SMART CLASSROOM AUTOMATION

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Abstract—**with advancement of Automation technology, life is getting simpler and easier in all aspects. In today's world Automatic systems are being preferred over manual system. With the rapid increase in the number of users of internet over the past decade has made Internet a part and parcel of life, and IoT is the latest and emerging internet technology. Internet of things is a growing network of everyday object-from industrial machine to consumer goods that can share information and complete tasks while you are busy with other activities. Wireless Home Automation system(WHAS) using IoT is a system that uses computers or mobile devices to control basic home functions and features automatically through internet from anywhere around the world, an automated home is sometimes called a smart home. It is meant to save the electric power and human energy. The home automation system differs from other system by allowing the user to operate the system from anywhere around the world through internet connection. In this paper we present a Home Automation system(HAS) using Intel Galileo that employs the integration of cloud networking, wireless communication, to provide the user with remote control of various lights, fans, and appliances within their home and storing the data in the cloud. The system will automatically change on the basis of sensors' data. This system is designed to be low cost and expandable allowing a variety of devices to be controlled.**

Keywords—Blood Bank; Donor; Admin;

1. INTRODUCTION

This project is implemented for the purpose of getting a classroom fully Smart and Automatic. The aim of the project is to make the peripherals in a classroom fully automatic like the curtains, projector screen, lights etc. This project can simplify the total routine of the class structure.

„SMART CLASS AUTOMATION" is a raspberry pi based project designed for making a class fully automated using sensors and relays. The sensors detect the motion of the human. The project uses different type of interfaces to automate the classroom.
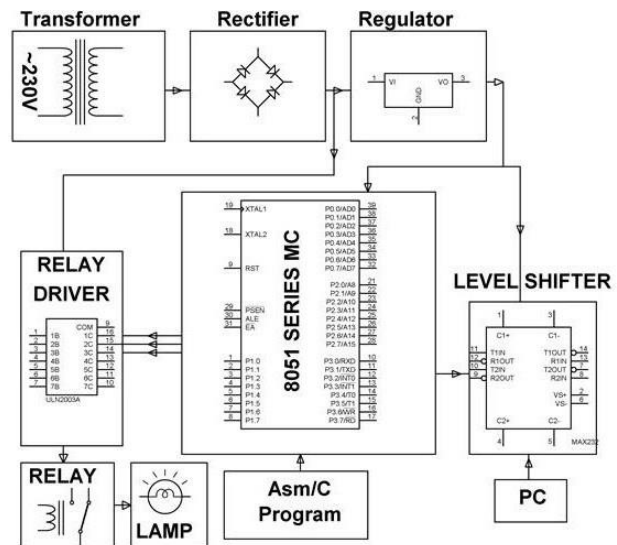
Smart class Automation will help class to automate and save electricity, automation is the need of modern era where IOT is of essence. And that is what we are exactly doing in this project a combination of modern classroom with saving electricity.

2. Literature Review :

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1. Existing Methods: Shekhar H. et al discussed about the concept of eliminating the black board and replacing them with the smart electric board is discussed[1]. Dong-oh Kang et al has clearly pointed the applying SoD (System on-Demand) technology to the smart class by resilient usage of smart devices like smart phones and smart pads, which adopts I/O virtualization, system virtualization and application virtualization techniques[2]. M. Kim and N. Y. Chong focuses on implementation on electric board by eliminating the black boards[3]. G. Tanganelli C et al has defined the use CoAPthon, an open-source Python-based CoAP library, which aims at simplifying the development of CoAP-enabled IoT applications[4].

2. Smart classrooms: Existing smart classrooms system more focuses on providing digital forms of teaching and learning experience at the same time being a little rich to afford as it consists of a PC integrated with the classrooms. The smart classroom system does not allow controlling physical appliances inside the classroom through software.

3. College Automation: PLC''s are widely used for such large automation applications. PLC
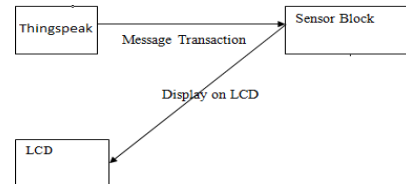can be Used to automate the college.
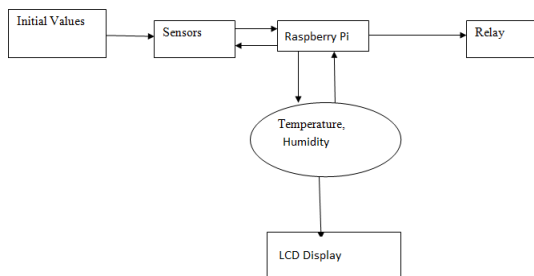
3. Proposed System

Problem Statement:
To implement Smart Class automation system

Objectives:

- Save electricity by automatically turning off lights, fans and projector when no one is present in classroom.
- When turned on projector mode, Window curtains will close automatically and projector screen will be rolled on.

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4. Contribution work:

The information is very difficult to retrieve and to find particular information like- E.g. - To find out about the current status of devices the user has to go through various registers. This results in convenience and wastage of time.
Also maintaining pir sensor is very time consuming task. This will create complexity in work.
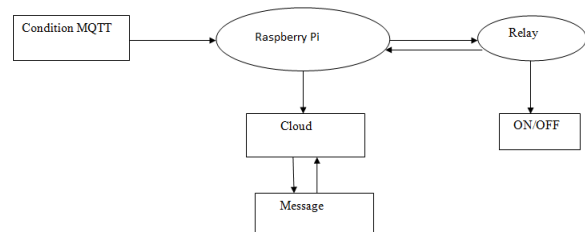
5. Conclusion:

Moisture transport in building materials poses serious problem, both to human comfort and structure integrity of building materials .It is essential to be able to determine the conditions and characteristics that cause moisture across porous materials.

.Problem to calculate amount of blood in stock. Difficulty in identifying blood expiry date.

In future we must overcome this drawback by using modern technology.

6. Result:

In this project we conserving energy by simply turning off electronic appliances when no one is around.

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