



FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA TERENGGANU

FINAL REPORT OF DIPLOMA PROJECT

I-AEROPONIC SYSTEM

MARCH 2015

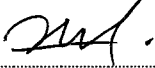
SITI AFIQAH BTE SELAMAT (2012853616)


SITI HAWA BINTI MOHAMMAD (2012265218)


SITI NORSYAFIQAH BTE HAMBALI (2012661692)

AHMAD SHAHRAN BIN IBRAHIM

“I declare that this report entitled “*your title*” is the result of my own group research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.”

Signature : 
Name : SITI AFIQAH BTE SELAMAT
Date : MARCH 2015

Signature : 
Name : SITI HAWA BINTI MOHAMMAD
Date : MARCH 2015

Signature : 
Name : SITI NORSYAFIQAH BTE HAMBALI
Date : MARCH 2015

ACKNOWLEDGEMENT

Firstly thanks to Allah S.W.T because give us blessing to be able to complete our final year project. Although we had been through many obstacle and tension as well as happiness while doing this project, Allah always by our side and give us strength to finish our project.

Secondly, we wish very special thanks to our supervisor Sir Ahmad Shahrhan Bin Ibrahim that have guided us from the beginning in order to make this project working perfectly. Furthermore, he always gives his best opinion and tips to help us overcome our problems.

Thirdly, we would like to give thanks to the all lecturers and technicians of Faculty of Electrical Engineering that help us work out on our project. Thanks for the teaching and the method of handling the components and the circuit of our project.

Last but not least, we would like to dedicate our thanks to our beloved parents, family, and friends that have involved to the success of this project. Without all of them, we cannot finish this project easily.

ABSTRACT

This project presents about the new idea of watering plant process that using aeroponics planting method. This project uses the automatic watering method that responds with humidity in the plant medium. There are two circuits involved in this project which are humidity sensor circuit and water level circuit. Humidity sensor is used to detect the humidity of plant in aeroponics plants medium and then connects to the circuit which controls the water pump. This process happens when humidity in aeroponics plants medium decreases and turns on the circuit by the switch that will on the water pump. Water will be pumped up from the tank and spray the plant's roots by using sprinkler. Next circuit is to control the level of water in the tank to avoid overflowing. If the water in the tank decreases below the water sensor, the water pump will pump up the water into the tank until the water reaches the sensor and the pumping process will stop immediately. Therefore, there will be no problems of water lacking or overflowing of water in the water tank. This project is an automatic process. So, the process of planting becomes more easier.

TABLE OF CONTENTS

CHAPTER	CONTENTS	PAGE
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENTS	iv
	ABSTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	x
	LIST OF FIGURES	xi
	LIST OF ABBREVIATIONS	xiii
	LIST OF APPENDICES	xiv
1	INTRODUCTION	
	1.0 Introduction	1
	1.2. Problem Statements	3
	1.3 Objectives	4
	1.4 Scope of Work	5
2	LITERATURE REVIEW	
	2.0 Introduction	6
	2.1 Introduction of Equalizer	6
	2.1.1 Proteus 8 Professional	6
	2.1.2 Arduino Software	8
	2.1.3 Hardware	9
	2.1.4 Software	10
	2.2 Studies on Previous Work	12