

الآية

فَسَاءَ لِلَّذِينَ اسْتَفْسَدُوا آلِهَتَهُمْ مَا كَسَبَتْ ° وَعَلَيْهَا مَا اكْتَسَبَتْ ° رَبَّنَا لَا تُؤَاخِذْ تَسْلِيْنَا أَنُوْهُ أَخْطَا نَارَبَّنَا وَلَا
مَلْ عَلَيْنَا إِصْرًا كَمَا حَمَلْتَهُ عَلَى الَّذِينَ مِنْ قَبْلِنَا رَبَّنَا لَا تُؤَاخِذْنَا بِطَاغَةِ تَابِيْهِ وَاعْفُ عَنَّا وَاعْفِرْ لَنَا
وَارْحَمْنَا أَنتَ مَوْلَانَا فَانصُرْنَا عَلَى الْقَوْمِ الْكَافِرِينَ (صدق الله العظيم

[سورة البقرة : 265]

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ABSTRACT

This research presents the development of GSM-based control home appliances for smart home system. The main aim of the prototype development is to reduce electricity wastage. GSM module was used for receiving short message service (SMS) from user's mobile phone that automatically enable the controller to take any further action such as to switch ON and OFF the home appliances such as light, air-conditioner etc. The system was integrated with microcontroller and GSM network interface using assembly language. software was utilized to accomplish the integration. The system is activated when user sends the SMS to controller at home. Upon receiving the SMS command, the microcontroller unit then automatically controls the electrical home appliances by switching ON or OFF the device according to the user order. In other word, it read message from the mobile phone and response to control the devices according to the received message. The prototype has been successfully developed and it could provide an effective mechanism in utilizing the energy source efficiently.

المستخلص

هذا المشروع يعني باستخدام اساسيات تقنية ال GSM في تطبيقات أجهزة المنازل و الفكرة الاساسية لهذا المشروع تقليل فاقد الكهرباء في المنازل الناتج من الاستخدام السيئ لي الاجهزة .العنصر الاساس في هذا المشروع جهاز ال GSM ب الاضافة الى المتحكم الدقيق و جهاز ال GSM يستخدم لاستقبال رسالة نصية من المستخدم .

هذا النظام صمم مع متحكم دقيق ويتم الربط بين المتحكم الدقيق وجهاز ال GSM تطبقا لي بروتوكولات وبرامج توضع في المتحكم الدقيق .يتم تنشيط النظام عندما يرسل المستخدم رسالة فيقوم جهاز ال GSM باستقبالها الى المتحكم الدقيق الذي يحدد ما تعنيه الرسالة ثم يأمر بفتح او اغلاق الجهاز المعني سواء كان لمبة او أي جهاز اخر .

تم عمل النموذج بنجاح و يمكنه توفير الية عمل فعالة في استخدام مصدر الطاقة .

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LIST OF ABBREVIATION

GSM	Global system for mobile
RAM	Random access memory
ROM	Read only memory
OTP	One time program
SFR	Special function register
ALU	Arithmetical logical unit
A/D	Analog and digital
EEPROM	Electrically erasable programmable
CPU	Center process unit
MCLR	Master clear reset
G	Giga
SIM	Subscriber identity module
GPRS	General packet radio serial
TTL	Transistor -transistor logic
USB	Universal serial bus
pc	Personal computer
DCE	Data circuit terminating equipment
DTE	Data terminal equipment
SMS	Short message service
AT	Attention
MMS	Media message service
LED	Light-emitting diode
DC	Direct current
UART	Universal asynchronous receiver/transmitter
TXD	Transmitted data
RXD	Received data
AC	Alternating current
EMR	Electromechanical relay
SSR	Solid state relay
IC	Integrated circuit
EMI	Electromagnetic interference

PTC	Positive temperature coefficient
NTC	Negative temperature coefficient
RTD	Resistive temperature devices
MCU	Microcontroller unit
ADC	Analog digital convertor
TE	Terminal equipment
TA	Terminal adaptor