

MINI PROJECT SYNOPSIS

1. Mini Project Topic

HOME AUTOMATION SYSTEM

2. Details of group members

University roll no.	Name	Mobile No.	Email ID
1901640130005	Aditi Shukla	97943313133	aditishukla9794@gmail.com
1901640130028	Harsh Raj	9140965614	harshbasketball06@gmail.com
1901640130061	Shreya Singh Rathour	7380652352	shreyarathour0914@gmail.com
1901640130066	Vishesh Jain	8756413701	visheshj.vj68@gmail.com

3. PROJECT OVERVIEW/BACKGROUND:

• INTRODUCTION:

There is an increasing demand for smart homes, where appliances react automatically to changing environmental conditions and can be easily controlled through one common device.

Home automation is the residential extension of "Building Automation". It is the automation of the home, housework or household activity.

• OBJECTIVE:

In this project, our prime objective or goal is to assist handicapped or old aged people. This paper gives a basic idea of controlling various home appliances and provide a security using android phone or tablet. Our prime objective is to

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- **BENEFITS TO THE SURROUNDING/SOCIETY:**

It is the expectation that adapting smart home automation (SHA) would lead to reduced electricity usage in the household and overall environmental advantages. The research showed that the use of home automation system could have a positive impact on the local peak load demand and reduction of energy consumption.

4. METHODOLOGY:

PROPOSED TECHNIQUES OR METHODS TO BE IMPLEMENTED:

- **IOT (The Internet Of Things)-** describes the network of physical objects- things- that are embedded with sensors, software, and other technologies for purpose of connecting data with other devices and systems over internet
- **IFTTT (If This Then That)-** is a web based service that allows users to connect between web services so that when something happens with one service, a trigger goes off and action takes place automatically.

ADVANTAGES:

- The main advantage of home automation through android mobile is that the physically challenged and disabled people can use it easily.
- Control home appliances from anywhere.
- You will receive an e-mail or sms for any activity.
- Helps for safety purpose.
- Monitoring 24/7.
- To improve convenience, comfort, efficiency and security.

- **LIMITATIONS:**

The biggest problem of a smart home system is the cost. This is something only few can afford.

The basic requirement for the smart home system is the internet. Without it, you will not be able to take control.

APPLICATIONS:

- It allows you to control wall switches, blinds, lamps etc. You are able to schedule the time lights should turn on and off. You can also control all others electrical appliances like fan, AC etc.
- It also has temperature and humidity detection techniques which gives you the exact temperature and humidity level of the surrounding.
- Lastly, it has smoke detectors which are one of the smartest sensors. They can be integrated with a hub for receiving instant notification if some problem occurs.

5. PROJECT REQUIREMENTS:

1. NODE MCU
2. RELAY BOARD
3. BREAD BOARD
4. DHT11(Temperature & Humidity Sensor)
5. MQ-2 GAS/SMOKE SENSOR
6. JUMPER WIRES

6. REFERENCES:

- <https://create.arduino.cc/projecthub/pawan-kumar3/home-automation-using-google-assistant-88c5c8>
- <https://ifttt.com>

Signature of Mini Project Co-ordinator:

Signature of H.O.D.:

