Tea Garden Automated Sprinkler System using IoT

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Introduction

- Tea gardens often located in hilly areas.
- Traditional methods of irrigation are difficult.
- Automated System can deliver water directly to the roots of the plants.

Motivations and Problem Statement

Tradition irrigation systems limitation:

- Improper use of the water
- Depends on humidity/ rain
- Damage of Plants
- Economic Impact
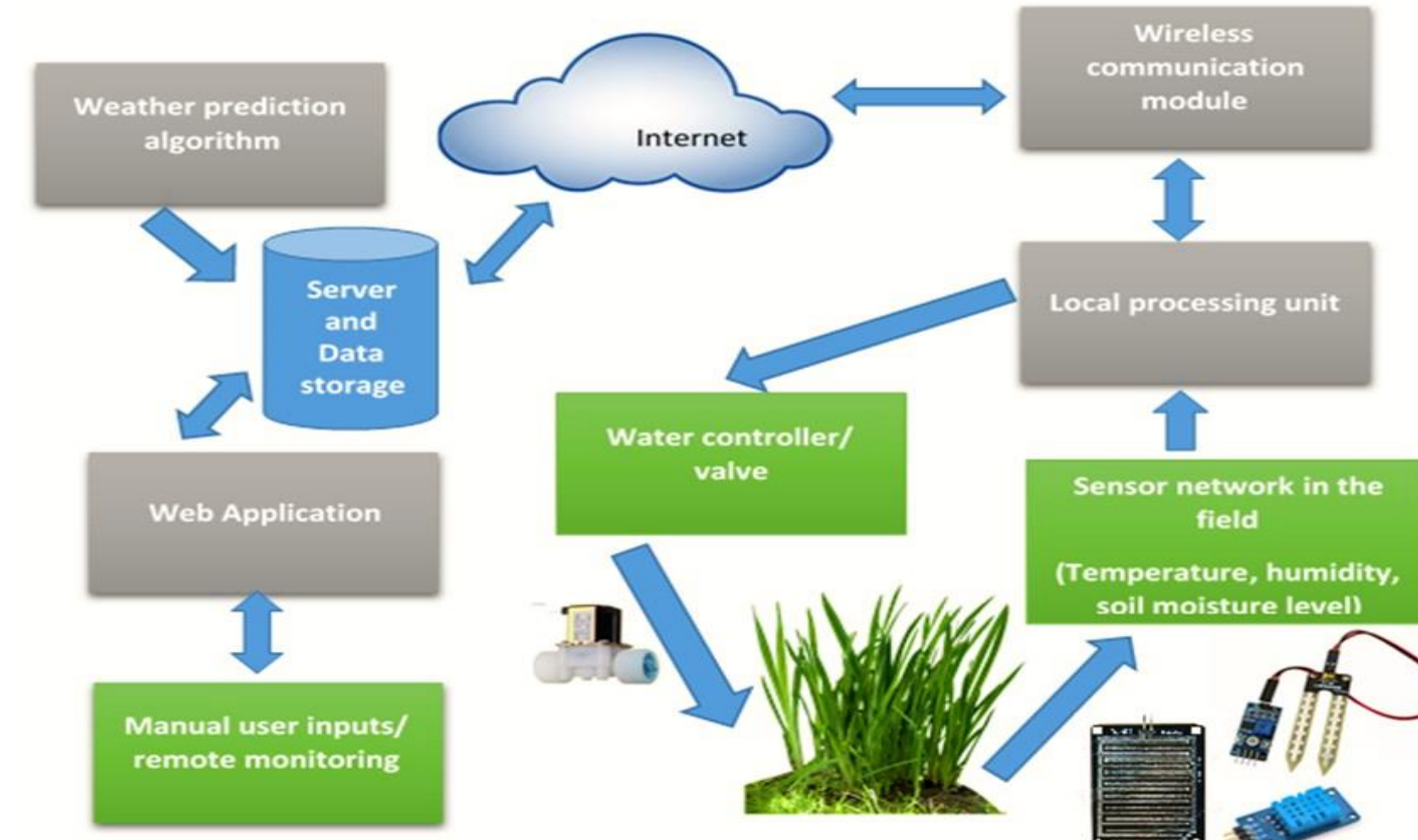
Literature Review

- M. N. Rajkumar, S. Abinaya, and V. V. Kumar, "Intelligent irrigation system—an IoT based approach," in *2017 International Conference on Innovations in Green Energy and Healthcare Technologies (IGEHT)*, pp. 1–5, IEEE, 2017.
- R. N. Rao and B. Sridhar, "IoT based smart crop-field monitoring and automation irrigation system," in *2018 2nd International Conference on Inventive Systems and Control (ICISC)*, pp. 478–483, IEEE, 2018
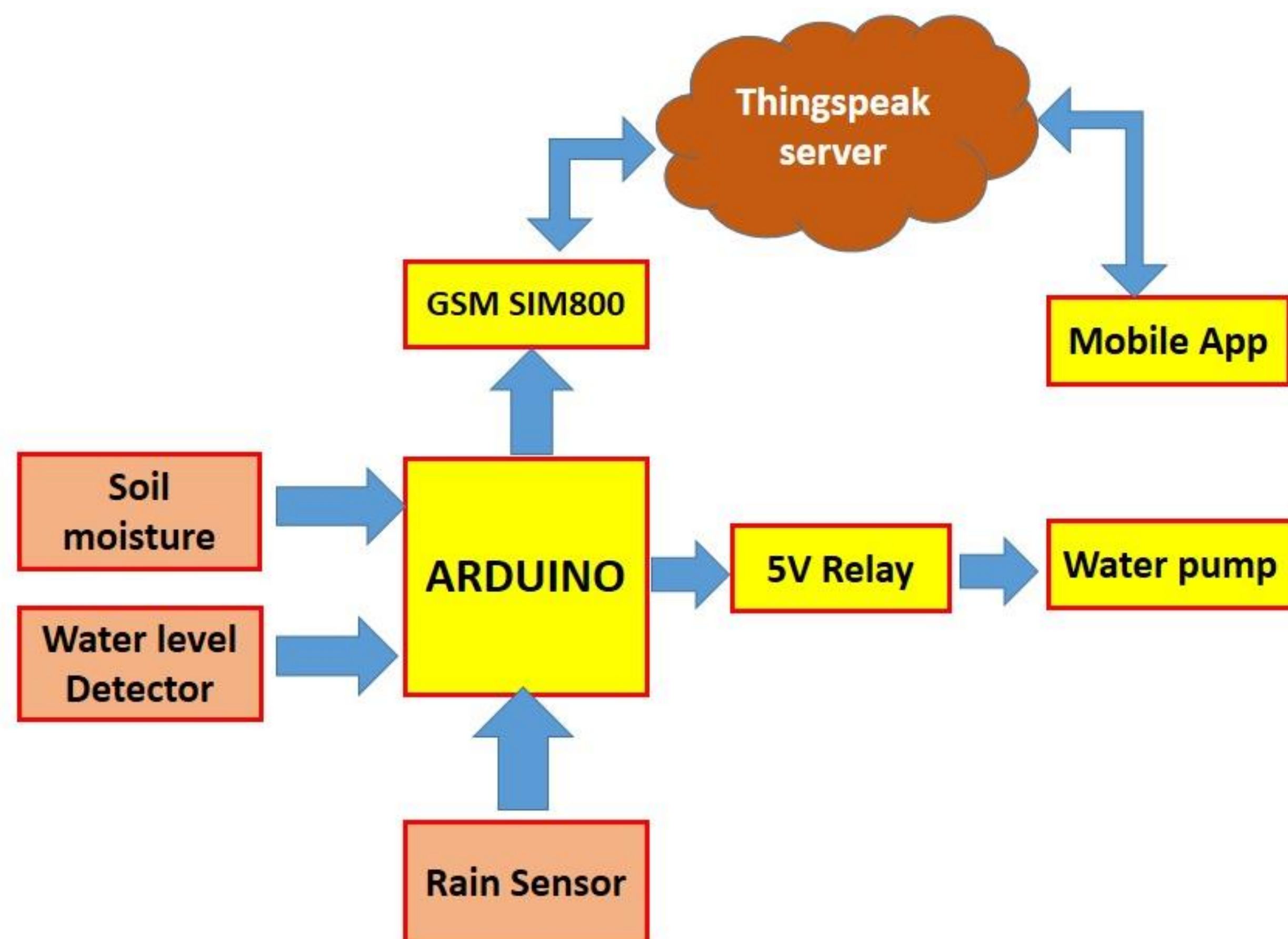
Proposed System

Fig-1 : Block diagram of the proposed system

rain = 1 ,its raining
Otherwise rain = 0.
w = water level
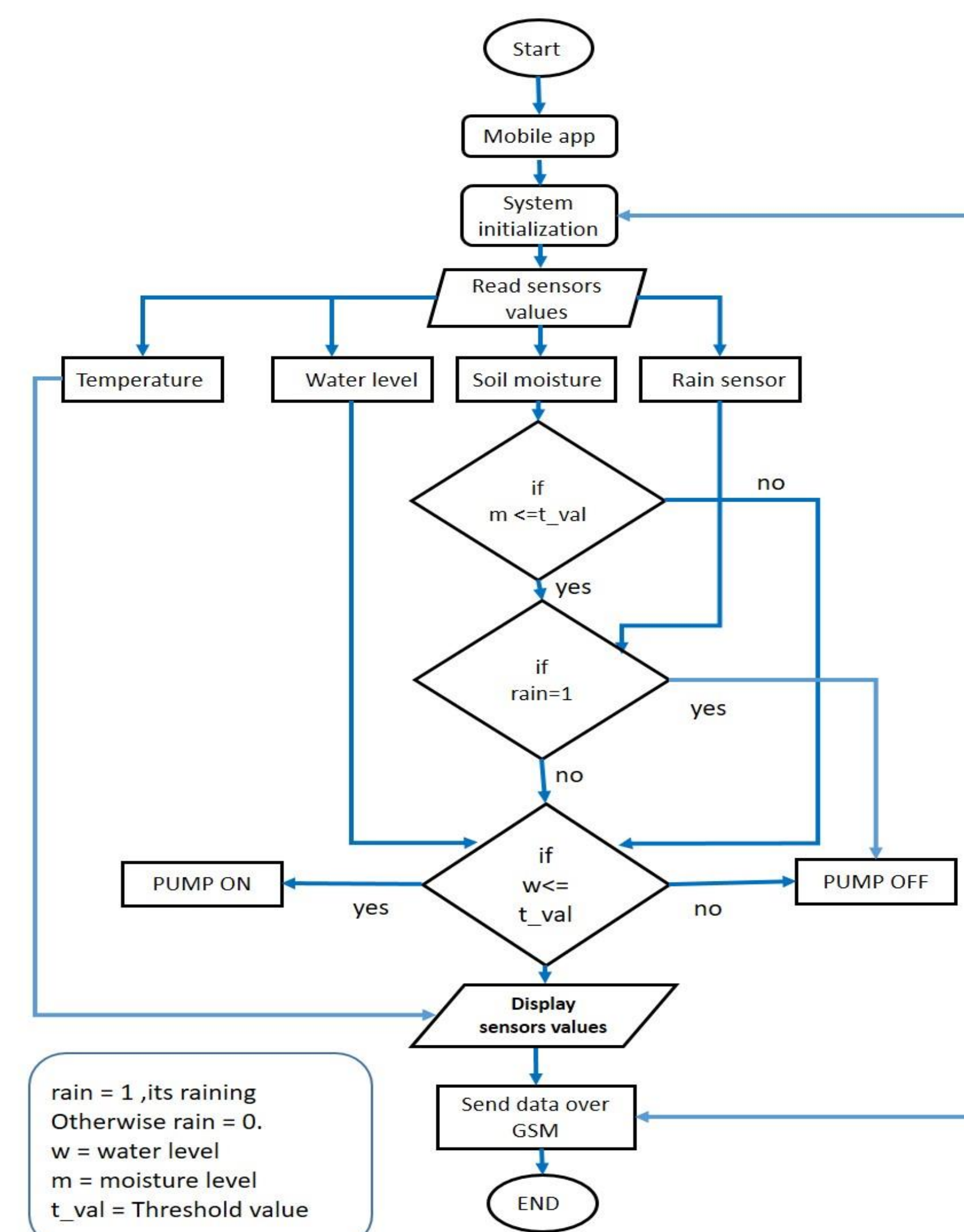m = moisture level
t_val = Threshold value

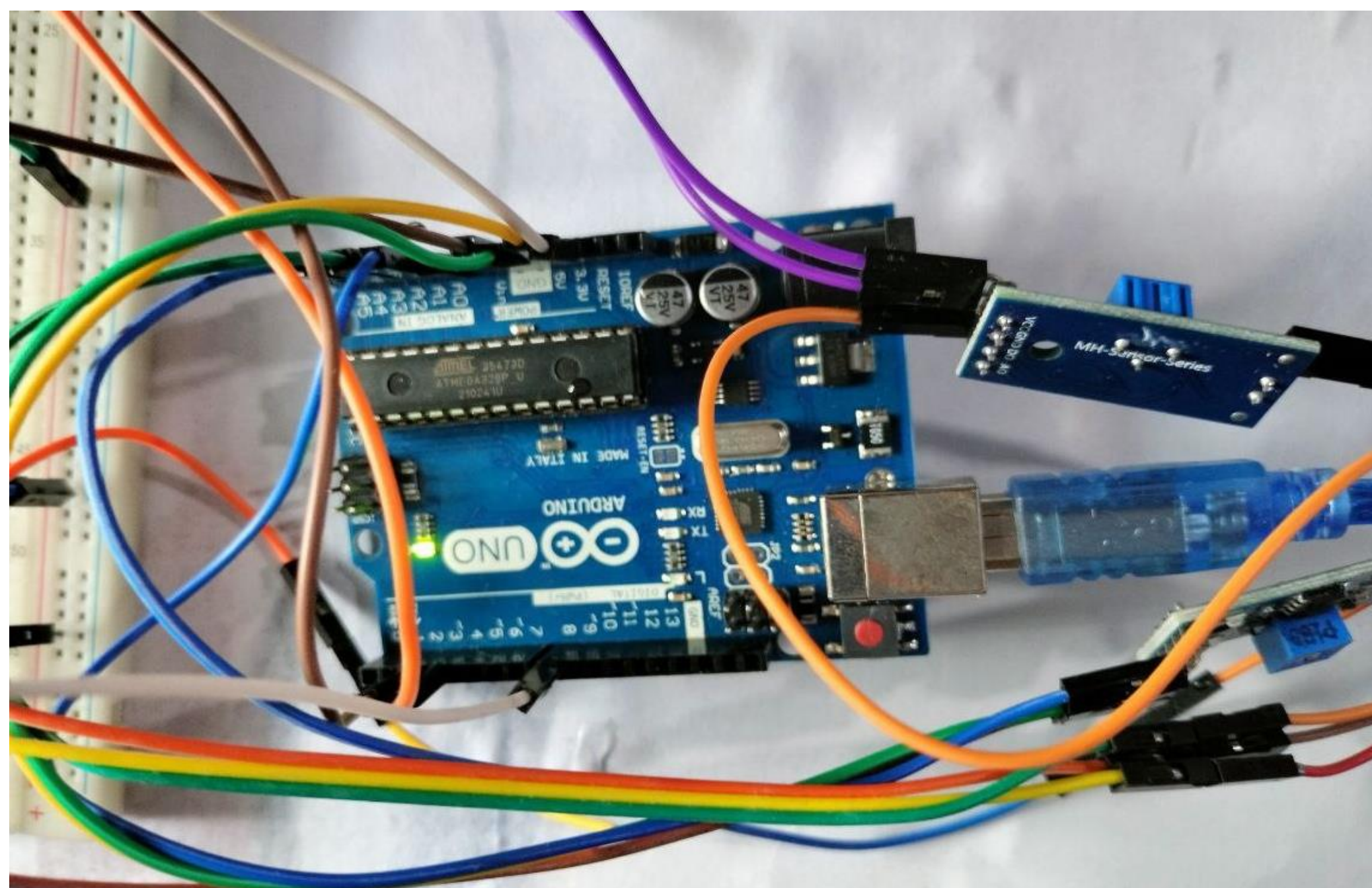Fig-2 : Flow Chart of the proposed system

Implementations

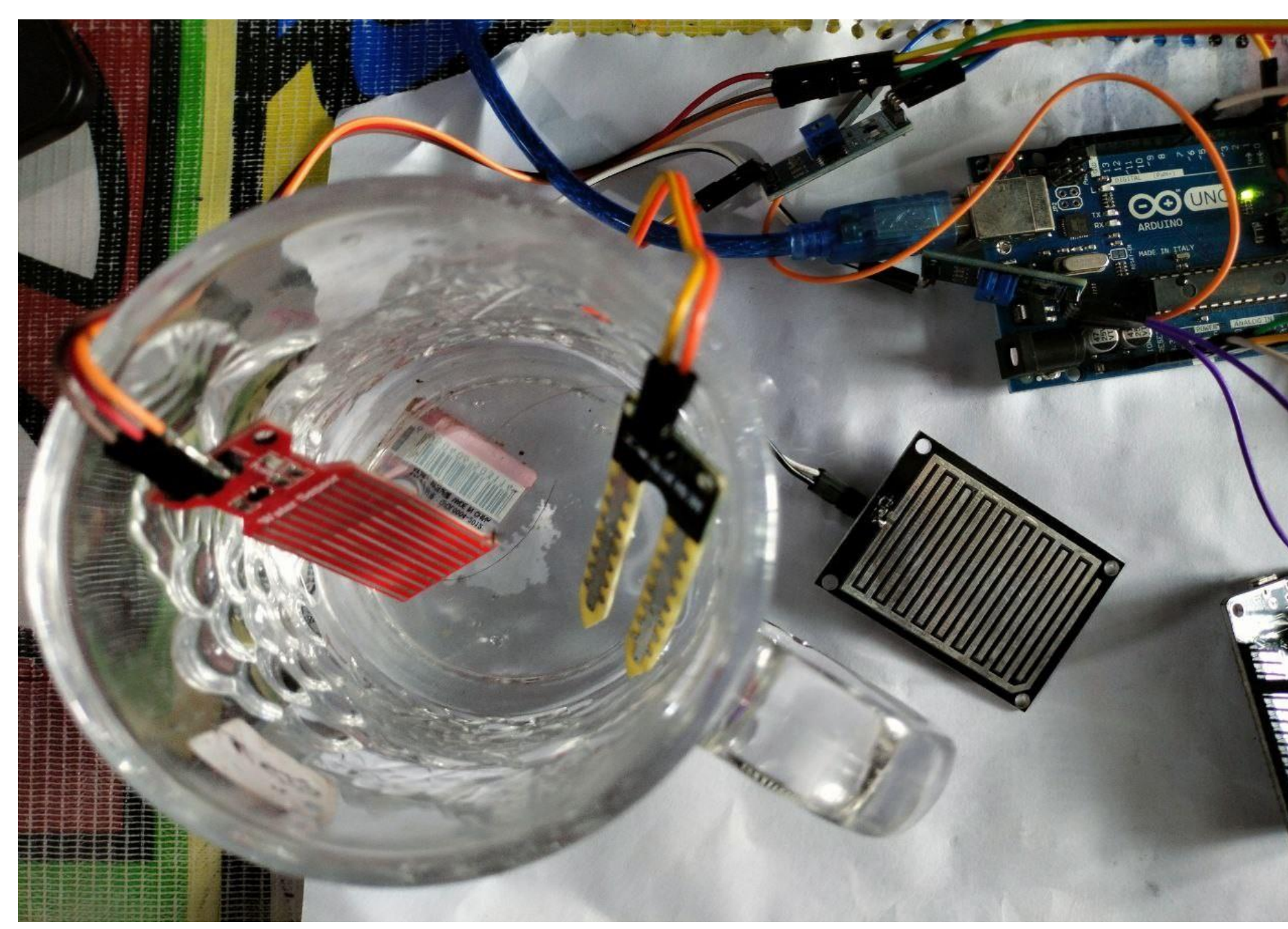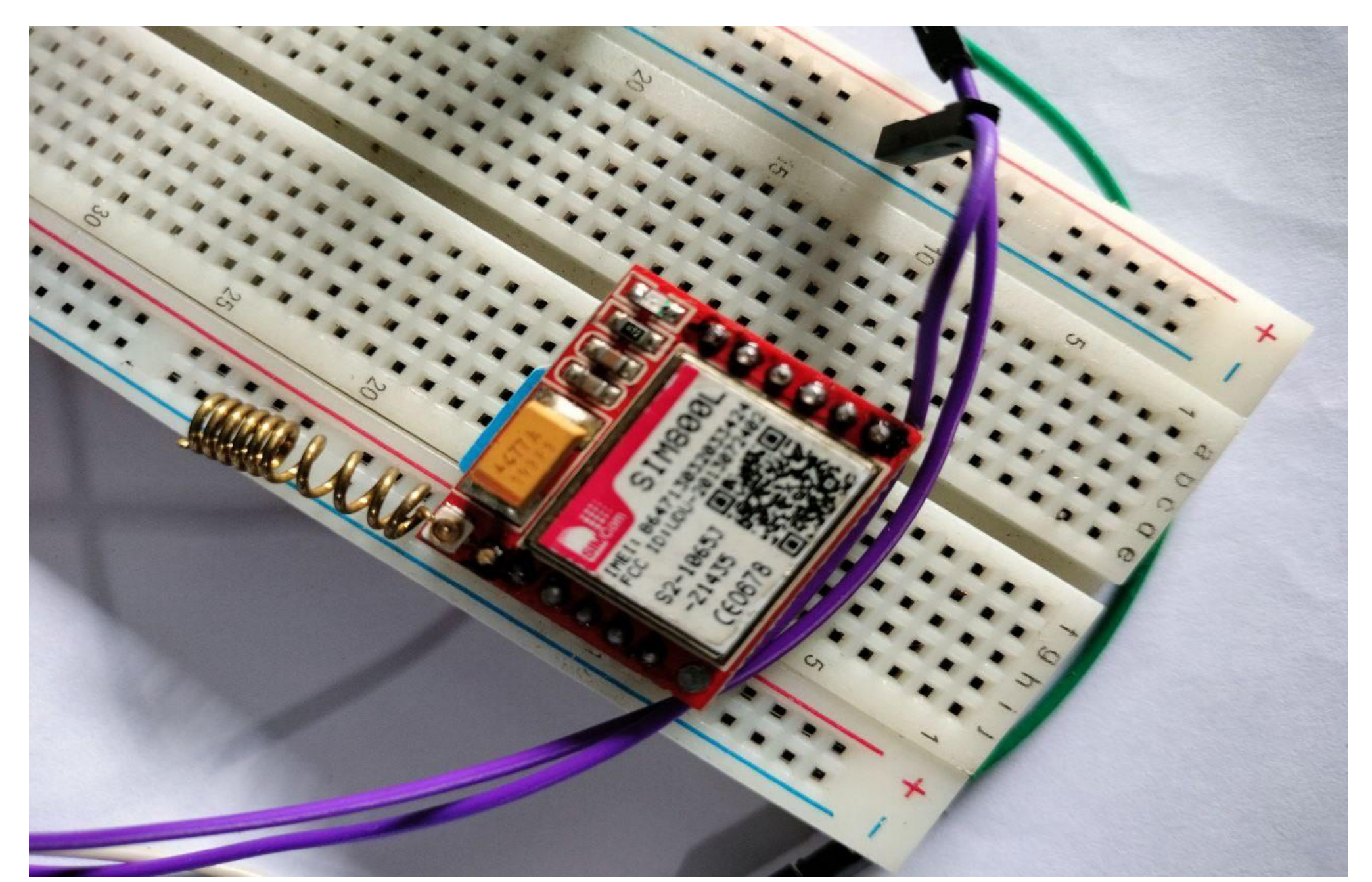Fig-3 : Main controller connection

Fig-4: Sensor Connection

Fig-5 : GSM Module connection

Conclusion

- Proposed and implemented a cost effective automated irrigation system.
- The system can make agriculture more sustainable.
- The system provide better economic impact

Future Works

- Implement a mobile app to monitor the system.
- The system will improve more prediction for the best crops to grow in specific environment.