

**FRESHNESS OF FISH DETECTOR**

**NURHUDA BINTI ABDUL MALEK**

**NURUL SYAFIRAH BINTI MOHAMED JAILANI**

**SHAZUIN NOORUL HANA BINTI SHAHARUDIN**

**A project report submitted in partial fulfillment of the requirement for the award of the degree of Diploma of Electrical Engineering (Electronics/ Telecommunications/ Instrumentations/ Computer)**

**Faculty of Electrical Engineering**

**Universiti Teknologi MARA**


**MARCH 2013**

“I declare that this report entitle “FRESHNESS OF FISH DETECTOR” 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 :  .....

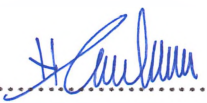
Name : NURHUDA BINTI ABDUL MALEK .....

Date : 4 APRIL 2013 .....

Signature :  .....

Name : NURUL SYAFIRAH BT MOHAMED JAILANI .....

Date : 4 APRIL 2013 .....

Signature :  .....

Name : SHARVIN NOORUL HANA BT SHAHARUDIN .....

Date : 4 APRIL 2013 .....

## **ACKNOWLEDGEMENT**

In the name of ALLAH, the most gracious and most merciful,

Praised to be our Lord, for His guidance and bless that we are able to finish our Final Year Project as to fulfill our Diploma in Electric Electronic Engineering program.

This Final Year Project has been a great challenge for us that the course calls for our creative, innovative and assertive nerves to respond directly and critically to the obstacles faced. With the help and guidance from our supervisor, Encik Aldrin bin Mohd Ali, as well as other lecturers, this project is managed to be completed within the time allocated successfully.

We would also like to thank our parents and friends for lending us their hands and being very supportive and helpful along the way of turning this task as a remarkable realization of us. May ALLAH bless and acknowledge your support and assistance as good deed and consecrate us in both world, here and here-after.

Lastly, we hope that the acknowledge that we gained can be applied and fully utilized so that it can benefit us in our future undertaking. We are looking forward to practice the taught skills and frills, so that we can see great business opportunities and react in the best way we could to embark on the opportunity.

Thank you.

## **ABSTRACT**

In today's world, it is noticeable that everyone in all different fields of life is seeking for something that can make life easier. In terms of household chores, there are several smart inventions to make people easier especially housewife. From our research, the title of our project is Freshness of Fish Detector. This project is specially design to detect either the fish is still fresh or not. In our daily life, we always have the problem to buy the fresh fish at the market. So we have decided to do this project to settle down the problem. In this project, the concept of the detector is same like pH sensor. The pH detector measures how acidic or basic a substance is. The pH detector ranges from 0 to 14. A pH of 7 is neutral, a pH less than 7 is acidic and a pH greater than 7 is basic. If the fish is fresh the scale will below than pH 7 and the range of the 0-6 will display on liquid crystal display (LCD). If the fish is not fresh the scale will above than pH 7 and the range of the 8-14 will display on LCD and also the buzzer will buzz. Therefore, in order to solve the problem we have come up with a solution. A battery 9V used in this project.

## TABLE OF CONTENTS

CHAPTER	CONTENTS	PAGE
	DECLARATION	i
	DEDICATION	ii
	ACKNOWLEDGEMENT	iii
	ABSTRACT	iv
	ABSTRAK	v
	TABLE OF CONTENTS	vi
	LIST OF TABLES	viii
	LIST OF FIGURE	ix
<b>1</b>	<b>INTRODUCTION</b>	
	1.1 Background	1
	1.2 Problem Statement	4
	1.3 Objective	5
<b>2</b>	<b>LITERATURE REVIEW</b>	
	2.1 Facts about Fish	6
<b>3</b>	<b>METHODOLOGY</b>	
	3.1 Software	10
	3.1.1 PCB Wizard	10
	3.1.2 ISIS Proteus	11
	3.2 Implementation	13
	3.2.1 Operating Circuit	13
	3.3 Flow Chart	14
	3.4 Printed Circuit Board Fabrication	16
	3.4.1 Procedure of etching process	16