

Smart Home Automation using IBM Watson

This project presents the overall design of Home Automation System (HAS) with low cost and wireless system. The smart home concept in the system improves the standard living at home. Home appliances are connected to the main control board and these appliances are controlled through User Interface using Wi-Fi communication through MQTT protocol.

By integrating sensors we can monitor the weather parameters of the home and by using flame sensor we can detect the fire accidents in the kitchen. These sensor parameters are sent to IBM Watson Cloud and these are visualized in the Node Red User Interface. We can control the lights of the home with the help of UI and in Bed room there is the RGB light. We can select the color for the user interface and then the light glows in that particular color. If any fire accident is detected then it will alert the people in the house by alarm and it will send notifications for other persons. The user interface which is created in node Red can be replicated in mobile app. we can even open and close the door by using this application.

Software Module:

- Arduino IDE
- IBM CLOUD
- Android studio

Hardware Module:

- ESP8266 Node MCU
- DHT11
- Flame sensor
- Servo motor
- Buzzer
- RGB led
- Leds

Block Diagram:



