Smart Farmer-IOT Enabled Smart Farming Application

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# Project development -Delivery of sprint-2

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| **TITLE** | **Smart Farmer-IOT Enabled Smart Farming Application** |
| **DOMAIN NAME** | INTERNET OF THINGS |
| **TEAM ID** | PNT2022TMID03166 |

**Code Reading the Weather Forecast and Sensor data:**

if (millis() - lastConnectionTime > postInterval) {

lastConnectionTime = millis();

makehttpRequest();

}

int ldrStatus = analogRead(ldrPin);

if (ldrStatus <= 200) {

digitalWrite(ledPin, HIGH);

}

else {

digitalWrite(ledPin, LOW); }

moisturePercentage = ( 100.00 - ( (analogRead(moisturePin) / 1023.00) \* 100.00 ) );

if (moisturePercentage < 35) {

digitalWrite(motorPin, HIGH);

}

temperature = dht.readTemperature();

humidity = dht.readHumidity();

sensors.requestTemperatures();

soiltemp = sensors.getTempCByIndex(0);

Explaination:

To read the weather forecast data from OpenWeatherMap API, we will use the code snippets that we generated using ArduinoJson Assistant. Here in void loop, we will only call the API after a particular time interval so that we don’t exceed our daily limit. Now after getting the weather data, next we will read all the sensor data. Here we are using the DHT11, DS18B20, LDR and Soil Moisture Sensor. LDR and soil moisture sensor data will be used to automate LED strip and water pump. So first we will read the LDR status and if the LDR reading is less than 200, then LED will be turned on automatically. Similarly, if the soil moisture percentage is less than 35, then water pump will be turned on.