

الآية

قال تعالى:

(اللَّهُ لَا إِلَهَ إِلَّا هُوَ الْحَيُّ الْقَيُّومُ لَا تَأْخُذُهُ سِنَّةٌ وَلَا نَوْمٌ لَهُ مَا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ مَنْ ذَا الَّذِي يَشْفَعُ عِنْدَهُ إِلَّا بِإِذْنِهِ يَعْلَمُ مَا بَيْنَ أَيْدِيهِمْ وَمَا خَلْفَهُمْ وَلَا يُحِيطُونَ بِشَيْءٍ مِنْ عِلْمِهِ إِلَّا بِمَا شَاءَ وَسِعَ كُرْسِيُّهُ السَّمَاوَاتِ وَالْأَرْضَ وَلَا يَئُودُهُ حِفْظُهُمَا وَهُوَ الْعَلِيُّ الْعَظِيمُ (٢٥٥))

صدق الله العظيم

البقرة الآية (٢٥٥)

Dedication

To those who have enlightened our lives in all aspects, to those whom whatever I say or do I still owe them , to those who paved the path for my career , may education march and to those whom even I can't find the words to say how I am so grateful, I proudly dedicate this humble .

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Abstract

This thesis presents the design and implantation of a smart monitoring and control of environmental parameters in a greenhouse temperature-humidity and ambient light based on the feedback theorem as an embedded system. The thesis addresses the problems of conventional control for such parameter since the autonomous control helps and participates in improvement of the level of efficiency. The software code is developed using both Micro C for PIC and SQLITE while Proteus7.7 package is used as simulator program for development of the system. Tests obtained from the simulation environment and from actual hardware have shown that the system behavior is consistent with the requirements. This thesis makes communication between stations of greenhouse easy and simple, by using database and monitors.

المستخلص

هذه الرسالة تناقش وتتناول عملية تصميم لنظام مراقبة وتحكم ذكي للمتغيرات المتعلقة بالبيوت المحمية (حرارة – رطوبة-وشدة اضاءة). بناءً علي نظرية التغذية الخلفية كنظام مضمن Embedded System . وتعالج هذه الرسالة مشكلة التحكم التقليدي المستخدم للتحكم في هذه المتغيرات حيث ان التحكم الذاتي يساعد ويساهم في رفع مستوي الكفاءة. في البداية تم تطوير البرمجيات باستخدام برامج Micro C for PIC and SQLITE بينما استخدم Proteus 7.7 كبرنامج محاكاة لبناء الدائرة وتصميمها. واخيراً اجريت التجارب العملية وتجارب برنامج المحاكاة وتمت مقارنة النتائج العملية والنظرية ووجدت انها متطابقة تماماً بالتوافق مع الاهداف .

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Abbreviations

A/D	Analog-To-Digital Converter
ALU	Arithmetic Logic Unit
CPU	Central Processing Unit
CRT	Cathode Ray Tube
EEPROM	Electrically Erasable Programmable Read Only Memory
EOM	End of Message
EPROM	Erasable Programmable Read Only Memory
GUI	Graphical User Interface
IC	Integrated Circuit
ID	Identification
IDE	Integrated Development Environment
LCD	Liquid Crystal Display
LDR	Light Dependant Resistors
LED	Light Emitting Diode
MCU	Microcontroller Unit
OTP	One Time Programmable
PC	Personal Computer
PROM	Programmable Read Only Memory
RAM	Random Access Memory
ROM	Read Only Memory
SOM	Start of Message