

# HOME ELECTRIC SYSTEM USING GSM FOR BLACKOUT NOTIFICATION

NUR AIN BINTI ZAMRI

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BORANG PENDESAHAN STATUS LAPORAN

PROJEK SARJANA MUDA II

Tajuk Projek : Home Electric System Using GSM For Blackout Notification

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TIDAK TERHAD

(TANDATANGAN PENULIS)

Ditandatangan oleh

(COP DAN TANDATANGAN PERSEKUTU)

DR. MOHD AZLISHAH BIN OTHMAN

Pensyarah Kanan

Fakulti Kejuruteraan Elektronik & Kejuruteraan Komputer

Universiti Teknikal Malaysia Melaka (UTeM)

Hang Tuah Jaya

76100 Durian Tunggal, Melaka

Tarikh: 17/6/15

Tarikh: 17/6/15

"I hereby declare this report is the results of my own except for quotes as cited in the references"

Signature:  .....

Author : Nur Ain Binti Zamri

Date : 17 JUNE 2015 .....

"I hereby declare that I have read this report and in my opinion this report is sufficient in term of the scope and quality for the award of Bachelor of Electronic Engineering (Telecommunication Electronics) With Honours"

Signature

:  .....

Supervisor's Name

: Dr. Mohd Azlishah Bin Othman

Date

: 19/5/15 .....

Specially dedicated to all my beloved person in this world~

The most supporting and beloved parents

ZAMRI BIN SAARI

KALSUM BINTI OSMAN

My lovely and only younger brother

NUR AIMAN BIN ZAMRI

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## ABSTRACT

Home electric system using gsm for blackout notification is a project to detect blackout and send SMS notification to user immediately the blackout occur. In modern society, all equipment required electric supply all the time. It is the system that can detect and notify about the failure of the electricity supply is indispensable. One system that can sense blackout and send the notification to user have been created and developed. This system is important for a site that requires electricity all the time because it can detect and inform about power supply failure as they happen no matter what the reason though. This project uses the GSM as a tool to send SMS and microcontroller acts as the backbone of the control and send commands to gsm. GSM (Global System for Mobile communication) is a cell innovation utilized for transmitting portable voice and information administrations. Out of all cell advancements being used today, GSM is the most across the board. GSM is chosen because GSM is the same network worldwide and users are not charged a roaming fee for international calls. However, most providers still charge a service fee on international calls. The most obvious advantage of GSM is its widespread use throughout the world. GSM has a harmonized spectrum, which means that even though different countries may operate on different frequency bands, users can transfer seamlessly between networks and keep the same number. As a result, GSM users essentially have coverage in over 218 countries. This system can provide an enormous impact on industrial and residential areas.

## ABSTRAK

Sistem elektrik rumah menggunakan GSM untuk pemberitahuan blackout adalah projek untuk mengesan blackout dan menghantar pemberitahuan SMS kepada pengguna serta-merta blackout berlaku. Dalam masyarakat moden, semua peralatan merlukan bekalan elektrik sepanjang masa. Ini adalah sistem yang boleh mengesan dan memaklumkan mengenai kegagalan bekalan elektrik yang sangat diperlukan. Satu sistem yang boleh mengesan blackout dan menghantar pemberitahuan kepada pengguna telah diwujudkan dan maju. Sistem ini adalah penting bagi sebuah laman yang memerlukan elektrik sepanjang masa kerana ia boleh mengesan dan memaklumkan mengenai kegagalan bekalan kuasa sejurus ia berlaku tidak kira apa sebab sekalipun. Projek ini menggunakan GSM sebagai alat untuk menghantar SMS dan pengawal mikro bertindak sebagai tulang belakang kepada kawalan dan menghantar arahan kepada gsm. GSM (Sistem Global untuk Komunikasi Mudah Alih) adalah inovasi sel digunakan untuk menghantar suara dan maklumat pentadbiran mudah alih. Daripada semua kemajuan sel yang digunakan hari ini, GSM adalah yang paling menyeluruh. GSM dipilih kerana GSM adalah rangkaian yang sama di seluruh dunia. GSM mempunyai spektrum harmoni, yang bermaksud bahawa walaupun negara-negara yang berlainan boleh beroperasi pada jalur frekuensi yang berbeza, pengguna boleh memindahkan lancar antara rangkaian dan menyimpan jumlah yang sama. Akibatnya, pengguna GSM dasarnya mempunyai liputan di lebih 218 buah negara.. Sistem ini boleh memberikan kesan besar kepada bidang perindustrian dan kediaman.



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## LIST OF ABBREVIATION

GSM	- Global System for Mobile Communications
PLC	- Programmable Logic Controller
SMS	- short message service
WPCOM	- Wireless Power-Controlled Outlet Module
ETSI	- European Telecommunication Standard Institute
AT Commands	- Attention commands
LCD	-Liquid- Crystal Display
ADC	- Analogue to Digital Converter
CDMA	- Code- Division Multiple Access
D-AMPS	- Digital Advanced Mobile Phone Service
MMS	- multimedia messages



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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 Project Introduction**

The advancement of advanced data has driven the quick change in human way of life. The utilization of power is critical as one of the primary wellspring of vitality that is imperative in today cutting edge life. A few sorts of system utilizing accessible innovation could be utilized to lessen awful things happened if power outage happen. Therefore a model taking into account a microcontroller gadget utilizing SMS is created. It can consequently send warning quickly the power outage happen utilizing cell telephone.

In this correspondence innovation time, numerous investigates have been done to make another innovation that will match to their needs in current way of life. The expense of the gadget may be affected individuals before buying it. However there are a few individuals who couldn't care less about the cost yet continually searching for its innovation and the advantage of the item.

As the individuals are currently occupied with their work and once in a while have time at their home, a great checking and notice framework will be the answer for this issue. This undertaking is intended for the future home framework that will be outfitted with most recent innovation and gives relaxation for individuals. Subsequently it will give a major effect in home outline and will be the primary focus in innovative work (R&D) and business later on.

The primary thought is about the new era of homes electric framework. This framework is really customary homes turned exceptional utilizing the most recent innovation. This home electric framework is about completely robotized and it guarantees wellbeing, security and solace for everybody under its rooftop. By using development and complex advancements, life is made less demanding and more straightforward [1]. This venture is proposed to build up a home electric framework by utilizing Global System for Mobile Communications (GSM) [2] for power outage notice. The GSM Modem is utilized for empowering individuals to get notice as instantly the power outage happens through Short Messaging System (SMS) [3].

## 1.2 Problem Statement

Notwithstanding the purposes behind your energy cut, any disappointment of your mains power supply can be a disturbance. For some, however, a force power outage can be more than only an impediment. In the event that you have essential hardware that needs to be continued running, for example, in server room and you have to know whether there's a force disappointment notwithstanding when you are not there then this framework is imperative for you.

In advanced society, it is difficult to envision existence without power. Advanced gear obliges a constant supply of power, industry, as well as in the family unit. Take the instance of a standard icebox. In the event that you encounter a force off circumstance, your sustenance will be spoilt. In the event that you are away on a weekend trip or overnight business travel then your nourishment may be at danger if the force goes out. It can take simply an issue of hours in a firmly fixed fridge for things to begin ruining. This framework will send ongoing content warning. In the event that you are far from your home then call a companion or relative and have them begin the generator for you. On the off chance that you are conscious, then the instant message will wake you up and you can examine the issue or on the off chance that you know a circuit tester, they could come over and bail you out too.

In the other hand, considerably more vital, consider the possibility that the force disappointment "ruins" your business. Additionally, your aquarium and the sea-going life contained inside oblige power to survive. Power from the divider outlet is utilized for pneumatic machines, force heads, protein skimmers, programmed feeders, and the lights used to light up and heat the tank. Contingent upon to what extent the force blackout goes unnoticed, you could be confronted with a noteworthy fiasco, for example, loss of fish or demise to the whole Eco-framework. You will most likely need the framework that can let you know about the disappointment of power.

Other than that, these days individuals truly require the framework which can advise them in the occasion of force cut in the meantime can observing cooler, cooler, fish tank and aquarium. Returning home to discover your storm cellar overwhelmed is not a lovely ordeal. At the point when force is thumped out amid a tempest, it keeps your sump pump from working. Regardless of the possibility that you have a battery reinforcement, its decent to know whether its really supplying force.

A moment instant message warning can likewise help caution you when you're away on business or excursion. Brief cautions help you call a relative, companion, neighbours, or administration expert to help restore control and deflect catastrophe. This framework is an easy to distinguish loss of (force cuts). When power misfortune is recognized, warning SMS will be sent to your phone through the cellular telephone and/or sound a perceptible alarm to make you mindful of the influence disappointment.

### 1.3 Project Objective

The goal of this undertaking is to outline Home Electric System Using GSM for Blackout Notification. Also is to build up the framework that can screen electric system in home. Other than that, the reason for this framework is to make client simpler to make a move if power outage happen. At that point, it outlines to help the client by dodging any instances of mischance brought about by power outage. Other target is to add to a power outage warning that can wrap the whole home electric framework and send messages to the clients right away utilizing GSM. This system is obviously to enhance the accessible framework these days.

- To design a prototype of home electric system using GSM for blackout notification with a microcontroller.
- To develop the system that can monitor electric system in home and industry.

## 1.4 Scope Of Project

In this project, the main part that been covered is designing home electric system using GSM for blackout notification. In order to achieve the objective of the project, there is several scope of work that needs to be considered:

- The project focusing on designing home electric system using GSM for blackout notification.
- The features and function of project outcome:
  - To make the circuit of microcontroller and the GSM model.
  - To design coding for the microcontroller.
  - To simulate and analyse the system.
  - To detect the blackout.
  - Notified the user by sending the SMS.
  - Monitor electric system in house.
- The limitation of project work:
  - Experimental test in lab instead of real prototype.

## 1.5 Thesis Outline

This postulation contains of five parts. The principal part succinctly examines the diagram about the task, for example, Project Introduction, Project Objectives, Problem Statement, Scope of Work and Project Methodology.

Section 2 portrays about the exploration and data which is the writing audit of the venture. Each actualities and data, which are found through by any references has been chosen. This writing audit covers the entire things about the GSM. Further research that is identified with the brilliant home application has been done through this writing survey.

Part 3 will examine about the approach that have been utilized as a part of this undertaking. Approach is a standout amongst the most vital things in arranging of an undertaking. The undertaking must be seen first and afterward taken after via scrutinize about the past tasks that are identified with this task.

Part 4 depicts about the outcome and talk. In this part, the consequences of the task, all the issues experienced and discourse on the works will be exhibited. The outcomes that introduced here including the equipment and programming part.

To wrap things up, Chapter 5 covers the conclusion and suggestion of the venture. The conclusion depicts about the assignment that have been finished for the whole two semesters. Other than that, the proposal part is included request to give a sentiment furthermore for further change on future works.