INTRODUCTION:

As far as India is concerned agriculture is backbone of our nation and a main source of food. Agricultural land is the one where lots of process to be done, irrigation is one among them. In irrigation we have traditional and modern irrigation methods.

In order to overcome disadvantage of some traditional irrigation methods. The digitalization of traditional method is the most important part in the agriculture. Drip irrigation is one of the most modern irrigation methods.

Using smart phones we can monitor the agricultural land with the help of hardware components. We came up with a smart phone based drip irrigation control system which withheld a modern technology. Rapid development in technology has made handheld devices very popular and nowadays with increase in demand user friendly applications, it will be affordable too. This will lead to development of farmer friendly android based application.

OBJECTIVE:

1. The goal of our project is to design a farmer friendly drip irrigation system which can be easily integrated into existing fields.
2. To design a user friendly interface on mobile device.
3. To develop a mechanism to store the sensor data on pi.
4. To design and develop algorithm for interaction between various components.
5. To design an interface on the mobile device to display the recognized sensor data.

METHODOLOGY:
**Smart Phone:** In this device we install the mobile application in which it contain details of the present status of the devices and it pass the command to receiver’s device from any location by using internet connection.

**Receiver Device set:** It is the device which contain modem that receive the command or signal passed by user handset that also send the present status of devices present in the fields that pass the command to microcontroller further process.

**Microcontroller:** The microcontroller is the main device which monitors the whole device in intelligent manner that contain program and controlling switch, providing the present status of the switch to the user device by transmitting the signal.

**Devices:** This is the physical existing electrical/electronic device in the fields.

**CONCLUSION:**

Based on all the systems surveyed and their advantages and drawbacks, this project presents the features to be possessed by an ideal system for drip irrigation with remote access. By designing the software and hardware, agricultural devices can control system based on the Android phone is realized. More importantly, it has combined android client, network transmission, and wire-less switch, Agriculture field information centre to form a complete system, and the whole system works normally.

The system has three hardware components: a local device to transfer signals to field devices, a web server to store field records and support services to the other components, and a mobile smart device running Android application. CRC (cyclic redundancy check) is used to detect accidental changes to raw data and achieve the nearly error-free reception. By constantly improving the control function, it allows us anytime, anywhere to control any device, and finally realizes. GCM (Google Cloud Messaging) server and Android operating system as the emerging technologies used in home automation area.

An ideal system should be available from all over the world to a user and in real time. A GSM network is identified as a candidate for this. However, the data channel of GSM must be used, to provide internet access. Only the Internet can ensure that access can be made available at all times. This will give rise to a standard access method for the irrigation plant. The user interface should be a web application that has an associated mobile application. So that Peoples of all kinds can access the system. Such a system should also have the feature of being easy to install. There should be a lot of throughput into the design of the user interface for these apps.
**FUTUREWORK:**

GPS can also be used to track the position of the user so that the system can sense whether the user is in field or not. It will certainly improve the overall managing quality of the system and will save the user from manually activating and deactivating the sensors each time user leaves or come to field. The sensors are connected through wires but it can be connected through a Wireless Sensor Network to remove the complexity of passing the wires from one part to other. Installation of camera in the field, this will not only improves the security of our field in this modern day world but it will also assist in monitoring the field and helps to take the decisions.