UNIVERSITI TEKNOLOGI MARA

EVALUATING TESTING PRACTICE BETWEEN AUTOMATED AND MANUAL TEST: A CASE STUDY IN OPENET TELECOM MALAYSIA

NORA MUHAMMAD ABDUL GHANI

IT Project submitted in partial fulfillment of the requirements for the degree of

Master of Science (Information Technology)

Faculty of Computer and Mathematical Sciences

February 2013

ABSTRACT

This study basically to evaluate the testing practice that currently implement in Openet Telecom Malaysia. At the moment, Openet apply Manual and Automated test in their projects. As far as we concern, Automated testing have many advantages over Manual testing. However, not all projects can use Automated testing. At some point Manual testing still significant to apply since it more suitable to implement compare with Automated testing in certain scenario. Thus, this study will identified which type of testing should be implementing in Openet project. This study will focus on Transaction Management (TM) project and Policy Management (PM) project. The objectives of this study are to gather requirement for Openet project between automated and manual test using Black Box testing technique, to analyse the testing practice implement in Openet for Transaction Management (TM) and Policy Management (PM) project and to propose recommendation of testing practice that suitable for Openet's project scope. Therefore, this study will identify the suitable testing practice in Openet project in order to give good test result as overall whether to implement Automated testing, Manual testing or both testing simultaneously in Transaction Management (TM) project and Policy Management (PM) project.

ACKNOWLEDGEMENT

First and foremost, Alhamdulillah and thankful to Allah S.W.T, The Almighty for helping the author to successfully complete this project from the very early stages until the end. The author wishes to express her gratitude to her supervisor Mr. Saharbudin Naim Tahir Shah, that she cannot find any words to show her appreciation to him who was abundantly helpful and offered invaluable assistance, support and guidance. Deepest gratitude are also to all lecturers who teaches the author from the beginning of study and without those knowledge and assistance this study would not have been successful. The author also wishes to express her love and gratitude to her beloved families for their understanding & endless love, through the duration of her studies. Finally, gratitude extends to all of respondents for their willingness to cooperate by answering questionnaire and to all individual who have contributed either directly or indirectly in completing this project successful.

TABLE OF CONTENTS

	THOR'S DECLARATION	
ABS	TRACT	. ii
ACK	KNOWLEDGEMENT	. iji
TAB	ELE OF CONTENTS	. iv
LIST OF TABLES		
LIST	Γ OF FIGURES	. ix
CHA	APTER ONE: INTRODUCTION	1
1.1	Introduction	1
1.2	Project Background	
1.3	Problem Statement	3
1.4	Project Objective	
1.5	Project Scope	
1.6	Project Significance	
1.7	Structure of the Thesis	6
1.8	Summary	6
CHA	APTER TWO: LITERATURE REVIEW	7
2.1	Introduction	
2.2	Automated Testing	
2.3	Manual Testing	
2.4	Bootstrap Sampling Technique	
2.5	Testing Criteria	
2.6	Summary	.21
	•	
CHA	APTER THREE: METHODOLOGY	22
3.1	Introduction	22
3.2	Methodology	
	3.2.1 Problem Assessment & Research Study	
	3.2.2 Knowledge Acquisition.	
	3.2.3 Data Analysis.	
	3.2.4 Knowledge Representation	
33	Summary	

CHA	PTER FOUR: ANALYSIS AND FINDINGS	22
4.1	Introduction	22
4.2	Background of Respondents	22
4.3	Statistic of Bootstrap Sampling Technique	23
4.4	Data and Survey Findings	
	4.4.1 Performance Execution Time for Each Test Case Result	.24
	4.4.2 Total Number of Test Cases Executed Result	.34
	4.4.3 Test Coverage for Each Test Case Result	.44
	4.4.4 Consistent Test Procedure Result	.54
	4.4.5 Reduce QA Costs Result	.64
	4.4.6 Testing Project Suitability Result	.74
4.5	Summary	89
СНА	PTER FIVE: DISCUSSION	90
5.1	Introduction	90
5.2	Discussion	. 90
	5.2.1 Achievement	90
	5.2.2 Difficulty Encountered	. 93
5.3	Strengths and Weaknesses	
5.4	Recommendation	
5.5	Summary	
J.J	Summary	70
СНА	PTER SIX: CONCLUSION	97
6.1	Introduction	97
6.2	Conclusion	97
6.3	Recommendation for Future Research	98
REF	ERENCES	99
	ENDICES Appendix A: Ouestionnaire	102