

# Home Automation System

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**Abstract-** Controlling most appliances in your home with the touch of a button. With the way the tech market keeps growing, that vision will soon become a reality. In fact, a recent article from Business Insider declared, “Homes around the world are going to become smarter and more connected over the next five years. A smart home is essentially one whose appliances and features can be controlled with a wireless device such as a Smartphone or tablet. Light switches, thermostats, fans, security cameras and locks can be operated using a phone. The user can either set a schedule for the devices or manually turn them on and off when he/she wants. One of the devices that serve as an indication of this trend is the Home Automation System with Bots. Within a decade, our living spaces will be enhanced by a host of new devices and technologies, performing a range of household functions and redefining what it means to feel at home. We are already entering this new era. In two years, we expect to see more items in our living space become interconnected—the formative first stage of a new home ecosystem. In five years, numerous tools and devices in the home will be affected. And in ten years, smart homes will become commonplace and will regularly feature devices and systems with independent intelligence and apparent emotion.

## I. INTRODUCTION

Home Automation System is an android application in which electric boards will be replaced by touch screen boards, which can be handled by the Smartphone application. In this project we are connecting raspberry pie with relay so that relay will trigger from 5 V to 240 V.

Raspberry pie is used to handle the operating system and motherboards. Patch cords are used to connect relay and raspberry pie. Memory card is use to store the operating system and software. The user can either set a schedule for the devices or manually turn them on and off when he/she wants. One of the devices that serves as an indication of this trend is the Home Automation System with Bots.

The new home will be built on a foundation of platforms and ecosystems, whose producers will need to, establish new levels of trust with their customers. Competition will take place not just for the consumers who inhabit the smart home, but for the interactions between consumers and

home bots that increasingly will shape buying behaviour. It's not too early for a wide range of players to start laying the groundwork for success in the home of the future.

The home automation systems offer convenience and sophisticated measures to operate various electronic products within the household. This report describes the drivers, restraints, opportunities, and challenges pertaining to the home automation system market. It further analyzes the current market scenario and forecasts the market till 2022, including the market segmentation based on product, software and service, and geography.

## II. FIGURES

Fig.1. Working of GSM Module: The SIM card mounted **GSM modem** upon receiving digit command by SMS from any cell phone send that data to the MC through serial communication. While the program is executed, the **GSM modem** receives command 'STOP' to develop an output at the MC, the contact point of which are used to disable the ignition switch.

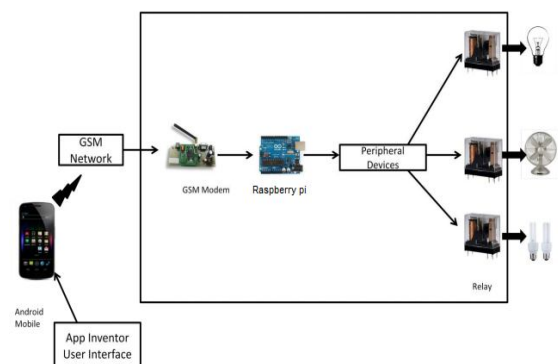


Fig. 1 Working of GSM module

Fig.2. Android Application User Interface: Android provides a variety of pre-built UI components such as structured layout objects and **UI controls** that allow you to build the graphical user interface for your app. Android also provides other UI modules for special interfaces such as dialogs, notifications, and menus.

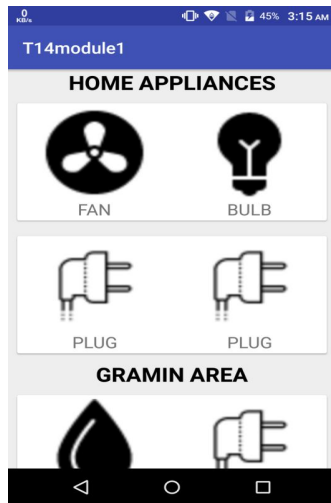


Fig. 2 Android Application User Interface

Fig.3. Android Application Working: *User android device will be connected through a wireless network, Soft buttons are provided to turn on/off the appliances remotely within the Wi-Fi range through the android application*



Fig. 3 Android Application working

### III. CONCLUSIONS

It is evident from this project work that an individual control home automation system can be cheaply made from low-cost locally available components and can be used to control multifarious home appliances ranging from the security lamps, the television to the air conditioning system and even the entire house lighting system. And better still, the components required are so small and few that they can be packaged into a small inconspicuous container.

The designed home automation system was tested a number of times and certified to control different home appliances used in the lighting system, air conditioning system, heating system, home entertainment system and many

more (this is as long as the maximum power and current rating of the appliance does not exceed that of the used relay). Finally, this home automation system can be also implemented over Bluetooth, Infrared and WAP connectivity without much change to the design and yet still be able to control a variety of home appliances. Hence, this system is scalable and flexible

### IV. ACKNOWLEDGMENT

First, we would like to thank our guide Prof. Ritesh Shrivastava, because of their guidance we are able to do our project successfully during the entire course.

We are also highly obliged to Prof. M.S.Khatib, Head, Computer Science and Engineering Department, for providing us with the help that would be contributing in our project.

We would also like to give thanks to honourable Prof. Dr. Sajid Anwar, Principal, A.C.E.T Nagpur.

Finally, we would like to thank all those who have contributed, directly or indirectly to make this project successful.

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