CSE360

Computer Interfacing

(Lab Sec 06)

Final Project Proposal

Submitted By:

Group-1

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Automatic Irrigation System with SMS Updates

For our CSE360 final lab project, we propose to build an “Automatic Irrigation System with SMS Updates”. This is a software-based simulation project which aims to automate the irrigation process using an ultrasonic sensor, soil moisture sensor and Arduino microcontroller. The ultrasonic sensor will be used to measure the water level in a tank and whenever, it goes below a certain level, a tank motor will be turned on to fill up tank and turned off when it is full. The soil moisture sensor picks up the moisture of the soil and if it goes below a certain threshold, a water pump will pump water to the crops. Moreover, we will also use a humidity and temperature sensor to give farmers an idea of the environmental condition to help them decide on harvesting at the right time. These can be viewed on an LCD screen. Along with this, the farmers will also receive updates when their motors are turned on or off via SMS through a GSM module. We will also build a GUI with LabVIEW to log data and visualise the changes.

Tentative components to be used are:

- Arduino Uno
- Sensors: Ultrasonic Sensor, Soil Moisture Sensor, Temperature and Humidity Sensor
- Motor Driver
- Motors
- GSM Module
- LCD Display
- LEDs
- Fixed and Variable Resistors
- Virtual Comport
- Virtual Terminals