**ABSTRACT**

An adequate water supply is important for plant growth. When rainfall is not sufficient, the plants need additional water. We know that people do not pour the water on to the plants in their gardens when they go to vacation or often forget to water plants. As a result, there is a chance to get the plants damaged. The project we have undertaken is “Automatic Plant Watering System”. This project is taken up as India is an agriculture oriented country and the rate at which water resources are depleting is a dangerous threat hence there is a need of smart and efficient way of irrigation. In this project we have implemented sensors which detect the humidity in the soil (agricultural field) and supply water to the field which has water requirement. The project is microcontroller based design which controls the water supply and the field to be irrigated. There are sensors present in each field which are not activated till water is present on the field. Once the field gets dry sensors sense the requirement till the sensors is deactivated again. In case when there is more than one signal for water requirement then the microcontroller will prioritize the first received signal and irrigate the fields accordingly.

With the raging water needs and the scarcity of water, there is a dire need for a smart system that can save the pristine water. This paradigm targets at saving time and avoiding the adversities like Constant surveillance. It also facilitates in reducing water wastage by automatically providing Water depending on the water need of plants, hence using the amount which is required.. It can provide us with sustainable estimation of water demands of plants and also we provide the user with the extreme ease of managing all the information using the android application. The aim of the project is to build a system that monitors the moisture levels in the soil .In this project we will be using two soil moistures sensors placed in different location so that they provide data to raspberry and depending on the threshold values set by us . We can also view the moisture levels over the Learning from the project:

* · working of soil moisture sensors
* · working with water pumps
* · setting up a web server on pi