TABLE OF CONTENTS

TITLE PAGE i
ACKNOWLEDGEMENT ii
DEDICATION iii
LIST OF TABLES iv
LIST OF FIGURES v
CHAPTER 1: INTRODUCTION **1**
Rationale of the Study 1
Objectives of the Study 3
Scope and Limitation of the Study 4
Significance of the Study 5
Flow of the Study 7
Definition of Terms 8
CHAPTER II: REVIEW OF RELATED LITERATURE AND STUDIES **9**
Review of Related Literature 9
Review of Related Studies 11
Comparative Matrix 13
CHAPTER III: RESEARCH METHODOLOGY **14**
Environment 14
Software Engineering Methodology 15
Planning/Conception-Initiation Phase 17
Business Model Canvas 17
Program Workflow 19
Gantt Chart 27
Functional Decomposition Diagram 28
Analysis Phase 29
Use Case Diagram 29
Storyboard 39
Database Design 42
Entity-Relationship Diagram 43
Data Dictionary
Network Design 54
Network Model 55

Network Topology 56
Development/Construction Phase 57
Technology Stack Diagram 57
Software Specification 58
Hardware Specification 58
Program Specification 59
List of Modules 61
REFERENCES **62**
CURRICULUM VITAE **64**
APPENDICES **65**

LIST OF TABLES

Table Number	Description	Page Number
1	Comparative Matrix	13
2	Business Model Canvas	18
3	GANTT chart	27
4	Process Registration Table	30
5	Process Register Traffic Enforcer	31
6	Process Login Table	32
7	View Alternative Route Table	33
8	Process Traffic Details Table	34
9	Process Road Disturbance Images and Video Clips Table	35
10	Process Destination Location Table	36
11	Process Alternative Routes Table	37
12	Generate Report Table	38
13	Account Table	44
14	Coordinates Table	45
15	Street Table	46
16	Traffic_media Table	47
17	Main_route Table	48
18	Route Table	48
19	Traffic_details Table	49
20	Peak_hour Table	50
21	Destination Table	51
22	PUJ Table	51
23	PUJ_routes Table	52
24	FareTable	53
25	List of Modules	61

LIST OF FIGURES

Fig. Number	Description	Page Number
1	Flow of the Study	7
2	Agile Development Life Cycle	15
3	Registration Workflow	19
4	Login Workflow	20
5	Road Disturbance Images and Video Clips Workflow	21
6	Process Traffic Details Workflow	22
7	View Alternative Routes Workflow	23
8	Add Alternative Routes Workflow	24
9	Generate Report Workflow	25
10	Add Destination Location Workflow	26
11	Functional Decomposition of ESC: A Mandaue City Travel Route Advisor	28
12	Use Case Diagram	29
13	Process Registration	30
14	Process Register Traffic Enforcer	31
15	Process Login	32
16	View Alternative Route	33
17	Process Traffic Details	34
18	Process Road Disturbance Images and Video Clips	35
19	Process Destination Location	36
20	Process Alternative Routes	37
21	Generate Report	38
22	Storyboard of Admin	39
23	Storyboard of Traffic Enforcer	40
24	Storyboard of User	41
25	Network Design	54

26	Network Model	55
27	Network Topoology	56
28	ESC: A Mandaue City Travel Route Advisor Technology Stack Diagram	57