“ Idea/Approach Details ”

Ministry Category : Council of Scientific and Industrial Research (CSIR)
Problem Statement : Smart Domestic Electric Energy Management System
Problem Code : #CSIR7

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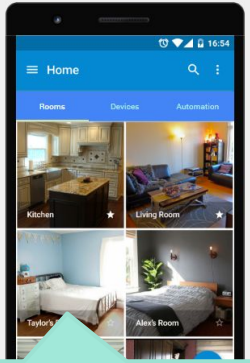
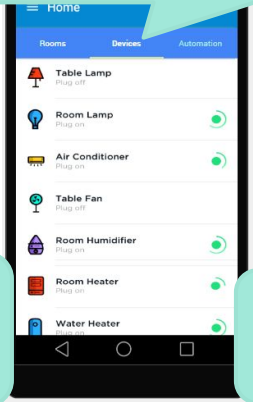
College Code : 1-3328130768

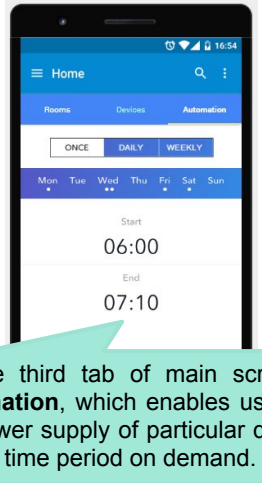
“ Prototype ”



It’s the first tab of main screen i.e., **Rooms**, which shows the rooms whose appliances are connected to IoT Hardware.

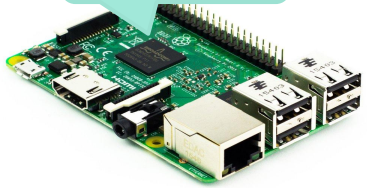


It's the second tab of main screen i.e., **Devices**, which shows the list of appliances that are connected to IoT Hardware.

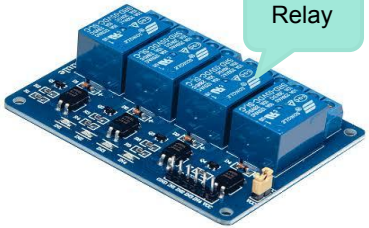


It's the third tab of main screen i.e., **Automation**, which enables user to cut the power supply of particular device for certain time period on demand.

It’s the equipment description page which includes information like **daily usage** of the device, **usage history**, device basic information, etc.



Raspberry pi



Relay

We are creating an **economical** hardware which will help to **control the appliances and monitor its energy usage**. For the flexibility of user we are also building an android app with the help of that, user can track daily usage of the appliances, switch on/off devices as per his/her convenience, and can also do many more things.

“ Technology Stack ”

Raspberry pi

Android Studio

Java

XML

“ Use Case Diagram ”

Activity 1: Mobile app will allow user to control electrical appliances by sending on/off signal through app to IoT Hardware board which will operate appliances accordingly.

Activity 2: Mobile app can set timer for on and off operation which will be operated at specified time. This time will be saved in Database, and arduino will fetch the time and will switch on/off the appliances accordingly.

Activity 3: Arduino saves all the working of electrical appliances in the database.

Activity 4: App retrieves the data from database and provides the statistics of energy consumption and usage to user.