IOT Based Smart Home Automation System Using Sensor Node

This project presents a proposal for home automation using iot. Home automation or domestics a term for home automation coined by Jim Hill has been evolving drastically. We saw many home automation technologies introduced over these years from Zigbee automation to Amazon Echo, Google Home and Home from Apple. It has become a craze these days.

The main aim of this project is to design an IOT based home automation which can be used to regulate the speed, measure the gas weight and control the intensity of the light. This system consist of LOAD cell is used to detect the weight of LPG gas cylinder and alert the user through mail if the gas cylinder weight crosses the set limit.

The main controlling device of the project is PIC microcontroller. Load cell, DC fan, along with transistor, DC light along with transistor and esp8266 wi-fi module are interfaced to the microcontroller. The system is implemented using ordinary household appliances controlled from blynk app and data sent to the microcontroller, the microcontroller in turn ON the devices and regulate the fan speed also control the light intensity accordingly. Microcontroller will continuously read the weight of cylinder and sending the mail alert when the gas level goes behand the set limit. The microcontroller used is esp8266 Wi-Fi module and the communication between the microcontroller and the blynk mobile application via Wi-Fi (Internet). The Microcontroller is programmed by using embedded C language such that it is capable of performing the task of the project.

The main objectives of the project are:

- Design a smart home automation.

- Using IOT blynk mobile Application.
- Automatic GAS level alert through mail.
- By using this system, we can regulate the fan speed and control the intensity.
- Using PIC Microcontroller to achieve this task.

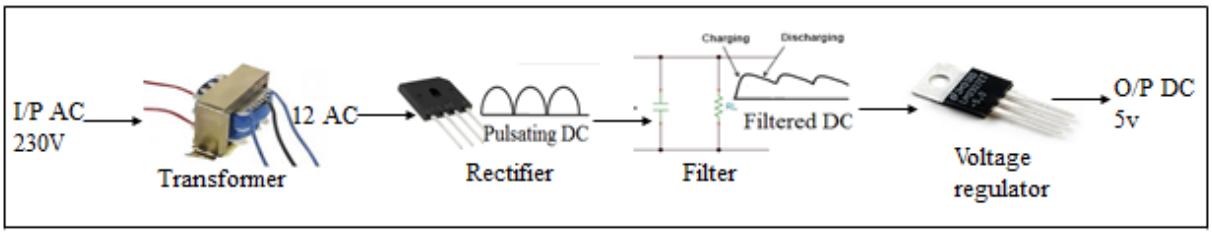
The main building blocks of the project are: PIC microcontroller.

- Regulated power supply.
- PIC Microcontroller.
- Esp8266 Wi-Fi module.
- DC fan.
- DC light.
- Transistor.
- Loadcell.

Software's used:

- PIC-C compiler for Embedded C programming.
- PIC kit 2 programmer for dumping code into Micro controller.
- Express SCH for Circuit design.
- Blynk app.

Regulated Power Supply:



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