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AUTOMATIC GATE OPENING SYSTEM

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***Abstract*—**The project deals with a secure RFID gate system that uses IoT technology for better protection. IoT enables the use of internet in connecting different devices that are helpful in our day to day life. By implementing this technology in a gateway it enhances the system by providing more security. This type of a gate can be used in large organizations like Industries, Military or Defense area , Apartments etc. The system consists of RFID reader and tag, PIC micro controller, Motor, H-bridge Relay, IR Sensor . A H-Bridge Relay is used so that both opening and closing of gates can be done.

Keywords: *Liquid Crystal Display, Internet Of Things, Universal Asynchronous Receiver / Transmitter. Transmitter / Receiver, Cache Dynamic Random Access Memory*

INTRODUCTION

Every large organizations like apartments industries, military area etc are continuously accessed by the members of the organization orother people in need of them.These large buildings are also a storehouse of various data that are confidential that can be controlled and given access to only authorized members of the respective authority hence they must be well secured Safety of an organization mainly depends on its Gate security system because anyone who enters the industry or apartment need to pass through these gates So they must be monitored. This Project focuses on an unmanned gate security system that uses an RFID .

The project deals with a secure RFID gate system that uses IoT technology for better protection . IoT enables the use of internet in connecting different devices that are helpful in our day to day life. By implementing this technology in a gateway it enhances the system by providing more security.

This type of a gate can be used in large organizations like Industries, Military or Defense area , Apartments etc. The system consists of RFID reader and tag, PIC micro controller, Motor, H-bridge Relay, IR Sensor . A H-Bridge Relay is used so that both opening and closing of gates can be done.

PROPOSED SYSTEM

When an unauthorized vehicle approaches the gate he/she needs to inform the person they want to meet so that the person inside can login to the website and click the OPEN button to open the gate. An IR sensor is used to close the gate after the arrival of the vehicle.

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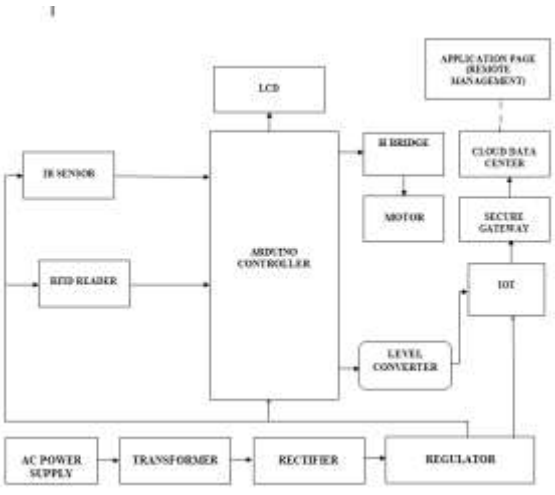
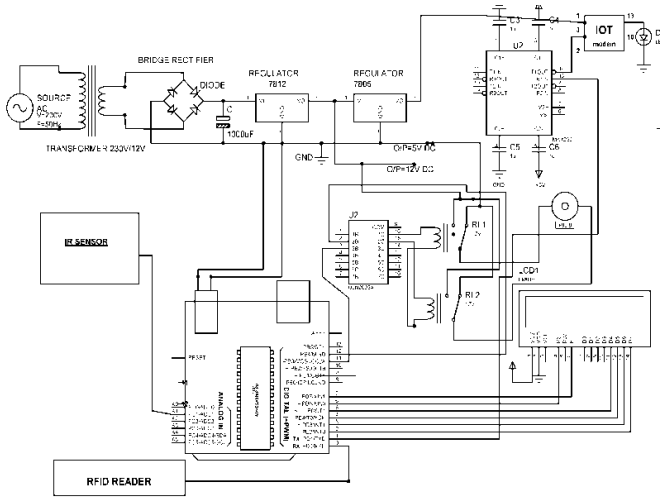
RFID tags began to be extensively used in vehicles to automate toll processes. The spontaneous electronic toll collection system depends on RFID.

BLOCK DIAGRAM



CIRCUIT DIAGRAM



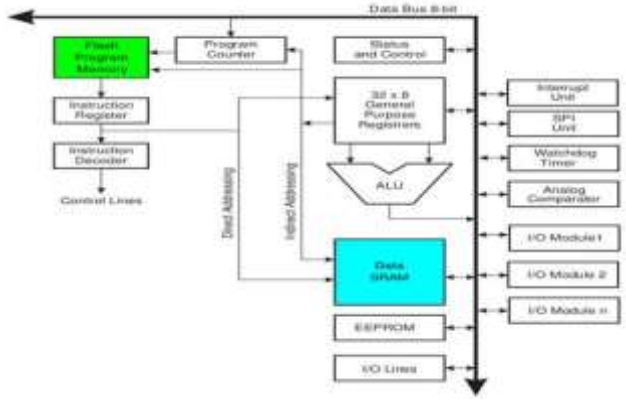
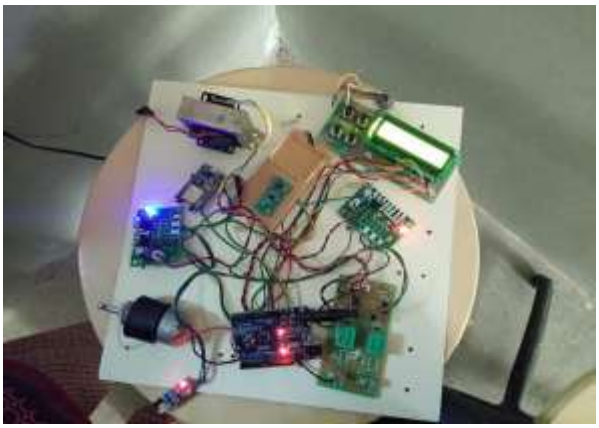


Fig: Architecture of ARDUINO Microcontroller

OUTPUT



CONCLUTION

The project carried out by us will make an impressing task in secure RFID gate system that uses IoT technology for better protection .This type of system can be used in large organizations(like industries, military or defense area ,tetc..).The authorized vehicle only allowed inside the gate with the use of RFID .When an un authorized vehicle approaches the gate he/she needs to inform the person they want to meet so that the person inside can login to Electromechanical Relay the website for open the gate.

REFERENCES

[1]. P.Kamalakannan.,M.Balaji.,A.Avinash., .Keerthana.,R. Mangayarkarasi. "*Automated toll collection with complex security system".(2010)*

[2]. Kittipatkhreasarn, Automatic gate using Bluetooth technology (Open the gate with the strength of the Bluetooth signal on the smartphone). 2018 International Conference on Digital Arts, Media and Technology (ICDAMT).

[3]. S.Jeevitha, A survey onrfid based automatic toll gate management. 2017 Fourth International Conference on Signal Processing, Communication and Networking (ICSCN).

[4]. Tong heng Lee, Internet-based monitoring of distributed control systems-An undergraduate experiment. 2016 IEEE transactions on Education.