**A PROJECT SYNOPSIS**

**On**

**VISITOR BASED FAN CONTROL**

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**Submitted**

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**Abstract:-**

In a rapidly flourishing world, automation has become the key factor in our daily life.

As we have reach in 21st century and now a days as technology is progressing and lot of modernization in the form of automation can be seen. Inspired from this fact we are developing a new idea of making a device which can control our fan speed according to the number of persons in Room. We will show the prototype with the help of DC fan. No fruitful steps have been taken so far in this area.

The idea behind the project Visitor based fan control is to control fan using microcontroller and electromagnetic switches i.e., relay, based on the variation in the number of persons detected by the Infrared sensor. So we will make it OFF or ON fan according to visitors

In this project we are using electromagnetic switches which are tripped according to number of persons sensed by infrared sensor.

Features **:**

* Time for each operation can easily be changed if required.
* Easy to use for day to day operation.
* Stand alone device – no computer or any other hardware required.
* LCD display
* Needs to be programmed only once.
* Easy to program.

Benefits **:**

* Accuracy to timings
* No manual intervention
* Saves man power and money
* Easy programming with the help of manual.

In this project we have used 8051 microcontroller.20th pin of microcontroller is ground whereas 40th pin is supply. The system comprises a small electronic unit with a IR sensor, which is fixed out side the entry door to control a Fan. When a person enters it is sensed by IR sensor, the relay is use to operate Fan. And accordingly number to visitor will be displayed in LCD. And when person leave the room fan gets Off. This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

**Project Requirement:-**

* Hardware
* Power supply.
* 7805 voltage regulator.
* AT89C51.
* LM358
* IR sensor.
* LCD.
* Electromagnetic Relay
* Resistors.
* Software:-
* Keil uVision 4 for programming
* Proteus Professional Suite for Simulation

**Future Enhancements Possible**

* We can also provide automation to our other home appliances like bulb, AC etc by using IR sensors. This will also save energy as our appliances will be off when there is no one present in room.
* We can provide automation to our home appliances using motion sensors or mic also.