

**FACULTY OF ELECTRICAL ENGINEERING**  
**UNIVERSITI TEKNOLOGI MARA**  
**PULAU PINANG**

**FINAL REPORT:**  
**PIR SENSOR BASED SECURITY ALARM SYSTEM**

**NAJWA HANIM BINTI KHALIB**  
**NURUL AMIRAH BINTI ABD HALIM**

**SEMESTER JUNE - OCTOBER 2016**

**This report is submitted to the Faculty of Electrical Engineering,  
Universiti Teknologi MARA (UiTM).**

**In partial fulfillment of the requirement for the award of Diploma in Electrical  
Engineering.**

**This report is approved by :**

.....

**Supervisor's Name**

**Pn Siti Zubaidah Md Saad**

**Date : 8 Sept. 2016**  
.....

## **ABSTRACT**

PIR Sensor Based Security Alarm System where PIR sensor is the main sensor for the project. Besides, GSM module, LED and Buzzer also one of the main component for the project. The input of the project will come from the movement detected by PIR sensor and the output will be SMS, lights and sound respectively. This project is to be able to help people to monitor their house even when they are away from home. Lastly, it also can help to decrease the crime rate.

## **ACKNOWLEDGEMENTS**

First and foremost, we offer our sincerest gratitude to our supervisor Pn Siti Zubaidah Md Saad for the guidance in making our final year project successful since our fourth and fifth semester. Thank you Pn Siti Zubaidah Md Saad . Second, special thanks to our panel Pn Fadzilah Mokhtar and Pn Linda Mohd Kasim for their comments as it help we to improve way better compare to before. Third, we would like to thanks our family for helping us a lot especially in financial and mental support. Lastly, we offer our regard and blessings to our colleagues for helping us understand the project and all of those who supported us during the completion of the project.

Table of Contents

ACKNOWLEDGEMENTS .....3

ABSTRACT .....4

LIST OF FIGURES.....5

LIST OF TABLES.....8

CHAPTER 1.....9

INTRODUCTION .....9

1.1 BACKGROUND OF STUDY.....9

1.2 PROBLEM STATEMENT.....11

1.3 OBJECTIVE OF RESEARCH.....12

1.4 SCOPE OF STUDY .....12

CHAPTER 2.....13

MATERIALS AND METHODS.....13

2.1 METHODOLOGY .....13

2.1.1 FLOW CHART OF THE SIMULATION PROCESS .....13

2.1.2 PROGRAMMER FLOW CHART OF THE PROJECT .....14

2.2 EXPERIMENTAL SETUP .....16

2.2.1 LIST OF EQUIPMENT & COMPONENTS .....17

2.2.2 METHOD AND PROCEDURE.....23