Smart Home with Tinkercard

Domain Name:Internet Of Things

BY

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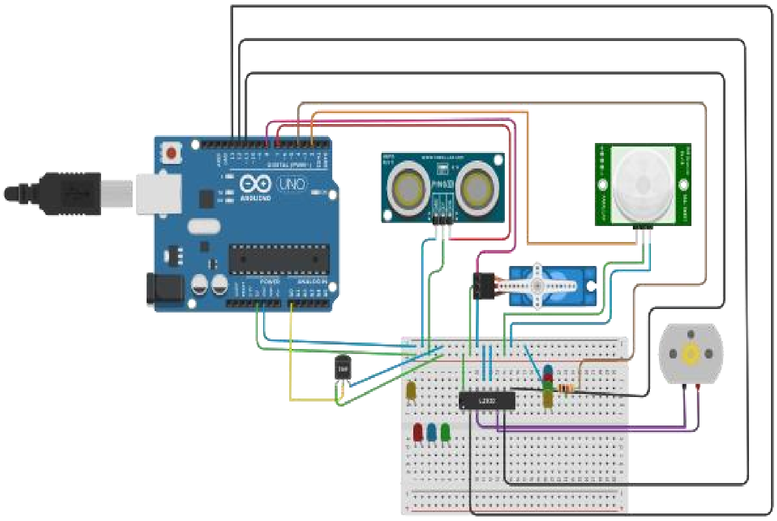
```
#include <LiquidCrystal.h>
const int rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2;
LiquidCrystal lcd(rs, en, d4, d5, d6, d7);
const int PIR = 8;
const int bulb = 7;
const int tempPin = A1;
const int fan = 10;
int const PINO_SGAS = A0;
//Temp
int temp;
int tempMin = 30;
int tempMax = 60;
//fan
int fanSpeed;
//PIR
int PIRState = 0;
//DoorBell
int trigger_pin = 13;
int echo_pin = 6;
int buzzer_pin = 9;
int time;
int distance;

void setup() {
  pinMode(PIR, INPUT);
  pinMode(bulb, OUTPUT);
  pinMode(fan, OUTPUT);
  pinMode(tempPin, INPUT);
  lcd.begin(16, 2);
  //Ultrasound
  Serial.begin (9600);
  pinMode (trigger_pin, OUTPUT);
  pinMode (echo_pin, INPUT);
  pinMode (buzzer_pin, OUTPUT);
```

```
}

void loop()
{
  //Using PIR to automate lights
  PIRState = digitalRead(PIR);
  if (PIRState == HIGH)
  {
    digitalWrite(bulb, HIGH);
  }

  if (PIRState == LOW)
  {
    digitalWrite(bulb, LOW);
  }
  //Using Temp sensor to automate fan
  if
  (temp = readTemp());

  if (temp < tempMin)
  {
    fanSpeed = 0;
    analogWrite(fan, fanSpeed);
    digitalWrite(fan, LOW);
  }
  if ((temp >= tempMin) && (temp <= tempMax))
  {
    fanSpeed = temp;
    fanSpeed = 1.5 * fanSpeed;
    analogWrite(fan, fanSpeed);
  }

  lcd.setCursor(0, 0);
  lcd.print("TEMP:");
  lcd.print(temp);
  lcd.print(" C ");

  delay(200);

  //Gas sensor to detect leaks
  int color = analogRead(PINO_SGAS);

  lcd.setCursor(0,1);
  //lcd.print("");
  if(color <= 85){
    lcd.print("Gas:Low ");
  } else if(color <= 120){
    lcd.print("Gas:Med ");
  } else if(color <= 200){
    lcd.print("Gas:High ");
  } else if(color <= 300){
    lcd.print("Gas:Ext ");
  }

  delay(250);

  //Using ultrasound to automate door opening and doorbell
   digitalWrite (trigger_pin, HIGH);
   delayMicroseconds (10);
   digitalWrite (trigger_pin, LOW);
   time = pulseIn (echo_pin, HIGH);
   distance = (time * 0.034) / 2;

  if (distance <= 10)
        {
        Serial.println (" Door Open ");
        Serial.print (" Distance= ");
        Serial.println (distance);
        digitalWrite (buzzer_pin, HIGH);
        delay (500);
        }
  else {
        Serial.println (" Door closed ");
        Serial.print (" Distance= ");
        Serial.println (distance);
        digitalWrite (buzzer_pin, LOW);
        delay (500);
       }
}

  int readTemp()
  {
    temp = analogRead(tempPin);
    return temp * 0.48828125;
  }
```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