TECHNICAL PROJECT REPORT

Title of Invention / Project:

Team Members / Inventors:

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***Section – 1 (IPR Related)***

Brief Abstract

* We need not to switch on and off the fan from time to time according to our requirements.
* It saves electricity as it automatically gets off when not required as sometimes we forget to switch off the fan.
* It adjusts the fan speed according to the room temperature and keeps our health in a good state.
* This project can be used in Home.
* It Acts As a Deterrent

Led motion sensor lights are a very good deterrent against burglars because it will be much harder to break into homes and  remain unnoticed in a house which is lit properly. So Led motion sensor lights are an effective way to increase your home security without spending a fortune on sophisticated alarms and lighting systems.

Motion Sensor

The sensor motion is very reliable because it uses body heat and wave lengths to calculate whether there is a movement or not, hence you can be certain that it won’t fail. You can also adjust the amount of sensitivity otherwise it will switch on even when a fly crosses its path. The idea that motion sensors will be activated even if the tiniest of motions is detected, is very unrealistic.

* Electrical Efficiency

Having Led motion sensor light technology is very efficient because the eventuality of leaving your lights on by mistake is totally eliminated. Many homeowners are opting to install such motion sensors into your rooms to eliminate this problem thus resulting in an environmentally friendly solution and in the end you pay less in electricity bills because there is no redundancy of electricity.

Existing state-of-the-art and Drawbacks in existing state-of-the-art

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| --- | --- | --- |
| **S. No.** | **Existing state of art** | **Drawbacks in existing state of art** |
| 1 | Temperature control fan | Extra power loss if forgot to switch off |
| 2 | Motion detector light | Extra power loss if forgot to switch off |

Novel/Additional modifications that you can propose to improve upon drawbacks

* *Due to motion detector the light will switch off automatically when there is no movement*
* *The fan speed will automatically change according to temperature.*

Advantages

* Motion Sensor

The sensor motion is very reliable because it uses body heat and wave lengths to calculate whether there is a movement or not, hence you can be certain that it won’t fail. You can also adjust the amount of sensitivity otherwise it will switch on even when a fly crosses its path. The idea that motion sensors will be activated even if the tiniest of motions is detected is very unrealistic.

* As mentioned before Led motion sensors can be installed anywhere, whether it is a driveway, a yard, a porch or a garage. This is very practical because you don’t have to check the entire house to make sure none of the lights have been left on. This would prove to be a very frustrating experience especially if you have already gone to bed.

Block Diagram



***Section – 2 (Real Project)***

Materials

* Motion Detector(PIR)
* Motor
* Batteries(\*2)
* 2-Way Relay
* Temperature Detector(DHM-114)
* Arduino UNO
* Jumping wires
* Bulb Holder

Circuit Diagram

Steps of Circuit Completion

* Bluetooth to Arduino



* Motion Sensor (PIR) to Arduino



* Arduino to relay



* Battery to Motor



* Relay to Motor



* Relay to Bulb Holder



* Arduino and Battery



* Final Project



Program Code