**ABSRACT:**

**HOME AUTOMATION USING WIFI**

The project aims at designing an advanced home automation system using Wi-Fi technology. The devices can be switched ON/OFF using a Personal Computer (PC) through Wi-Fi.

Automation is the most frequently spelled term in the field of electronics. The hunger for automation brought many revolutions in the existing technologies. These had greater importance than any other technologies due to its user-friendly nature. These can be used as a replacement of the existing switches in home which produces sparks and also results in fire accidents in few situations. Considering the advantages of Wi-Fi an advanced automation system was developed to control the appliances in the house.

Wi-Fi (Short for Wireless Fidelity) is a wireless technology that uses radio frequency to transmit data through the air. Wi-Fi has initial speeds of 1mbps to 2mbps. Wi-Fi transmits data in the frequency band of 2.4 GHz. It implements the concept of frequency division multiplexing technology. Range of Wi-Fi technology is 40-300 feet.

The controlling device for the automation in the project is a Microcontroller. The data sent from PC over Wi-Fi will be received by Wi-Fi module connected to Microcontroller. Microcontroller reads the data and decides the switching action of electrical devices connected to it through Relays and Triac witches. The Microcontroller is programmed used embedded ‘C’ language