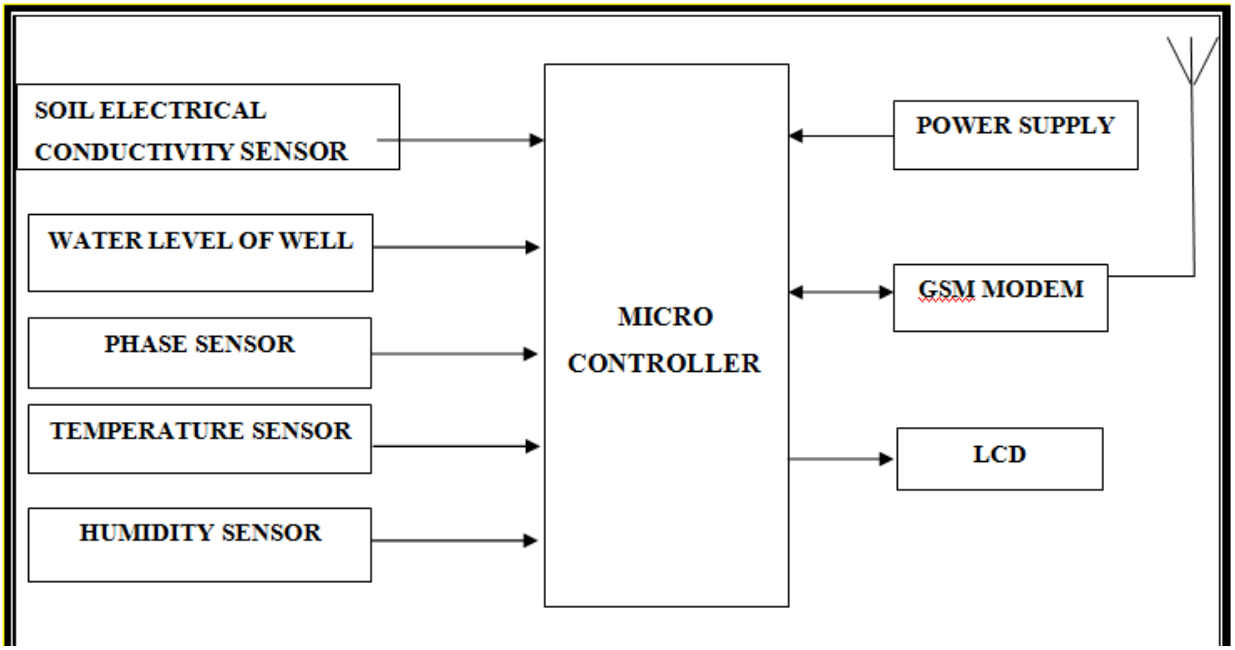
Irrigation Control System

Abstract

Irrigated agriculture is one of the primary water consumers in most parts of the world. With developments in technology, efforts are being taken into automation of irrigation systems to facilitate remote control of the irrigation system and optimize crop production and cost effectiveness. The objective of the project is to provide an approach that helps farmers to easily access, manage and regulate their irrigation systems for the water needs of crops using SMS technology for data transportation using Bluetooth, GSM or GPRS module . A prototype irrigation controller system, which is a closed-loop digital control system, was implemented to continuously monitor the soil moisture level, temperature, humidity, salinity, control parameters, irrigation scheduling plan, and output of the pumping system to manage and control of the irrigation systems. The controller system comprises processor module, sensing system, pump switching system, regulated power supply system and intrusion detection system.

KEYWORDS: GSM, moisture sensor, humidity sensor.



References:-

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Block diagram:-

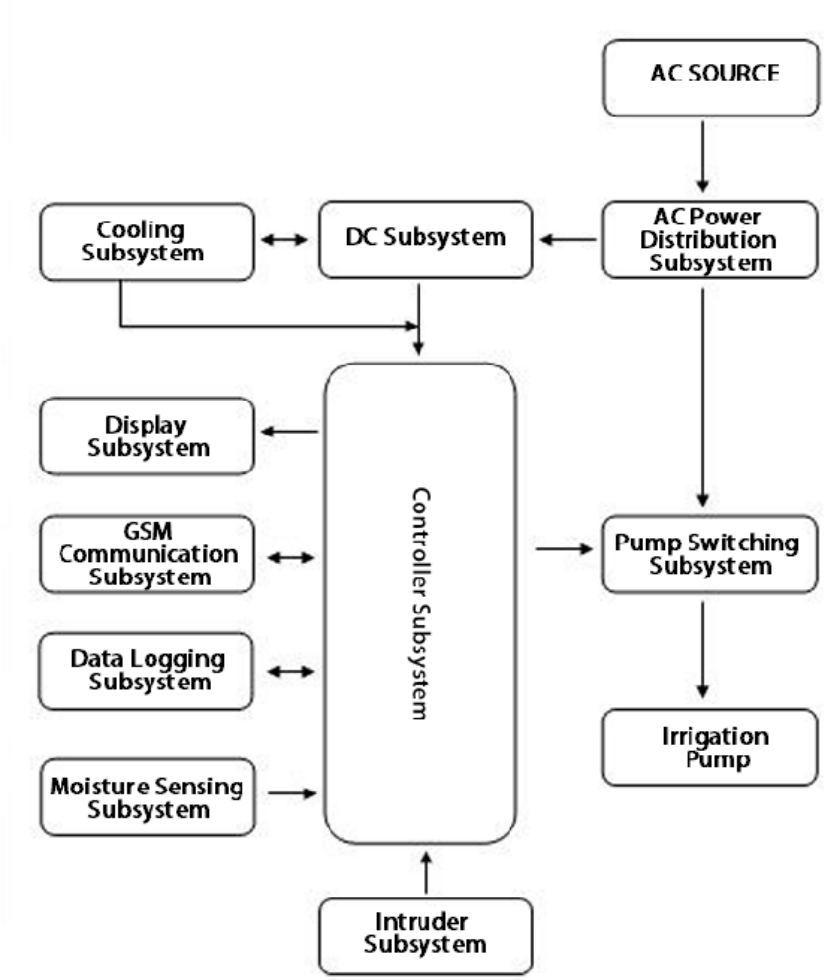

Figure 1:- Architectural diagram of the GSM based irrigation monitoring and control system

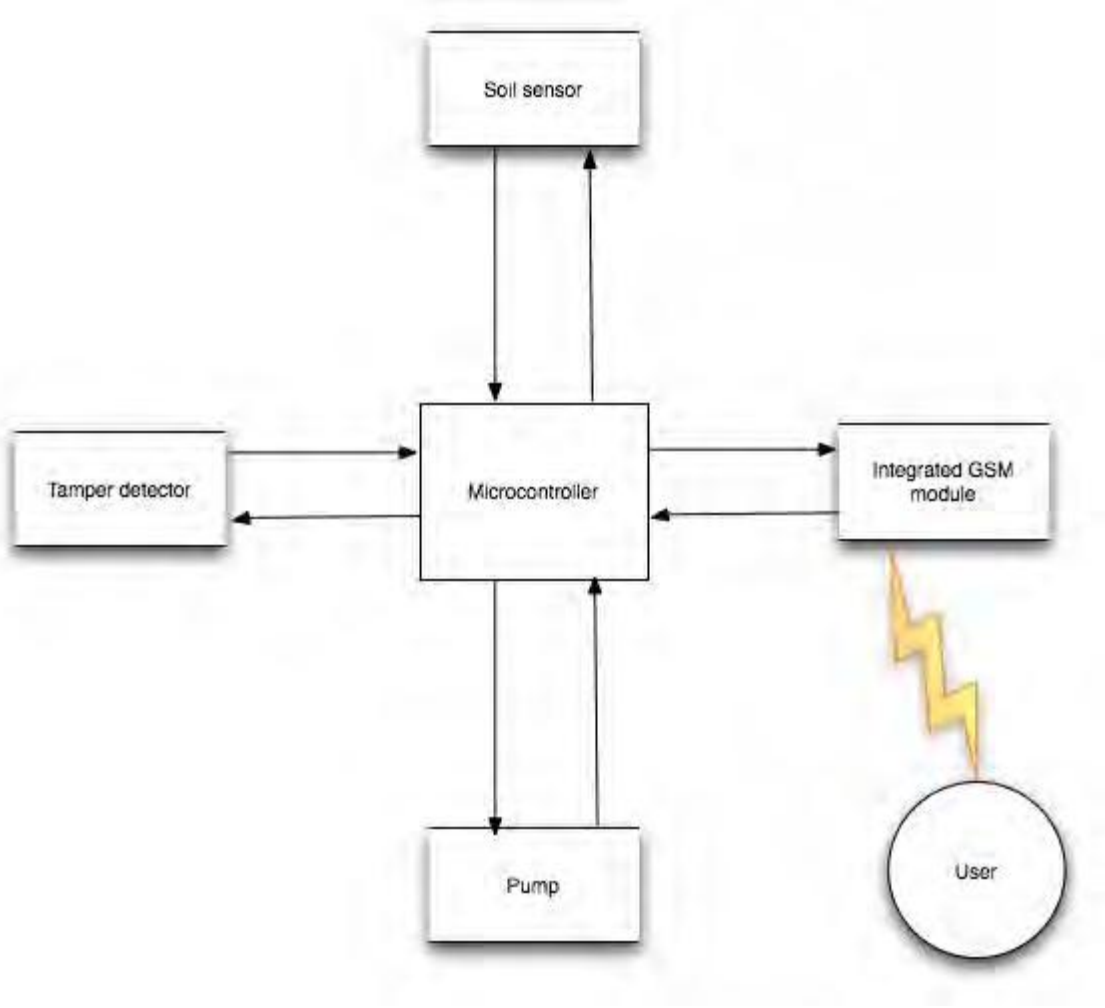

Figure 2: Hardware architectural diagram of the integrated microcontroller system

Conclusion:

Early irrigation system was totally dependant on human efforts that substituted with fully automated irrigation control system.