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**FINAL REPORT:  
SAFE IRON POWER OUTLET**

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## TABLE OF CONTENTS

ACKNOWLEDGEMENTS

ABSTRACT

LIST OF FIGURES.....	1
LIST OF TABLES.....	4
<b>CHAPTER 1 INTRODUCTION.....</b>	<b>5</b>
1.1 Background of Study.....	5
1.2 Problem Statement.....	6
1.3 Objectives of Research.....	7
1.4 Scope of Study.....	8
<b>CHAPTER 2 MATERIALS AND METHOD.....</b>	<b>9</b>
2.1 Methodology.....	9
2.2 Design Flow Chart.....	10
2.3 Experimental Setup.....	12
2.4 Equipment and Component.....	13
2.5 Coding For Simulation.....	18
<b>CHAPTER 3 CIRCUIT DESIGN AND OPERATIONS.....</b>	<b>20</b>
3.1 Schematic Diagram.....	20
3.2 PCB Designs.....	24
<b>CHAPTER 4 RESULT AND DISCUSSION.....</b>	<b>27</b>
4.1 Software Simulation Result.....	27
4.2 Hardware Implementation Result.....	31
4.3 Circuit Testing and Troubleshooting.....	40
4.4 Discussions.....	43

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## **ABSTRACT**

The Safe Iron Power Outlet is a project which will be carried out in order to solve the difficulties in doing ironing. The idea was obtained based on the observation of many people. For example, the housewife always busy and sometimes forgot to turn of the power supply and can lead burning their clothes or can be dangerous if kids are playing around the iron. The problem statement have been identified where the problem that users usually is their clothes are easily burned because of the temperature of the iron and sometimes users left the iron unattended. The Safe Iron Power Outlet is designed to see how the system can be used to solve these problems. So, with this system, we can cut off the current automatically when there are no movement or sense at touch sensor. Otherwise the system can detect the condition of the iron whether in  $90^{\circ}$  or  $0^{\circ}$ . PIC16F877A will detect the condition of the touch sensor ad the angle sensor and the relay will determined the system whether to cut off the current or let the current flow. This project is hoped to renew and to update on the previous to be very helpful for the people.

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of study

Nowadays, there are many inventions and improvement of electrical appliances made to help reduce people's burden. As an example, the weight of iron used for ironing clothes had been reduced, which is more easier and less require human's energy. Somehow, this invention still have some advantages. A housewife usually as busy as a bee which is one of the factor that leads to burning when ironing the clothes. Accidents like this are dangerous and has to be prevented as it may lead to bigger fire.

In order to handle this problem, Iron Safe Power Outlet had been invented. This project contain touch sensor, angle sensor, PIC, LED indicator and relay sensor. This project also can save the energy because this project is design to automatically cut off the current in several condition.

The first condition is when there is in untouched mode and the iron is in ( $0^{\circ}$ ) horizontal condition. Next, there is also in untouched but the iron is in the ( $90^{\circ}$ ) vertical condition. Both of these condition, the current will automatically cut off to make sure that the burning problem can be solved. Otherwise of these two condition, the current will continue be supplied.