2.	Coffee Shop .....	43
<b><i>CHAPTER VI.....</i></b>		<b>44.</b>
<b><i>CONCLUSION AND SUGGESTION.....</i></b>		<b>44.</b>
6.1.	Conclusion.....	44.
6.2.	Suggestion.....	44.
<b><i>REFERENCES .....</i></b>		<b>45</b>

## LIST OF FIGURE

<u>Figure 1:1 Coffee Beans .....</u>	<u>3</u>
<u>Figure 1:2 Formula of SMA .....</u>	<u>15</u>
<u>Figure 2:1 Cycle Time of Roasted Coffee Beans .....</u>	<u>22</u>
<u>Figure 3:1 Flowchart Process of Research .....</u>	<u>28</u>
<u>Figure 4:1 Graphic of Simple Moving Average Calculation.....</u>	<u>32</u>
<u>Figure 4:2 Graphic of Linear Regression Calcuation.....</u>	<u>33</u>
<u>Figure 4:3 Compare Key Performance Index of Coffee Beans .....</u>	<u>36</u>
<u>Figure 5:1 Used Coffee Beans Before Implemented .....</u>	<u>41</u>
<u>Figure 5:2 Used Coffee Beans After Implemente.....</u>	<u>41</u>
<u>Figure 2:1 Visualization Roasting Date Tag.....</u>	<u>42</u>
<u>Figure 2:1 Recent Couvee's Bag .....</u>	<u>42</u>

## LIST OF TABLE

<u>Table 3: 1 Horizontal Display of MRP.....</u>	<u>20</u>
<u>Table 4: 1 Deman of Coffee peer cup .....</u>	<u>29</u>
<u>Table 4: 2 Deman of Coffee peer cup .....</u>	<u>30</u>
<u>Table 4: 3Simple Moving Average Calculation .....</u>	<u>31</u>
<u>Table 4: 4 Linear Regression Calculation .....</u>	<u>32</u>
<u>Table 4: 5 Invetory Record .....</u>	<u>34</u>
<u>Table 4: 6 Material Requirement Planning of Lot of Coffee Beans .....</u>	<u>35</u>

