Hello, everyone! We are Team 07

Today, we’re going to share our project on Smart Irrigation System, which aims to make irrigation smarter using embedded systems.

These are the topics which we are going to cover further in this ppt.

Farmers usually uses too much water for irrigation, even when its not needed. This not only wastes, water but can also harm the plants. And sometimes farmers even don’t give water thinking that the soil is moist.

So, to tackle these problems, we’ve developed a system that can manage water usage by the farmers.

Here,

We're using a 32-bit LPC1768 microcontroller with ARM Cortex M3 , which helps us connect different sensors.

These sensors, like the ones measuring temperature, soil moisture, and water levels, work together to give us real-time information about the environment. With these information our system decides when to water the crops and how much water to use.

Our system is all about using technology to solve real world problems and farming more sustainable.

* This is the flowchart of our system.

First of all we are using timer 0 to check the sensor reading at an interval of 1 hour

And when the value of match control register of timer 0 matches with timer counter an interrupt will be sent

Then the program will enter into the Interrupt Service Routine

Then inside the ISR the sensors are checked serially.

Then we have set the range for every sensor data and the relay will turn ON and Off and accordingly the condition is shown in LCD

And after the completion of these the system again waits for one hour and run the whole verification again.