PROJECT TITLE : SMART AGRICULTURE NAME:LAVANYA SREE.S

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IT 3RD YEAR

SOURCE CODE:

#include “DHT.h”

#include <LiquidCrystal.h>

LiquidCrystal lcd(13,12,11,10,9,8);

#define DHTPTH A1

#define DHTTYPE DHT11

Const int sensor\_pin = A0;

Int relay\_pin = 8;

DHT dht(DHTPIN , DHTTYPE);

Void setup(){

Serial.begin(9600);

Lcd.begin(16,2);

pinMode(relay\_pin,OUTPUT);

pimMode(sensor\_pin,OUTPUT);

dht.begin();

lcd.print(“AGRICULTURE MONITORING SYSTEM”);

}

Void loop(){

Float moisture\_percentage;

Void loop() {

Float moisture\_percentage;

Int sensor\_analog;

Sensor\_analog = analogRead(sensor\_pin);

Moisture\_percentage = (100-( (sensor\_analog/1023.00) \* 100) );

Serial.print(“moisture percentage = “);

Lcd.print(“M:”);

Serial.print(moisture\_percentage);

Serial.print(“%\n\n”);

digitalWrite(relay\_pin,HIGH);

delay(5000);

digitalWrite(relay\_pin,LOW);

delay(5000);

float h = dht.readHumidity();

float t = dht.readTemperature();

float f = dht.readTempature(true);

if (isnan(h) || isnan(t) || isnan(f) ) {

Serial.println(“failed to read from DHT sensor!”);

Return;

}

Float h1 = dht.computeHeatIndex(f,h);

Serial.print(“humidity:”);

Lcd.print(“H:”);

Serial.print(h);

Serial.print(“ %\t”);

Lcd.print(“T:”);

Serial.print(“temperature:”);

Serial.print(t);

Serial.print(“ %c”);

Serial.print(f);

Serial.print(“%f\t”);

Serial.print(“heat index:”);

Serial.print(hi);

Serial.println(“ %f”);

Delay(1000);

}

EXPLAINATION:

DHT.h header is used for the digital output , relative humidity and temperature sensor which gives the output digitally.

Liquid crystal.h header is used for detecting the liquid levels. Relay pin acts as the interface between relay and the arudino uno.

Moisture sensor detects the moisture content in the soil. Temperature sensor detect the temperature of the soil content. Dht11 sensor is used.