

## TABLE OF CONTENT

<b>APPROVAL PAGE</b> .....	<b>i</b>
<b>VALIDATION PAGE</b> .....	<b>ii</b>
<b>DECLARATION OF ORIGINALITY</b> .....	<b>iv</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>v</b>
<b>ABSTRACT</b> .....	<b>vii</b>
<b>TABLE OF CONTENT</b> .....	<b>viii</b>
<b>LIST OF IMAGE</b> .....	<b>x</b>
<b>LIST OF TABLE</b> .....	<b>xii</b>
<b>CHAPTER 1 INTRODUCTION</b> .....	<b>1</b>
1.1. Background of the Study .....	1
1.2. Problem Identification .....	3
1.3. Purpose of the Study.....	3
1.4. Limitation of the Study.....	4
1.5. Benefit of the Study.....	4
1.6. Research Methodology .....	5
1.7. The Writing Structure.....	6
<b>CHAPTER 2 THEORITICAL BASIS</b> .....	<b>2</b>
2.1. WeChat .....	2
2.2. WeChat Mini Program.....	2
2.3. WeChat Developer Tool .....	9
2.4. WeChat API.....	10
2.5. WeUI, Basic Front-end Library .....	10
2.5.1. WXML.....	11
2.5.2. WXSS .....	11
2.6. JavaScript .....	12
2.7. REST APIs .....	13
2.8. Node Js .....	14

2.9.	MongoDB .....	15
2.10.	UML .....	17
2.10.1.	Use Case Diagram .....	17
2.10.2.	Class Diagram.....	20
2.10.3.	Activity Diagram .....	22
2.10.4.	Sequence Diagram .....	23
<b>CHAPTER 3 ANALYSIS AND DESIGN.....</b>		<b>26</b>
3.1.	Analysis .....	26
3.1.1.	Analysis of the Current System .....	26
3.1.2.	Weakness of Current System .....	28
3.1.3.	Survey and Analysis .....	29
3.1.4.	Analysis of Needs .....	31
3.1.5.	Software Development Method .....	32
3.2.	Phase of Design .....	35
3.2.1.	Designing Application with UML .....	35
3.2.2.	Designing User Interface .....	49
3.3.	Phase of Construction.....	51
3.3.1.	Programming .....	51
3.4.	Phase of Implementation .....	52
<b>CHAPTER 4 Implementation and testing.....</b>		<b>53</b>
4.1.	Implementation .....	53
4.1.1.	Determine the Development Tools .....	53
4.1.2.	Hardware Environment Specification .....	53
4.1.3.	User Interface.....	54
4.2.	Black Box Testing .....	63
<b>CHAPTER 5 Discussion.....</b>		<b>66</b>
5.1.	Conclusion.....	66
5.2.	Suggestion .....	66
<b>REFERENCES .....</b>		<b>68</b>
<b>APPENDIX 1. Curriculum Vitae.....</b>		<b>L1 - 1</b>
<b>APPENDIX 2. Questionnaire.....</b>		<b>L2 - 1</b>