TUF | THE UNIVERSITY OF FAISALABAD

IoT Based Smart Kitchen Automation & Monitoring

INTRODUCTION

With the development of the Internet of Things Technology, one of the most important features of the development of the Information Society is Intellectualization. With the continuous improvement of people's living standards, the demand for the quality of life is gradually diversified. The appearance of the modern industry or intelligent kitchen will bring a new experience to people.

People gradually need an kitchen environment that can be closely connected with modern technology. With this demand, new concepts such as, kitchen environment monitoring, intelligent kitchen control have come into our Life.

Therefore, this project proposes a modern intelligent kitchen system based on Internet of Things Technology. The intelligent kitchen system and modern industrial monitoring is based on digitalized information and network, combined with smart phones and various sensors to realize intelligent management of industrial and kitchens.

Problem Statement

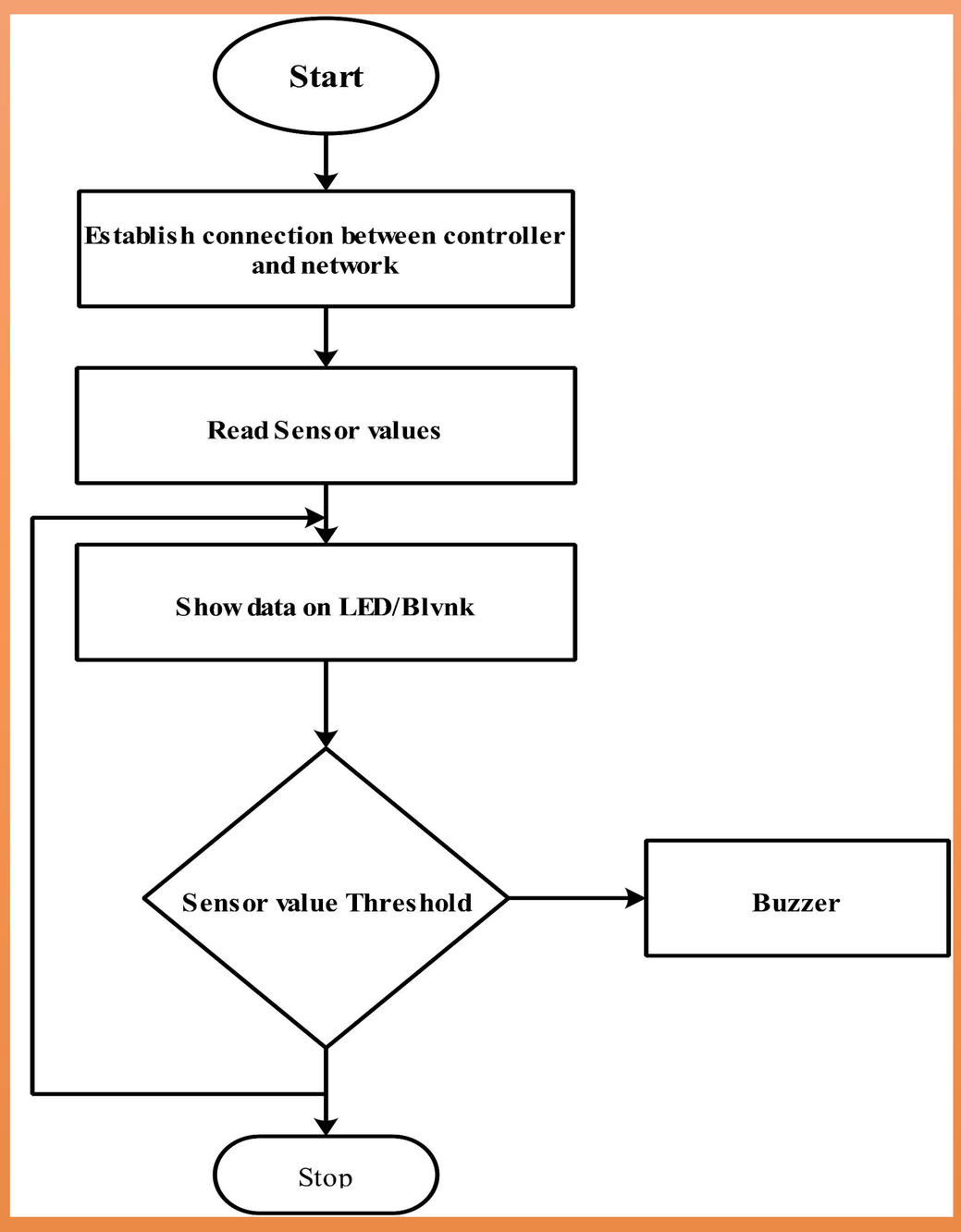
Kitchen within a home is a place which is always in use one way or the other. Women on the other side are less careful about increased humidity, temperature or gas leakage issues when indulged in working. Hence, in this project we automate the controlling of temperature, gas pressure and humidity inside a kitchen. Furthermore, in this project we use sensors which senses and tells us results and Blynk App work only a click and we got our results.

Objectives

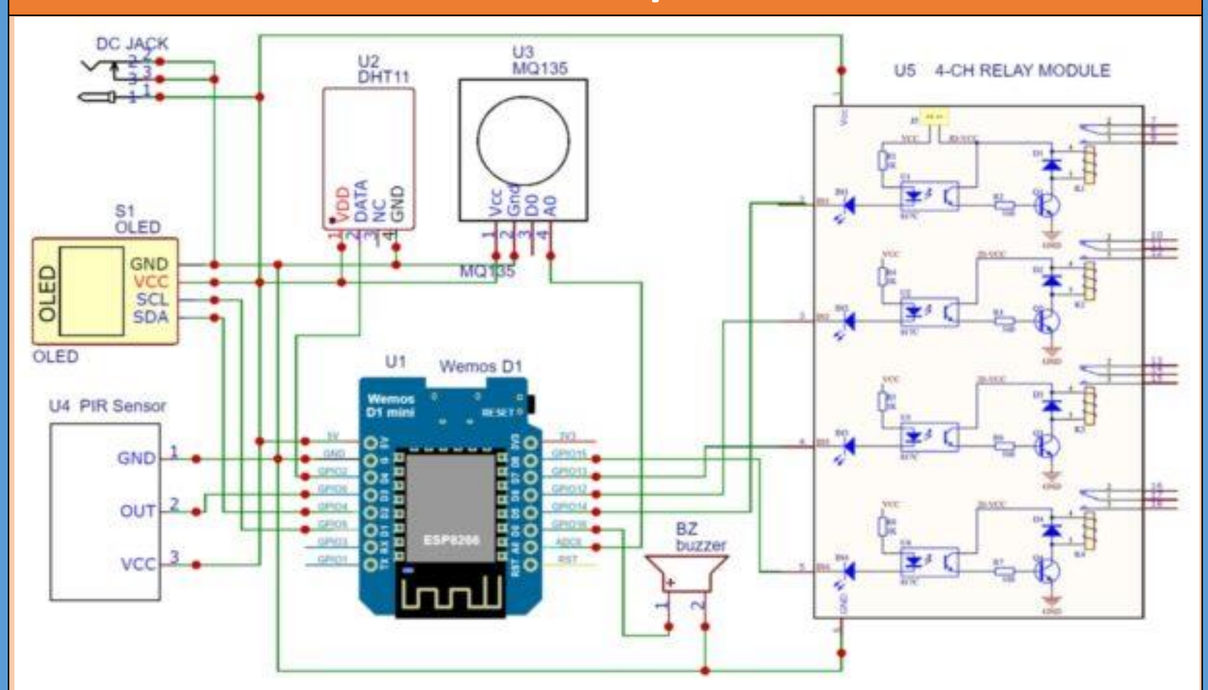
The objectives of this project are as follows:

- IoT based kitchen safety.
- Interfacing of sensors and Blynk App.
- Display of readings from sensors.
- Alarm system for detection of any anomaly.

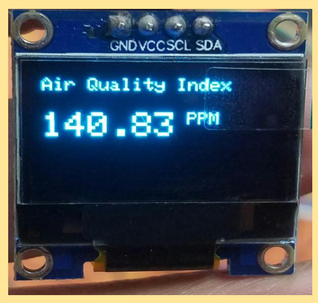
Methodology

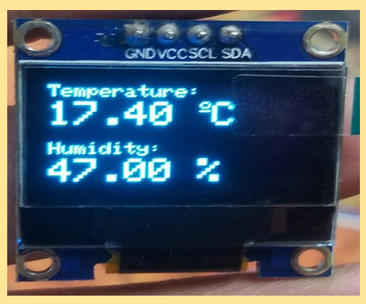


CIRCUIT DIAGRAM/ SCHEMATICS



Results and Discussion





As above figure shows, the system is working properly and displaying the temperature, humidity, and air quality of the kitchen. These results are also accessible on a mobile phone too. This is done through the Blynk APP. The use of IoT concept is used to make these readings available to anyone through cloud based communication.

Future work

The idea of IoT is especially valuable for persons with disabilities, as IoT technologies can support human activities at larger scale like building or society, as the devices can mutually cooperate to act as a total system. So far, much work has been done on realizing the IoT. In future,

- We decided to work and make it a proper model or proper automation kit for our feasibility.
- Work on its PCB designing to make it a proper model or proper automated kit and that's we use it in our kitchens as a readymade item.
- Blockchain based IoT can be implemented to secure the environment from any vulnerable personnel's.

CONCLUSIONS

Our Smart Kitchen using IoT system with multiregional sensors has been designed, constructed and tested. The result obtained from the tests carried out shows that the system is capable of detecting anomaly and alerts whenever there is gas concentration at the inputs of the gas sensors. Hence this system can be used in homes and public buildings such as hotels and restaurants. Smart kitchen provides you all the automation features that include safety features.

REFERENCES

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