DIY Team Project

Report of TEAM 19

Team Members :

Chirag Ghosh (20CS10020)

Soni Aditya Bharatbhai (20CS10060)

Abhijeet Singh (20CS30001)

Gopal (20CS30021)

Problem Statement : Controlling home appliances remotely using Arduino.

Motivation : We saw the IoT videos provided by DIY IITKGP. Moreover the recent increase in the popularity of smart appliances in the market motivated us to make a smart project of our own.

Objectives : To create a user-friendly way to control home appliances using Arduino and Node-red. Additionally we also wanted voice control feature along with the touch-screen switch operation through mobile phones.

Work done :

1. We have successfully set up the hardware consisting of Arduino UNO AtMEGA328p , breadboard and relay modules.

2.We have successfully created the node red dashboard and also integrated it with arduino board and Google home.

3.After research we decided to use Standard Firmata code for our project.

4. Using smart NORA , we connected our node-red dashboard with Google Assistant.

Summary : We have successfully created a working model that enables virtual operation of home appliances. For the same we used Arduino board in combination with Standard Firmata code, Node Red ,NORA server and Google Home mobile application. The project works for different sets of appliances and enables the user to operate two appliances at the same time. We have tested the project several times through different mobile phones and the set-up is working perfectly.

Conclusions : All the software and hardware components are working in good coordination. Our estimates of cost and time requirements were fairly accurate, As we had expected the project is working perfectly for voice control and touch -screen operations for different sets of appliances.

Thank You

Team 19