* 1. **INTRODUCTION:**

*Generally, the current irrigation systems are manually operated. India is the country of village and agriculture plays an important role in the development of the country. In our country, agriculture depends on the monsoons which have an insufficient source of water. So, irrigation is used in the agriculture field. In Irrigation system, depending upon the soil type, which is how much water is provided to plant. In agriculture, two things are very important, first to get information about the fertility of the soil and second to measure moisture content in the soil. Nowadays, for irrigation, the different techniques are available in the country which is used to reduce the dependency of rain such as water pump etc. And mostly this technique is driven by electrical power and on/off schedule. In this technique, water level indicator placed in the water reservoir and soil moisture sensors are placed root zone of the plant and near the module and gateway unit handles the sensor information and transmit data to the controller which in turns in the control the flow of water through the valves.*

*The Internet of things (IoT) [1] emerges as the naturals choice for irrigation monitoring and controller system using IoT applications, even though the integration of different technologies required for making it work seamlessly in practice is still not fully accomplished. Internet of Things (IoT) is widely used in connecting devices and collecting data information. IoT(Internet of Things) is used with IoT frameworks to handle and interact with data and information about sensor which is sense the data. Advanced tools and technology can be used to increase farm yield. Developing IoT technologies can help to collect a large amount of ecological and crop recital data. “IoT encompasses many new intelligent concepts for using in the near future such as smart home, smart city, smart transportation, and smart farming” [2]. The technique can be used for the application of an accurate amount of fertilizer, water, pesticide etc. to enhance productivity and excellence. The emergence of IoT is a phenomenon that owes to the conjunction of several factors such as inexpensive devices, low-power wireless technologies, availability of cloud data centers for storage and processing, management frameworks for dealing with unstructured data from social networks, high-performance computing resources in commodity platforms, and computational intelligence algorithms to deal with this monumental amount of data.*

*This paper presents an irrigation monitoring and controller system. The system uses the sensor network to monitor the environmental conditions such as soil moisture content and water level of agriculture land for controlling the irrigation. The system has an automatic and manual mode. The real-time sensed data is stored on the android app. for decision making and controlling actions. The user can monitor the controlling actions taken at the farm as well as control the irrigation via an android app on the farmer’s mobile phone.*

* 1. **MOTIVETION:**

For continuously increasing demand and decrease in supply of food necessities, it’s important to rapid improvement in production of food technology. Agriculture Is only the source to provide this. This is the important factor in human societies to growing and dynamic demand in food production. Agriculture plays the important role in the economy and development, like India. Due to lack of water and scarcity of land water result the decreasing volume of water on earth, the farmer use irrigation. Irrigation may be defined as the science of artificial application of water to the land or soil that means depending on the soil type, plant is to be provided with water.

* 1. **AREA OF UTILITY:**

The primary focus of this project is to help the farmers and reduce their work. This module can be implemented in perennial plant irrigation land and gardening land.