

ITSP ABSTRACT

Application controlled power system

We are focusing on the power needs of the world. We often forget to turn off the equipments of our residence. As some appliances are meant to be switched on so we cannot even switch off the main switch.

Keeping this fact in mind we are making a app controlled switching system in homes for individual appliances so it is convenient for them to switch the appliances as per their requirements.

Our approach

We will design the electronics system which will consist of one processing unit (Raspberry pi) And for communication wifi will be used.

The electronic switch will replace the main switch which will consist of relay(as larger amount of current is needed in most our home appliances) which will be actuated from the signal of main processing unit. The relay will be connected to H-bridge to which processor will send signals to change its state.

Components required

Raspberry pi(whole kit)-Rs-4500

Relay switches-Rs-100(2pcs)

L293D(or similar)-Rs-100(2pcs)

Battery eliminator(240ac to 12dc)-Rs-400

Wifi module(for communication)-\$7(eBay)

Week 1

We will learn Raspberry pi programming and retrieving information from wifi module integrated to it. We will start designing the electronic circuit.

Week2

We will simulate our electronic circuit by giving signals by ourselves and then start to write the code for Raspberry pi to give signals H bridge. We will start to learn the android app programming.

Week3

We will start to build our android app for the purpose. The app will be using wifi of mobile to communicate to the hardware implanted in the house. If it completed till this stage , we will try to increase the range by replacing wifi communication by mobile networks.

Week4

Furthur developments will take place, according to the progress done so far. Which will include not only switching on or off the appliances but also controlling them at required pace and power. We will try to make the app more user friendly and more compatible so, that users can easily use the app to their required purpose.