GreenHouse Automation

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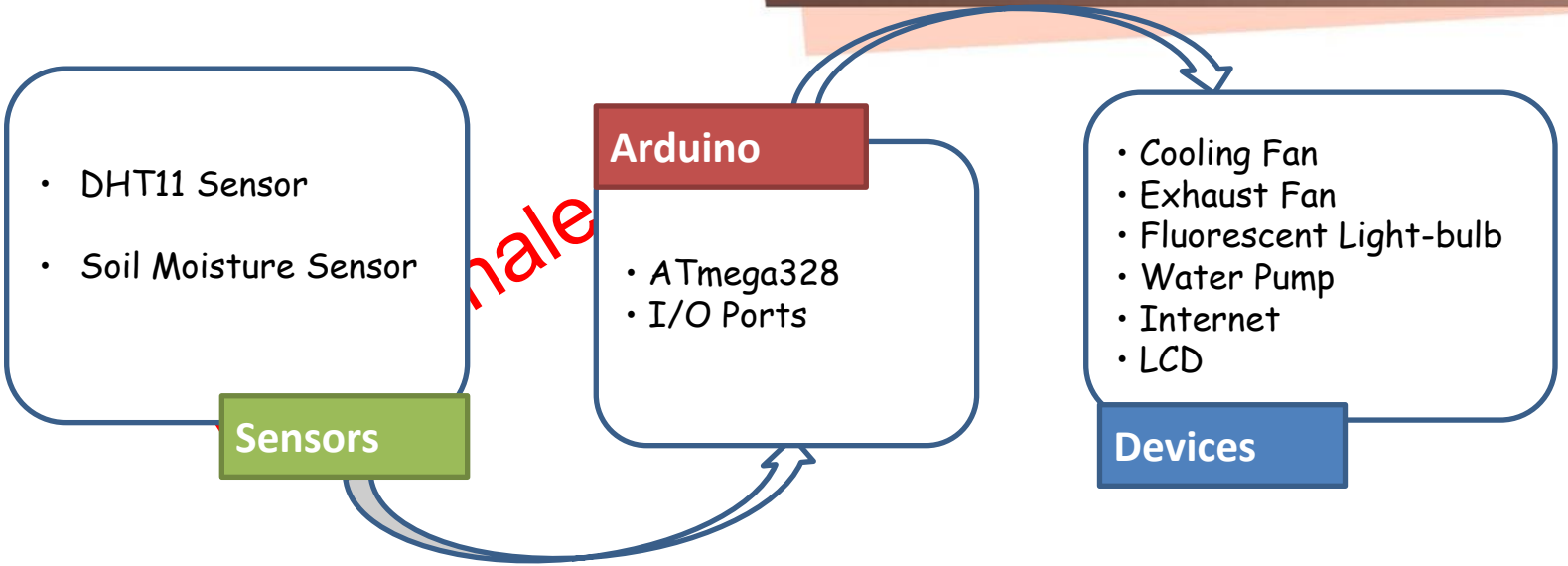
What is Greenhouse?

A greenhouse (also called a glasshouse, or, if with sufficient heating, a hothouse) is a structure with walls and roof made chiefly of transparent material, such as glass, in which plants requiring regulated climatic conditions are grown.

Greenhouse Automation

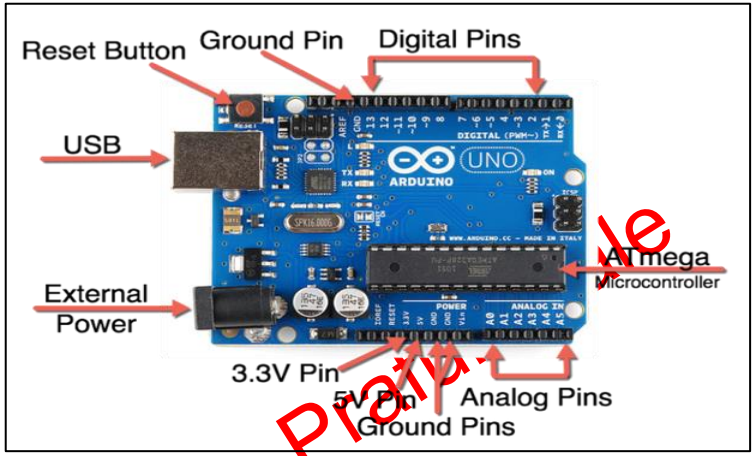
- **Greenhouse automation refers to the software that is created to automate actions of the technical installations installed within the greenhouse.**

System Overview

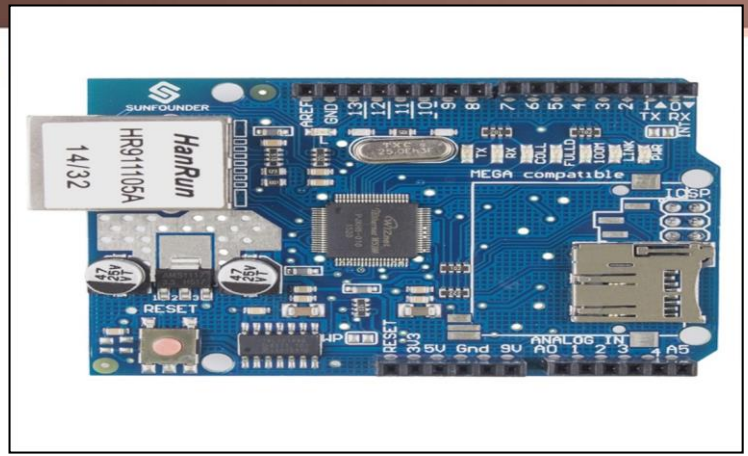


- **Voltage output from sensors sent as inputs into Arduino**
- **Based on input values, Arduino outputs specific voltages to turn ON/OFF devices**

Requirements

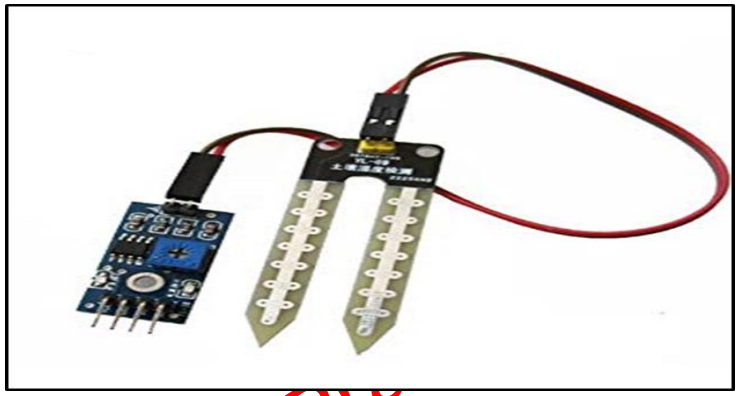


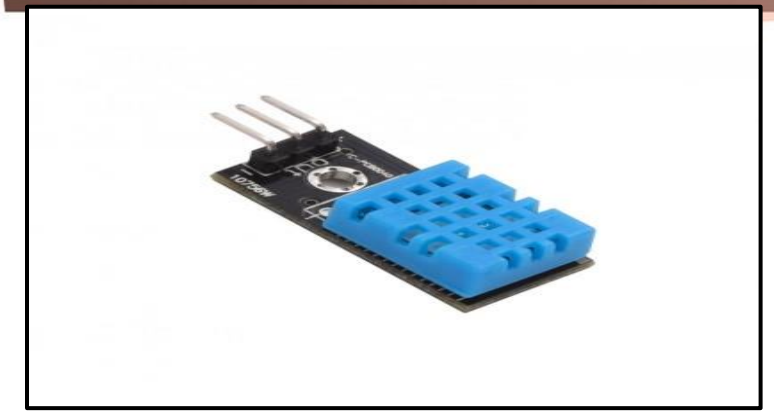
Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online



The Arduino Ethernet Shield allows you to easily connect your Arduino to the internet. This shield enables your Arduino to send and receive data from anywhere in the world with an internet connection.

Requirements

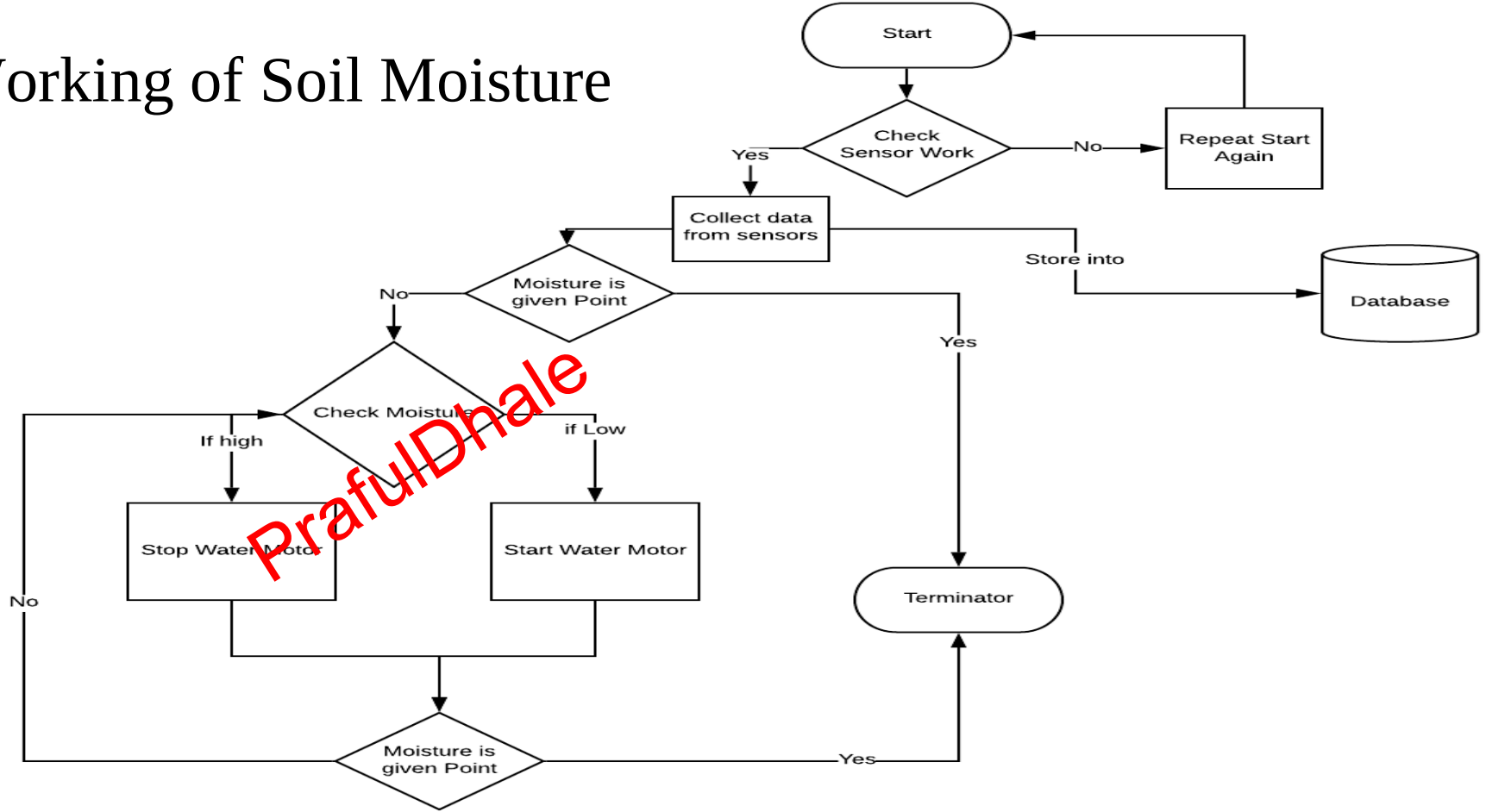




The **Moisture sensor** is used to measure the water content(moisture) of soil.when the soil is having water shortage,the module output is at high level, else the output is at low level.

A **humidity sensor** senses,measures and regularly reports the relative humidity in the air. It measures both moisture in air and temperature.

Working of Soil Moisture



Flowchart Showing Complete flow of Moisture Sensor

Video of Implementation

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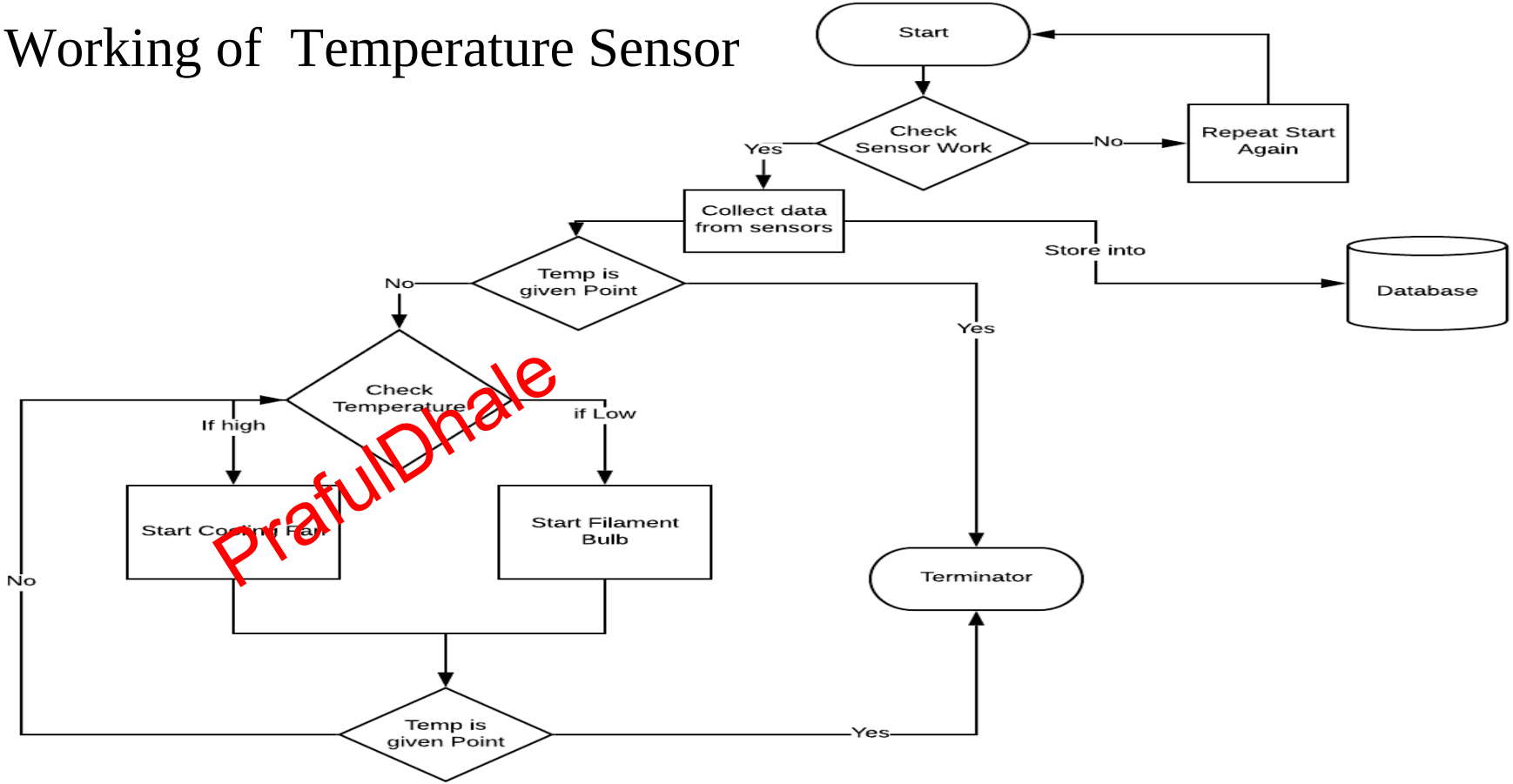
Working of Temperature Sensor



Flowchart Showing Complete flow of Temperature Sensor

Video of Implementation

PrafulDhale

Advantages

- ★ Improved labor efficiency
- ★ Improved reliability
- ★ Production in regions with adverse weather conditions
- ★ Ability to grow all the year
- ★ Prevent Thefts and Improve Security

Conclusion

The system may be implemented with the help of many technologies but these technologies more reliable, easy to implement, works effectively and easy to operate.