

## TABLE OF CONTENTS

VALIDATION SHEET .....	i
ABSTRACT.....	ii
ORIGINALITY STATEMENT SHEET .....	iii
PREFACE.....	iv
TABLE OF CONTENTS.....	v
TABLE OF FIGURES .....	viii
LIST OF TABLES.....	ix
LIST OF APPENDIXES.....	xi
LIST OF KNOWLEDGE .....	xii
CHAPTER I PRELIMINARY.....	1
I.1 Research Background.....	1
I.2 Problem Statement .....	4
I.3 Research Objectives .....	4
I.4 Research Scopes .....	5
I.5 Research Benefits .....	5
I.6 Writing Systematics .....	6
CHAPTER II LITERATURE REVIEW.....	8
II.1 Digital Ecosystem .....	8
II.2 UI/UX.....	11
II.2.1 User Interface.....	13
II.2.2 User Experience .....	17
II.3 Persona .....	20
II.4 Usability Testing .....	22
II.5 User Centered Design.....	24
II.6 SUS (System Usability Scale).....	25

II.7	SEQ (Single Ease Questions).....	26
II.8	State of the Art .....	26
CHAPTER III RESEARCH METHODOLOGY .....		33
III.1	Conceptual Method.....	33
III.2	Research Systematic .....	33
III.3	Data Collection .....	36
III.4	Development Process of Product/Artifact .....	37
III.5	Evaluation Method .....	37
III.6	Justification of Methods .....	38
CHAPTER IV DESIGN AND ANALYSIS .....		40
IV.1	Plan the Human Centered Design.....	40
IV.1.1	Interview Analysis .....	40
IV.2	Specify the Context of Use.....	58
IV.2.1	Persona Identification .....	58
IV.3	Specify User Requirements .....	61
IV.3.1	Business Process Analysis .....	62
IV.3.2	Context Scenario .....	69
IV.3.3	Persona Needs Analysis .....	83
IV.4	Design Solution .....	84
IV.4.1	Wireframe Design.....	84
IV.4.2	User Interface Design .....	118
CHAPTER V IMPLEMENTATION AND TESTING .....		133
V.1	Evaluate Designs Against User Requirements.....	133
V.1.1	Testing Plan .....	133
V.2	Iteration 1 .....	134
V.2.1	Single Ease Question (SEQ) .....	134
V.2.2	System Usability Scale (SUS) .....	137

V.2.3	1 <sup>st</sup> SEQ Iteration Result .....	138
V.2.4	1 <sup>st</sup> SUS Iteration Result.....	139
V.3	Iteration 1 Conclusion .....	140
V.4	Iteration 2 .....	141
V.4.1	Single Ease Questions (SEQ).....	141
V.4.2	System Usability Scale (SUS) .....	144
V.4.3	2 <sup>nd</sup> SEQ Iteration Result.....	145
V.4.4	2 <sup>nd</sup> SUS Iteration Result.....	146
V.5	Iteration 2 Conclusion .....	148
CHAPTER VI	CONCLUSIONS AND SUGGESTIONS .....	149
VI.1	Conclusions .....	149
VI.2	Suggestions.....	149
BIBLIOGRAPHY	.....	150
APPENDIX	.....	152