

INTELLIGENT DUSTBIN

(I-BIN)

ABDUL HADYAN SYAFIQ BIN HJ ABDUL JALIL

NABIL FIKRI BIN RUSLAN

A project report submitted in partial fulfillment of the requirements for the award of the degree
of Diploma of Electrical Engineering (Instrumentation)

Faculty of Electrical Engineering

Universiti Teknologi MARA

OCT 2012

“I declare that this report entitled “INTELLIGENT DUSTBIN” 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 : *Abdul Hadyan Syafiq Bin Hj Abdul Jalil*

Date :

Signature :

Name : *Nabil Fikri Bin Ruslan*

Date :

ACKNOWLEDGEMENT

In the name of ALLAH S.W.T The Most Gracious and Most Merciful.

Alhamdulillah and thankful to Allah S.W.T for give us strength and enough time to overcome the problem that we faced during this final year project. Firstly, we felt very grateful because at last we successfully completed this project until this stage. We would like to say a big thanks to those people that involve in helping us to complete this project. Special thanks to Coordinator Final Year Project (II) EEE 368, Madam Siti Aisyah Binti Che Kar for giving us lot of chance to complete this project at this stage successfully even during the did this project there were many obstacles we have to face.

This proposal will not doing great without the help of our supervisor Miss Nurbaiti Binti Wahid, who is the anchor and the main lead to our group also always giving us a lot of advice and knowledge on how to do the project correctly and smoothly. Although she is busy with her job, but she is willing to share her time to make sure our project successfully.

Besides that, we also want to thanks to all lecturer and staffs from faculty of electrical engineering for their cooperation, encouragement and giving us a lot of important information during preparation to complete this project. They also help with giving us good suggestions to overcome a problem mainly seeking for some of information regarding to this project.

Another special thanks to our friends who is willing to help us during the process to finish this project and their support. By all these peoples' help, we finally have completed our project successfully. By involving ourselves in this project, we could know how to value of cooperation between us in group, toleration between us and patient in order to complete this project. Lastly, we would like to say thank you for those people that involve in completing this project.

ABSTRACT

Basically, dustbin is place where all people around the world use to throw rubbish into the dustbin. From the dustbin, we come with some innovation where consists of infra red (IR) sensor combine with two other circuit which are voice record and playback circuit and DC motor circuit which will detect the present of rubbish at the top of dustbin and play the voice command and turn on motor to flip the top of dustbin and put the rubbish inside the dustbin. This project is to enlighten and teach people to discard trash properly. The idea of making new version of dustbin comes out when we decide to make some innovation by flipping the top of the dustbin and make some voice command from the dustbin. Not only that, this project also will satisfy the objectives that are to teach people to jointly take care of environment especially in the area of the dustbin. Besides, it is important to make awareness to the citizen to take care of environment by throw rubbish properly inside the dustbin. It is also has been made to produce another marketable product and study the function and application related to the component that we use in this project. The input for this project is present of the rubbish by the PIR sensor and the output is voice command for the voice recorder and playback circuit. For the power supply, we use 9V dc power supply but we used voltage regulator to reduce the power supply until 5V because we only use 5V. When the sensor detect present of object or rubbish, it will trigger relay. Then, relay will turn on the voice recorder and playback circuit. After that, the circuit will turn on and voice command will be heard until 90 second. The sensor will detect again the present of object or rubbish. When it is still detect the rubbish, it will turn on motor circuit. Motor will start rotate. Then, rubbish will falls inside the dustbin. If there is no rubbish detected, motor will turn off and return to original position. As a conclusion, we hope and believe that this new dustbin can help us and improve cleanliness of our environment.

TABLE OF CONTENTS

CHAPTER	CONTENT	PAGE
	DECLARATION	i
	DEDICATION	ii
	ACKNOWLEDGEMENT	iii
	ABSTRACT	iv
	ABSTRAK	v
	TABLE OF CONTENTS	vi
	LIST OF FIGURES	
	LIST OF SYMBOLS	
	LIST OF ABBREVIATION	
	LIST OF APPENDICES	
1	INTRODUCTION	
	1.1 Introduction.	1
	1.2 Objective.	2
	1.3 Scopes.	2
	1.4 Problem Statement and way to solve.	3