Agriculture is the major occupation in India and forms the backbone of Indian economy. Here we introduce a project of a smart irrigation which can be controlled using a mobile application. Water is the most important factor in agriculture. Correct amount of water at correct time and constant monitoring of water level in the fields is a difficult task for the farmers.

This project helps the farmer in various issues faced in agriculture like pumping of proper amount of water in the fields, controlling of floodlights used to light up the field at night, alerts regarding climatic changes. A website is created which contains information regarding good practices of farming, subsidies available from government on pesticides, electricity, organic means of farming, and concession on tax for farming lands.

Arduino Uno module is used in the circuit along with GSM module. Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino consists of both a physical programmable circuit board and a piece of software, or IDE that runs on computer, used to write and upload computer code to the physical board. Arduino is programmed to control the sensors in the irrigation system circuit. The GSM module connected to the Arduino is used to send and receive messages to control the circuit. A Light Dependent Resistor (LDR) is used to sense the change in light intensity and switches on the floodlight. Soil moisture sensing circuit helps in measuring the moisture level in the soil. A Dc motor pump is attached to the Arduino board which pumps water to the soil based on the moisture sensor circuit reading sent to mobile application developed. The farmer receives tips on farming based on his selection while signing up into the application and climatic alerts for the day. From this project we hope to build a system which helps to solve problems faced by the farmers in our country and equip them with correct knowledge to help them gain profit for the crops they cultivate.

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