

**Title:**

Development and Implementation of a Home Appliance Automation Device using a Mobile Phone and Wi-Fi Connection

**Rationale:**

Today's people lead more hectic lives and have an insatiable need for simplicity and convenience in all aspects of their existence. Many people frequently fail to remember to turn off their appliances. People are typically in a rush whenever they leave their homes or go to a new location since their schedules are so full. There are also occasions when we question whether or not we turned off the appliances in our home, which leads to either continuing to worry about it or making the impulsive decision to get back there to double check everything. Because of the packed agenda, attending events like this takes a lot of time and can be stressful. Additionally, if you fail to remember to switch off the appliances, this will lead to an increase in the amount of electricity that is used.

The United Nations (UN) is of the opinion that It is estimated that approximately one billion people, or fifteen percent of the global population, are currently living with one or more disabling conditions. More than 46% of older people (those 60 and up) have some kind of disability, and more than 250 million older people have a disability that ranges from mild to severe. When there are individuals like this around, even simple tasks like turning the lights on and off will be difficult. They have no choice but to rely on another individual to activate the lighting and turn off the fan.

In this day and age, the average home is filled with a variety of different appliances. Electricity is being used up by each and every one of these pieces of equipment. In our fast-paced world, we frequently forget to turn appliances off, and when we do remember, we are sometimes too lazy to get up and press the button. The elderly and people with disabilities will have a considerably more difficult time with this task. In light of these considerations, the researchers are

of the opinion that it is necessary to work on finding a solution to this problem. The answer not only relates to reducing the amount of human work, but it also emphasizes saving energy and making better use of time. The primary goal of this is to assist people who are disabled or old by giving them the capacity to operate appliances and improve their quality of life. In the absence of this, these individuals could be forced to rely on the assistance of a caregiver or an institution.

### **Statement of the Problem:**

The study aims to develop a device that will aid in controlling of Home Appliances using Mobile Phone. Specifically, it sought to answer the following questions:

1. How does the Home Appliance Automation contribute in terms of:
  - 1.1. Reducing the amount of human work?
  - 1.2. Making better use of time?
2. What is the effectiveness of the designed and implemented Home Appliance Automation device in terms of the following indicators:
  - 2.1. Accuracy; and,
  - 2.2. Functionality?
3. What is the significance of the device in the following sectors:
  - 3.1. Individuals; and,
  - 3.2. Persons with disabilities; and,
  - 3.3. Elderly

### **Scope and Limitations:**

The purpose of this research is to develop a way through which a mobile phone may be used to control (i.e., turn on and off) various home appliances. A variety of home appliances will be tested to determine whether or not they are capable of being turned off and on. An application

for mobile devices will be developed that can act as a button to control the various home appliances. Additionally, because it is based on WiFi, the system is able to accept a wide range of distances. Even when the user is not physically present in the house, they are still able to operate the devices that are there. Access to home appliances may still be attained through a mobile device as long as it is equipped with a WiFi connection. Nevertheless, the problem of regulating television stations and the number of settings on electric fans is not covered in the research.