

الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿وَقُلْ رَبِّ زِدْنِي عِلْمًا﴾

صَدَقَ اللَّهُ الْعَظِيمُ

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DEDICATION

**To my family
with love**

ABSTRACT

The use of cars has become an important necessity in people's lives, which led the widespread and growing use this led to the emergence of the problem of congestion and traffic congestion, especially in major cities. So as to increase and frequently used the automotive industry and in return, we find there are slow in the construction of paved roads.

This led to the emergence of the phenomenon of congestion and traffic congestion. Previous studies have provided solutions to this phenomenon. In thesis we are trying to provide a solution to this problem by using bulbs and light emitting binary lighted by solar energy. Also the use of wireless sensor to send a signal from the sensor to the

المستخلص

إن إستخدام السيارات أصبح ضرورة مهمة في حياة الناس مما أدى للانتشار الواسع و المتنامي في استخدامها أدى هذا إلي ظهور مشكلة الازدحام و الاختناق المروري خاصة في المدن الكبرى. وذلك لازدياد صناعة السيارات وأستخدامها بكثرة وبالمقابل نجد هناك بطئ في تشييد الطرق المسفلته. هذا أدى لظهور ظاهرة الازدحام و الاختناق المروري. قدمت دراسات سابقة حلولاً لهذه الظاهرة. في هذا البحث نحاول تقديم حل لهذه المشكلة باستخدام لمبات ثنائي الباعث الضوئي و انارتها عن طريق الطاقة الشمسية، أيضا تم أستخدام شبكة الاستشعار اللاسلكية لارسال الاشارة من الحساسات لوحدة التحكم. نتائج المحاكاة باستخدام برنامج بروتوس بينت ان أداء النظام جيد تحت ظروف التشغيل المختلفه .

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LIST OF ABBREVIATIONS

AC	Alternative Current
DC	Direct Current
EEPROM	Electrically Erasable Programmable Read Only Memory
GPRS	General Packet Radio Services
GSM	Global System Mobile Communication
GUI	Graphical User Interface
HID	High Intensity Discharge
IEEE	Institute of Electrical and Electronic Engineering
IR	Infra Red
LDR	Light Detect Resistor
LCD	Liquid Crystal Display
LED	Light-Emitting Diode
LR-WPAN	Low-Rate Wireless Personal Area Networks
MCU	Micro Controller Unit
PC	Personal Computer
PIR	Passive Infrared Sensors
PLC	Programmable Logic Controller
PSDU	Parking Status Display Unit
PV	Photovoltaic Electricity
RGB LED	Red, Green and Blue Light-Emitting Diode
RISC	Reduced Instruction Set Computing
SRAM	Static Random Memory
STE	Solar Thermal Electricity
VANET	Vehicular Ad-Hoc Networks
VIPs	Very Important Persons
WPANs	Wireless Personal Area Networks
WSN	Wireless Sensor Network
ZC	ZigBee Coordinator
ZED	ZigBee End Device
ZR	ZigBee Router