

# Touch Screen Based Home Automation System

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## Abstract:

In previous home automation systems operated fully on mechanical concept which increase its cost and maintenance. In smart Home automation we can intelligently control lighting, and security also that's why we can say it as a versatile technology and we can control home appliances from a maximum distance which is effective. In this system it helps a user to operate switching various appliances and lighting devices from a single input. For input we used Touch screen. In our project, where we can easily access the process through mobile. And for larger distance we use the GSM module.

**Keyword:** GSM Module, Zigbee Module, Touch screen, MQ2 sensor, PIR sensor.

## I. INTRODUCTION

In 1<sup>st</sup> paper of home automation includes to improving the quality and its life by facilitating a flexible, comfortable and its worth for secure surrounding [1].

As technology is changing day by day that's why houses change into smart house. Now a days we can see the smart homes are changing from straight switches to federal control system, it contain switches as touch screen. Touch screen control panels are also designed for commercial, industrial and medical systems and it is household activity. Home automation include centralized control of lighting, HVAC appliances, and other systems to provide improved convenience, comfort, energy efficiency and security. In our system we use touch screen to operate few electrical equipment and primarily concentrate on showing how touch screen can be used for home automation system. Home automation by using GSM and Zigbee, we can expand it in future for better performance. We use ZigBee as a wireless module for data transmission.

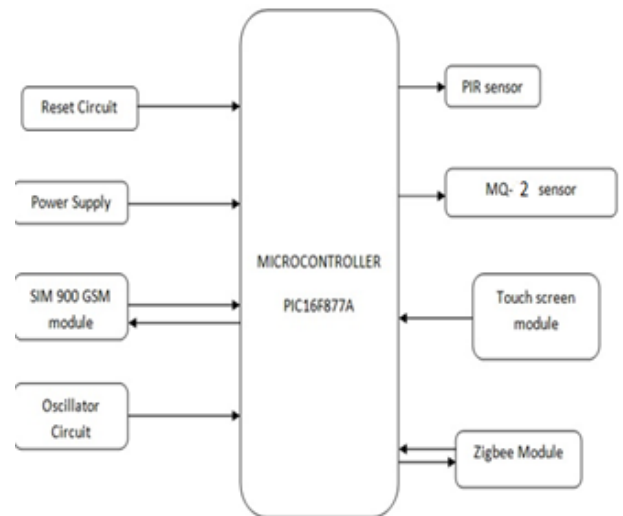
## II. SURVEY

For making our system we referred some papers and journals and components. Home automation based on Bluetooth shows the controlling appliances using Bluetooth but have limited range[2]. Home automation based on ADK technology which is mainly useful for handicapped people[3]. Home automation based on WI-FI shows the wireless access to appliances[4]. Home automation based on Zigbee shows the long distance HVAC control[5]. It is household activity, it may include HVAC(Heating ,ventilation and air conditioning).

## III. PROPOSED METHODOLOGY

### Block diagram

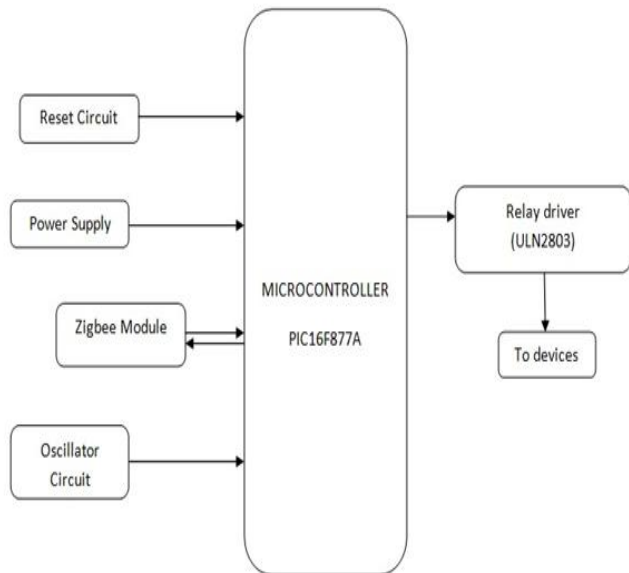
- **Transmitter section**



Figure(1). Transmitter section

- **Receiver section**

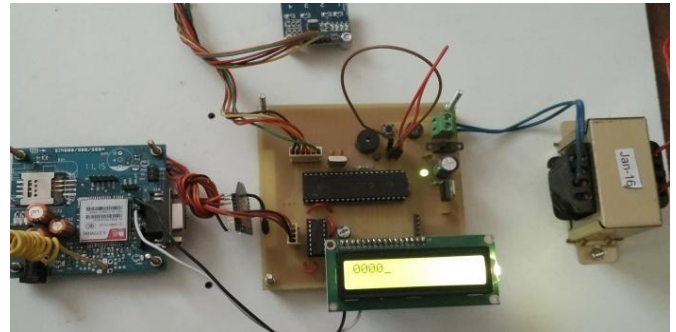
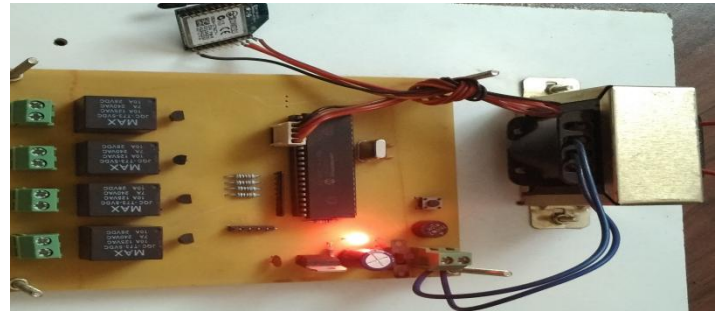
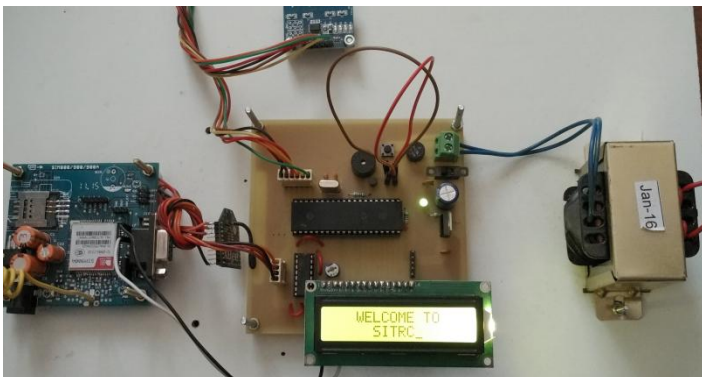
The general circuit network with low cost, for any user it gives flexible data, site or failure of each end user does not affect other sites to expand, for household appliances, our selected topology is most suitable for solving the general circuit conflict, the use of master-slave structure. In transmission medium there is a communications carrier, for improving quality we use realistic selection of transmission medium and cost-effective communication, so we use ZigBee.



Figure(2). Receiver section

#### IV.RESULT

ZigBee is a very flexible wireless data transmit without connecting wires, which takes typical communication space of 75 meters and its expansion is infinite, it consists of 65,000 wireless data transmission network modules, so people can manage the supplementary room's gadget from any location in home and see result on display of screen. Each ZigBee network not only can serve as a monitoring object, it can be straight coupled to the sensor for collection and data monitoring, can also automatically transfer from other network nodes data smart Home Appliance Status suggestion Control and System Using GSM Cellular phone containing SIM (Subscriber's Identifying Module) card has a specific number through which Communication occurs. The style of communication is wireless and machinery works on the GSM (Global System for Mobile communication) technology. Here, the user transmits instructions to the system to organize the devices through SMS. The msg send by user is received through GSM handset send status to user's mobile. For that purpose we need a valid SIM card and has to be ready with an AT Modem for sending AT commands. The handset can be made in AT modem with UART interface and helps AT command advice.



#### V. CONCLUSION

In our proposed system to operate electrical equipment we use touchscreen panel and primarily concentrate on showing how touch screen help for home automation system. This system has attractive feature such as SMS-Email notification and also we use a GSM module which provides simple and easy way to control the household appliances with a single SMS. Also the protection and one of precautions system can be easily installed in the house and used.

#### VI. REFERENCES

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