

## TABLE OF CONTENTS

<b>APPROVAL PAGE .....</b>	<b>.ii</b>
<b>ORIGINALITY STATEMENT .....</b>	<b>iii</b>
<b>ABSTRACT.....</b>	<b>iv</b>
<b>GRATITUDE NOTE .....</b>	<b>v</b>
<b>TABLE OF CONTENTS .....</b>	<b>vi</b>
<b>LIST OF FIGURES .....</b>	<b>viii</b>
<b>LIST OF TABLES .....</b>	<b>ix</b>
<b>CHAPTER 1.....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>1</b>
1.1    Background.....	1
1.2    Problem Formulation .....	2
1.3    Objectives.....	2
1.4    Scope of Works.....	2
1.5    Methods of Research .....	3
1.6    Summary.....	4
<b>CHAPTER 2.....</b>	<b>5</b>
<b>BASIC CONCEPT .....</b>	<b>5</b>
2.1    Wireless Fidelity.....	5
2.2    Near Field Communication .....	6
2.2.1  NFC Device .....	6
2.2.2  NFC Tools .....	7
2.2.3  NFC Tags.....	7
2.2.4  NFC Operating Mode.....	8
2.2.5  NFC Architecture.....	8
2.3    Radio Frequency Identification .....	9
2.4    Android .....	10
2.5    Captive Portal.....	10
<b>CHAPTER 3.....</b>	<b>12</b>
<b>SYSTEM DESIGN .....</b>	<b>12</b>
3.1    System Design.....	12
3.2    Block Diagram System.....	12

<b>3.3</b>	<b>Hardware Device Design.....</b>	<b>13</b>
<b>3.3.1</b>	<b>NFC.....</b>	<b>13</b>
<b>3.3.2</b>	<b>Tenda W15E AC1200.....</b>	<b>13</b>
<b>3.3.3</b>	<b>Device For NFC .....</b>	<b>14</b>
<b>3.3.4</b>	<b>Device Spesification .....</b>	<b>15</b>
<b>3.3.5</b>	<b>Software and Application .....</b>	<b>15</b>
<b>3.3.6</b>	<b>NFC Tag Reader Application.....</b>	<b>16</b>
<b>3.4</b>	<b>Software Devices Design.....</b>	<b>17</b>
<b>3.4.1</b>	<b>System Work Flowchart .....</b>	<b>17</b>
<b>3.4.2</b>	<b>Tenda W15E AC1200 Configuration .....</b>	<b>18</b>
<b>CHAPTER IV</b>	<b>.....</b>	<b>19</b>
<b>RESULT AND ANALYSIS</b>	<b>.....</b>	<b>19</b>
<b>4.1</b>	<b>Application implementation.....</b>	<b>19</b>
<b>4.1.1</b>	<b>Implementation of the Android Application Interface for Users .</b>	<b>19</b>
<b>4.2</b>	<b>Optimal Distance and Averange Time Taken .....</b>	<b>20</b>
<b>4.3</b>	<b>Internet Speed and Devices Connected.....</b>	<b>25</b>
<b>4.3.1</b>	<b>Download Speed .....</b>	<b>25</b>
<b>4.3.2</b>	<b>Upload Speed .....</b>	<b>26</b>
<b>4.4</b>	<b>QoS (Quality of Services) Parameters.....</b>	<b>27</b>
<b>4.4.1</b>	<b>Throughput .....</b>	<b>27</b>
<b>4.4.2</b>	<b>Delay .....</b>	<b>28</b>
<b>4.5</b>	<b>Package Loss from Client to Tenda Router Internet Connection ....</b>	<b>28</b>
<b>CHAPTER V</b>	<b>.....</b>	<b>29</b>
<b>CONCLUSION AND SUGGESTION</b>	<b>.....</b>	<b>29</b>
<b>5.1</b>	<b>Conclusion.....</b>	<b>29</b>
<b>5.2</b>	<b>Suggestion .....</b>	<b>30</b>
<b>BIBLIOGRAPHY</b>	<b>.....</b>	<b>31</b>
<b>LAMPIRAN</b>	<b>.....</b>	<b>34</b>