SMART FARMING

CS2003

Computer Organization Architecture

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OBJECTIVE

- Developing a smart farming system that farmers can use to Increase their crop production and keeping track of overall condition of crop.

- Our suggested method will increase crop production and even enable automation to control other factors.

Introduction

- Agriculture sector plays a crucial role in the Indian Economy.
- In last decades, there has been quick advancement in smart agriculture system .In the past ,irrigation systems used to be dependent on the mills to irrigate the farm by the conventional methods without knowing the appropriate quantities of these crops .
- Efficient systems should be proposed to minimize Water shortage.
- Our goal in this project is to help the farmers by efficiently decreasing the workload for farmers.

COMPONENTS USED

- Arduino Mega
- Temperature Sensor
- Moisture Sensor
- Humidity Sensor
- PH Meter
- Light Bulbs
- Liquid Crystal Display
- Motor
- Water Pump
- Water Pump Controller
- 5V Battery
- Jumper Wire
- GSM

Description:

Sensors -

- DHT11 Sensor : It Will Measure Temperature and Humidity of Surrounding
- Moisture Sensor : It is used to Measure Water content of the soil
- Ph Sensor : It Will Measure the Ph value of soil

Water pump:

When the moisture level of the soil falls below a certain level. The water pump will trigger the water supply to automatically turn on, and after restoring the moisture content of the soil it turns off.

Water Spray:

It will ensure optimal temperature and humidity of the crop surrounding.

GSM Technology:

Integration of the GSM module to the Arduino will help us achieve real time updates on the condition of the crop such as when the Ph and moisture content of the soil is not optimum users will be warned through notifications.

LCD:

This will be used to show all the readings that will be taken from the sensors to show the overall condition of the crop.

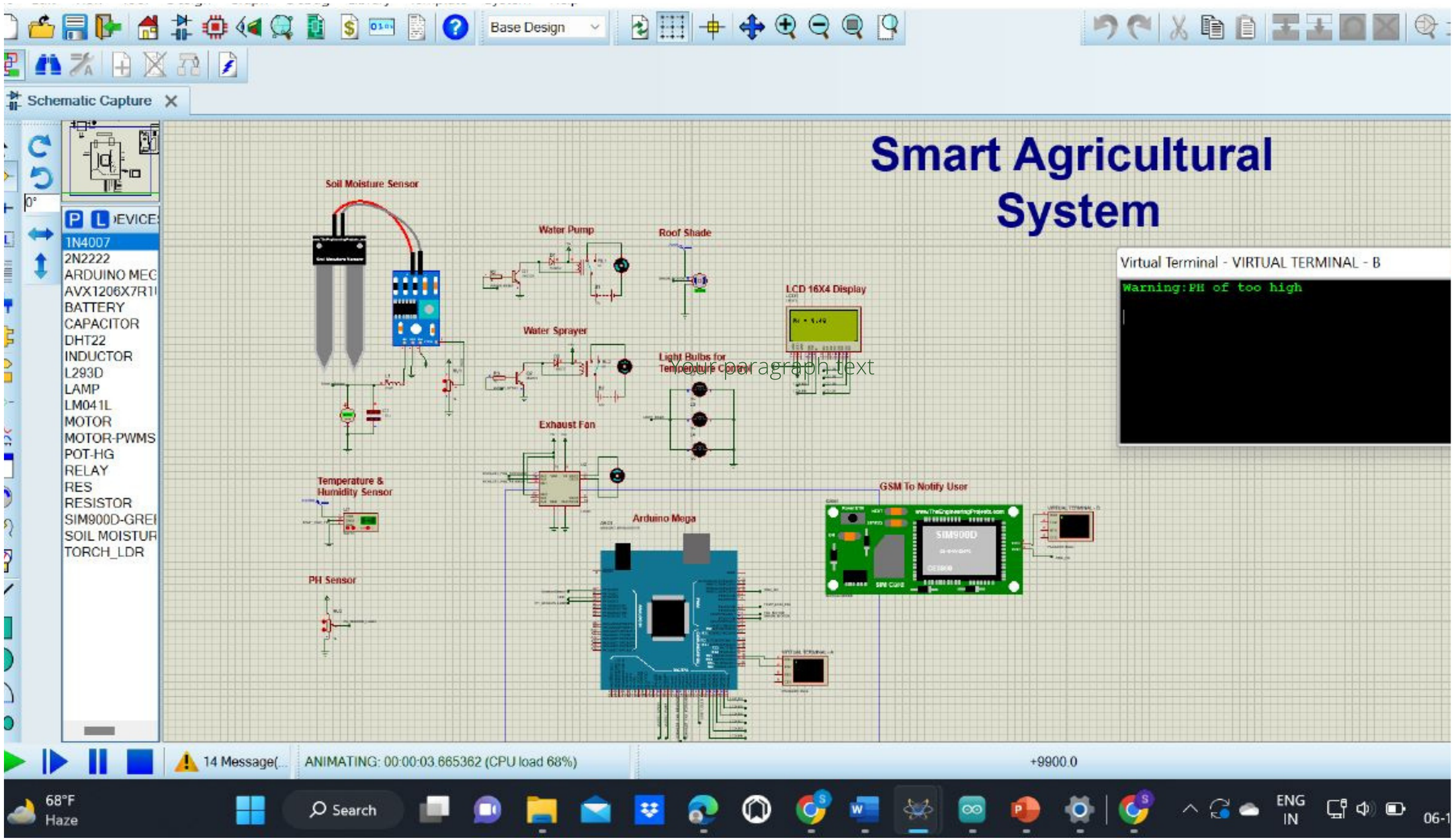
Exhaust Fan:

An exhaust fan will be used to increase the airflow in the crop surroundings. This ensures optimal temperature and humidity of the surrounding.

Light Bulbs:

Light Bulbs are used to ensure correct temperature for crop surrounding.

Circuit Design :



CODE USED:

LINK: https://github.com/Shreya0511

Conclusion

- Rooftop farming would great opportunity for high density urban for reducing food demand
- To create automated intervention this app enhances the capacity of the farmers and Saves a lot of time..
- Proposed System is Environment Friendly.

Thank You