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SMART HOME SECURITY SYSTEM

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Abstract: **Security is most important factor today. Technology develops day by day in the world. So, technology of security should be modern with time to protect the crime works. We decide to make a security project as our project. In this project we used laser light tiatiateobject crossover the laser line the security alarm will ringing and also the focus light will "on" to focus the entrance of unauthorized person. There are two parts of the system, one is transmitter part built with a LASER radiator, a pair of dry cell batteries, an on-0ff switch and a stand to hold it. The receiver side, there is a focusing LDR (light depending resistor) sensor to sense the laser continuously. The other Project is OBSTACLE AVOIDING ROBOT for security purpose of home. in this project we built a robot as a guard. if any person tries to enter the home the robot will try to stop that person at that moment. we use ultrasonic sensor and Arduino UNO and servo motor. The main scope of project is to automatically changing the direction of robotic vehicle as required whenever any obstacle comes on its way. here an ultrasonic sensor is used which detects the presence of any obstacle and sends the signal to microcontroller which changes the direction of the robot. KEYWORDS - LDR, Arduino UNO, LASER, Servo Motor,**

I. INTRODUCTION

A security system is defined as the detection of unauthorized entry into building and project area .The denial of such unauthorized access to prevent damage to property.Home security is foremost in residential. Home is place where valuable and appliance safe.Non automatic system were found to be unreliable.In this project the door were fitted with a lock and key system which could be opened easily.This feel will only arise when the home is equipped with reliable

II. THEORY

In general smart home system consist of two component.**Sensors measure in or around the home while actuators initiate actions based on collect data.**What makes technology smart.

III. BLOCK DIAGRAM

It can be explained by the following block diagram:

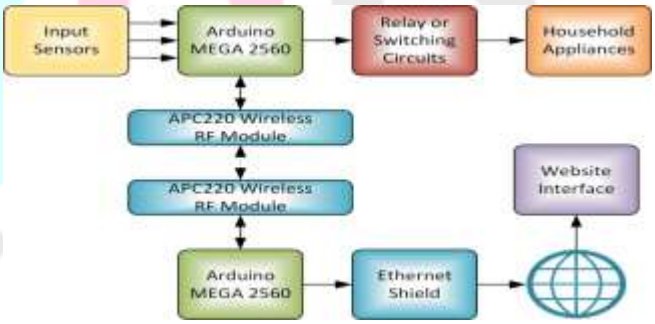


Fig: Block diagram of smart home security system.

There are following section of block diagram:

1. According to a recent survey,93% of America consider professional monitoring to be the most important feature for home security system.

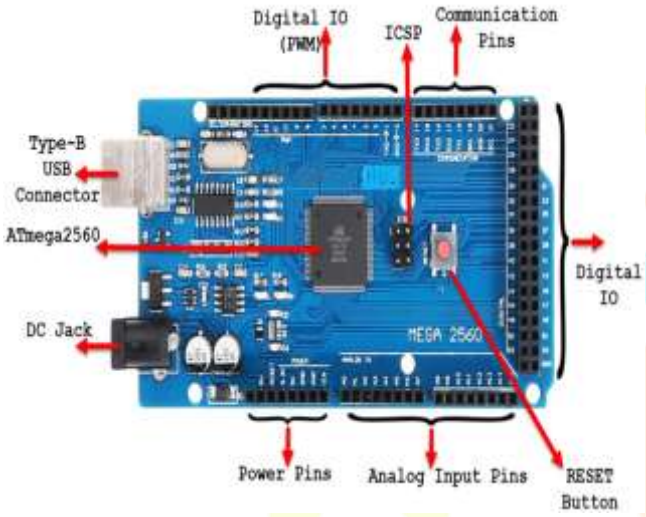
2. If someone attempts to break into home security.

3. It is enough for alarm to be notified immediate.

IV. COMPONENTS

- Arduino uno
- Arduino mega 2560
- RFID Module
- Fingerprint Sensor R307
- Jumper Wire
- LCD Screen 16X2
- Keypad
- Servomotor

1. ARDUINO MEGA 2560:



The Mega 2560 is based on the ATmega2560. It is a microcontroller board. It has 16 Analog inputs, 4 hardware serial ports, a 16 MHz crystal oscillator, 54 digital input/output pins which 15 can be used as PWM outputs, a USB connection, an ICSP header, power jack, and a reset button.

2. LDR MODULE:

LDRs are tiny light-sensing device also known as photoresistors.
An LDR is a resistor whose resistance change as the amount of time.

3. Push Button:

A push Switch is a mechanical device used to control an electric circuit in which the operator manually presses a button to actuate an internal.

5. POWER SUPPLY:

A battery converts chemical energy into electrical energy by means of an electrochemical oxidation-reduction (redox) reaction. This type of reaction involves the transfer of electrons from one material to another via an electric circuit.
Battery will provide power supply to the system for working. We have used 9v battery for this.

Buzzer:

A buzzer is based on inverse principal of piezo electricity discover. A beeper is a audio signal device. Which may be mechanical or electromechanical.

Motor:

An electric motor is a electrical machine that convert electrical energy into machnical energy. Most motor are operate through the interaction between the motor magnetic field and electric current.

VI. METHEDOLOGY

In our system IR sensor use for sensing.When any body came in the range of IR sensor then sensor send a singnal to microcontroller after that use for controlling and then which is use for beeping alarm

VII. RESULT

Home security system aim to protect your property and those inside it from burglary ,home intrusion,fire and other environmental disasters such as burst pipes.

VIII. FUTURE SCOPE

Home automation in getter popular day by day making it the basic requirement for future homes.Which will be smart enough to provide the best possible comfort to people.

Smart devices that are becoming integral part of our lives.There are a lot of smart device and integration available to user to perform daily house task like switching lights, and other device changing light colors, checking for home security like using cameras, locks that can be control by smartphone. There are many more technology that are under development to make our

IX. CONCLUSION

Home security is rapidly growing field and there are new &improved burglar alarms poping up everyday. With ripid advance of technology the filled is turning out to be an area full of scope and new changes can be made to more efficient.

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