Nwankwo chukwuerike mark 17/MHS01/205 Biomedical engineering

Conceptualization: Irrigation system automation

Specification:

hardware; sprinkler, water tank, sensors (moisture & temperature), pipe system, pump, water gauge

software; GUI, timer, access control, error detection

Design: the timer starts the operation during the allotted time or when the temperature sensor hits a pre-set limit, informing the pump to send water from the tank through the pipe system and watering the farm, until a pre set limit is hit on the moisture sensor with the error detection system that is working in between to prevent over/under watering and checking water gauge for water level as well as signalling with GUI when water level is low and sounding an alarm.

Implementation: The hardware is assembled, and the code is written out

Testing and debugging

Release and update

Stop

Restart process

Send report to GUI and sound alarm

Scan for errors and water level

Moisture limit reached

Pump water through pipe

Begin irrigation

Step

1. Start
2. Pump water through pipe
3. If moisture limit is not reached

Scan for errors and water level

Send report to GUI and sound alarm

Restart process

Else

Print “finished”

1. Stop

Setup and control irrigation system in 1 app

control the irrigation process during the dry season at appropriate times

Irrigate abuad farm