DIGITAL TIMER SWITCH

ZAINORSHAFIQ BIN S.M SALIM MOHAMAD RASUL IZUDDIN BIN WAHIDUDDEN

A project report submitted to the Faculty of Electrical Engineering, Universiti Teknologi MARA in partial fulfillment of the requirements for the award of Diploma of Electrical Engineering.

FACULTY OF ELECTRICAL ENGINEERING UNIVERSITI TEKNOLOGI MARA MALAYSIA

SEPTEMBER 2015

ACKNOWLEDGEMENT

We would like to express my deepest appreciation to all those who provided me the possibility to complete this report. A special gratitude I give to our final year project supervisor, Puan Nur Asfahani Binti Ismail whose contribution in stimulating suggestions and encouragement, helped us to coordinate our project especially in writing this report.

Furthermore we would also like to acknowledge with much appreciation the crucial role of the staff of UiTM Pasir Gudang, who gave the permission to use all required equipment and the necessary material to complete the project. Last but not least, many thanks go to whose have invested his full effort in guiding the team in achieving the goal. I have to appreciate the guidance given by other supervisor as well as the panels especially in our project presentation that has improved our presentation skills thanks to their comment and advices.

ABSTRACT

We planned to use knowledge about technology to develop a simple extension to advance socket extension. For our research, without this project, society always keep wasted electricity usage and cannot use it wisely. This project we names as Digital Timer Switch. This project functioning just like other simple sockets, but this switch can ON and OFF automatically depend on the user. User can set the socket depend how long they want and automatically OFF without user do not have to close it manually.

We develop this socket to make it more users friendly. Users can save money from pay expensive electric bill because this socket can control electricity usage. Beside, before this system designed, research about the same project has been done. Knowledge from previous project giving us an idea to improve our project to make it updated to other project.

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	CANDIDATE DECLARATION	ii
	APPROVAL SHEET	iii
	DECLARATION OF ORIGINAL WORK	iv
	ACKNOWLEDGEMENT	v
	ABSTRACT	vi
	TABLE OF CONTENTS	vii
	LIST OF FIGURE	ix
	LIST OF TABLES	xi
	LIST OF ABBREVIATIONS	xii
1	INTRODUCTION	
	1.1 Introduction	1
	1.2 Problem Statement	2
	1.3 Objectives	2
	1.4 Scope of Work	2
2	LITERATURE REVIEW	
	2.1 Previous Project	4
	2.1 Main Component	5
3	METHODOLOGY	
	3.1 Project Development	7
	3.2 Components	9
	3.3 Flow Chart	22

CHAPTER 1

INTRODUCTION

1.1 Introduction

This project is originally based from simple socket extension. The aim for this project is to improve this simple socket extension to more advance socket extension. As planned, this socket has been improvised to switch on and off automatically depends on the user. It is called as digital timer switch. The reason this project has been created is to help users in their daily life. This digital timer switch can reduce the usage of electricity and hopefully lower down monthly expenses. This project can be implemented on many home appliances such as kitchen appliances, fan, television, etc. Based from information we collected, we found that socket extensions are widely used in daily basis.

This project functions just like any other simple socket, only that this socket can be controlled by user. User can set the switch to turn on for as long as they want and automatically switch off based on the time set. Previously, there were some implementations of the same switching concept but they were done using analog timer and had time limitation. But for this project, we improve the analog to digital to control the timer. We also use LED and buzzer to make more improvement. The signal from socket will transmit to LED and buzzer to indicate the timer.