

UNIVERSITI TEKNOLOGI MARA

Fire Alarm System using GSM

Muhammad Hanif bin Hasbullah

**Thesis submitted in fulfillment of the requirements for
Bachelor of Computer Science (Hons) Data
Communication and Networking**

Faculty of Computer and Mathematical Sciences

JUNE 2016

ACKNOWLEDGEMENT

Alhamdulillah, praises and thanks to Allah because of His Almighty and His utmost blessings, I was able to begin the research of my proposal for Final Year Project for my study. My gratitude to His grace and mercy for all the strength and patience throughout the process of writing this proposal.

To my supervisors, Siti Arpah Binti Admad, Department of Computer Technology and Networking, Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, I would like to express my greatest thanks for all the support and guidance that have been given to me in the past, and in the future till the end of the project. Thank you for putting up with me. Without thee guidance and help, I would not be here, presenting this proposal.

To my dear parents, Hasbullah Bin Mahmud and _____, thank you for being there, thank you for this life you have given me, for because of you, here I am still moving forward towards success. A thank you to all my siblings for all the help you have given me.

Special thanks to my companionship, for the non-stop support and encouragement, allowing me to be still standing here challenging the world, striving ahead. Thank you for all the moments that bring me joy and happiness in this life. You shall forever be with me.

Last but not least, to my fellow classmates, all the thanks for support and thoughts in helping me with my proposal. Thank you for the journey we have so far, and many to comes. I wish all of you only success and happiness.

ABSTRACT

The purpose of this project is to develop a fire alarm system using GSM module. The gas sensor used in this project is MQ-2 which is detect the present LPG, smoke, methane, and etc. These sensors will detect the concentration of the gas according to the voltage output from the sensor. In order to make the sensors operate correctly, Arduino Uno was used as the microcontroller for the whole system. GSM module also attached to the microcontroller to give the ability to send an alert to the user mobile phone.

TABLE OF CONTENTS

CONTENTS	PAGE
SUPERVISOR'S APPROVAL	i
STUDENT'S DECLARATION	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	vi
LIST OF TABLES	vii
LIST OF APPENDICES	viii
INTRODUCTION	1
LITERATURE REVIEW	4
METHODOLOGY	11
RESULT AND FINDING	21
CONCLUSION	29
REFERENCES	30
APPENDIX	32

CHAPTER 1

INTRODUCTION

This chapter will describe about the introduction of this project, which is fire alarm system using GSM and also explain about the background study, problem statements, aims and objective, project scope and significant of the project.

1.1 Background of Study

Fire incidents have never stopped from threatening our daily life. These cases kill and injure thousands of people every year, beside the great damage and loss. During Ops Raya 2013, there is a total of 45 fire incidents involving losses approximate at RM2.5 million and over 350 people were found homeless in the blaze in Keramat, Sentul and Setapak during the period (<http://www.themalaymailonline.com>). Fire alarm systems are designed to detect fire at the early state of the development when there is an available time for the occupant to evacuate (R. Craig Schroll, 2007).

Based on the department's forensic, in most of the cases, the fire started from the switch box because many of the occupant did not switch of the lamps or switch box before leaving their home for a long period. Unattended cooking also can be a major cause that leads to fire incident. Smoke inhalation is the number one cause of death that related to fire incident. An estimated 50%-80% of fire deaths are the effect from smoke inhalation rather than burns (http://www.emedicinehealth.com/smoke_inhalation/article_em.htm).