

Automatic Irrigator cum Refiller

Sensors used: Ultrasonic, soil

I wanted to create a system that would automatically water plants since this is an issue we face whenever our family goes for long trips.

The project helps in automating the process of irrigating.

The sequence of steps are as follows

- + The soil sensor measures the humidity of the soil
- + Whenever the humidity of the soil goes below a threshold value the micro controller gives a high output to the pin connected to the pump.
- + The pump then runs at an interval of 0.5 seconds, while the microcontroller checks the humidity at every instance.
- + Until the humidity of the soil goes above the threshold(150) the pump continues to perform its process.

+ Additionally, the water tank from which the pump draws water from is fixed with an ultrasonic sensor. The sensor measures the water level, whenever the water level recedes to below 100 cm the buzzer gets activated and accordingly buzzes to notify the user that tank needs to be refilled.

Furthermore, this check only happens if water is needed in the soil. If water is not needed in the soil the buzzer does not get unnecessarily activated.

