**Abstract**

Nowadays water scarcity is a big concern for farming. This project helps the farmers to irrigate the farmland in an efficient manner with automated irrigation system based on soil humidity. Humidity sensor is used to find the soil humidity and based on this microcontroller drives the solenoid valve. Irrigation status is updated to the server or localhost using Personal Computer. Java platform is used here for getting information via serial communication from microcontroller and to update in the server. In addition for better cropping system, fertilizers required for the crops, best crops to cultivate for the particular climatic and soil conditions are updated to server at regular basis by monitoring soil PH level, Temperature level of the field area etc., By using PC host, crop is continuously monitored. Also LCD is used to display the PH, temperature and moisture level. This will improve the cultivation method and leads to better productivity.

**Block Diagram**