IOT Lab Experiment no-8

Aim: Write a Iot program for industrial application using sensor and smart boards

Code :

#include <LiquidCrystal.h>

const int LM35 = A5;

const int motor = 13;

const int LedRed = 11;

const int LedGreen = 12;

const int rgbGreen = 9;

const int rgbRed = 10;

LiquidCrystal lcd(2, 3, 4, 5, 6, 7);

void setup() {

Serial.begin(9600);

lcd.begin(16, 2);

lcd.print("Automated Plant");

lcd.setCursor(0,1);

lcd.print("Irrigation System");

pinMode(motor, OUTPUT);

pinMode(LedRed, OUTPUT);

pinMode(LedGreen, OUTPUT);

pinMode(rgbGreen,OUTPUT);

pinMode(rgbRed,OUTPUT);

delay(2000);

lcd.clear();

lcd.print("Temp=");

lcd.setCursor(0,1);

lcd.print("WaterPump= ");

}

void loop() {

int value = analogRead(LM35);

float Temperature = value \* 500.0 / 1023.0;

lcd.setCursor(6,0);

lcd.print(Temperature);

lcd.setCursor(11,1);

if (Temperature > 40){

digitalWrite(motor, HIGH);

digitalWrite(LedRed, HIGH);

digitalWrite(LedGreen, LOW);

digitalWrite(rgbGreen,LOW);

digitalWrite(rgbRed,HIGH);

lcd.print("ON");

}

else {

digitalWrite(motor, LOW);

digitalWrite(LedRed, LOW);

digitalWrite(LedGreen, HIGH);

digitalWrite(rgbGreen,HIGH);

digitalWrite(rgbRed,LOW);

lcd.print("OFF");

}

delay(1000);

}

Circuit Diagram

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