

SPRINT 1: PROPER DETECTION AND CAMERA ACTIVATION

Date	29 October 2022
Team ID	PNT2022TMID30241
Project Name	IoT Based Smart Crop Protection System for Agriculture

WOKWI

SAVE

SHARE

Docs

sketch.ino

diagram.json

libraries.txt

Library Manager

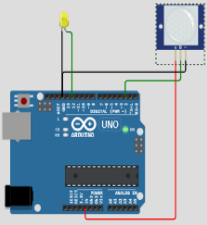
```
1  /*
2  PIR sensor tester
3  */
4  #include <WiFi.h>
5  #include <PubSubClient.h>
6  WiFiClient wifiClient;
7  String data3;
8  #define ORG "z22obn"
9  #define DEVICE_TYPE "Project"
10 #define DEVICE_ID "123456789"
11 #define TOKEN "y6Lb71znmBD&Iv9euq"
12 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
13 char publishTopic[] = "iot-2/evt/manimd/fmt/json";
14 char topic[] = "iot-2/cmd/led/fmt/String";
15 char authMethod[] = "use-token-auth";
16 char token[] = TOKEN;
17 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;
18 PubSubClient client(server, 1883, wifiClient);
19
20 int ledPin = 12; // choose the pin for the LED
21 int inputPin = 2; // choose the input pin (for PIR sensor)
22 int pirState = LOW; // we start, assuming no motion detected
23 int val = 0; // variable for reading the pin status
24
25
26 void setup() {
27   pinMode(ledPin, OUTPUT); // declare LED as output
28   pinMode(inputPin, INPUT); // declare sensor as input
29   Serial.begin(9600);
30 }
```

Simulation

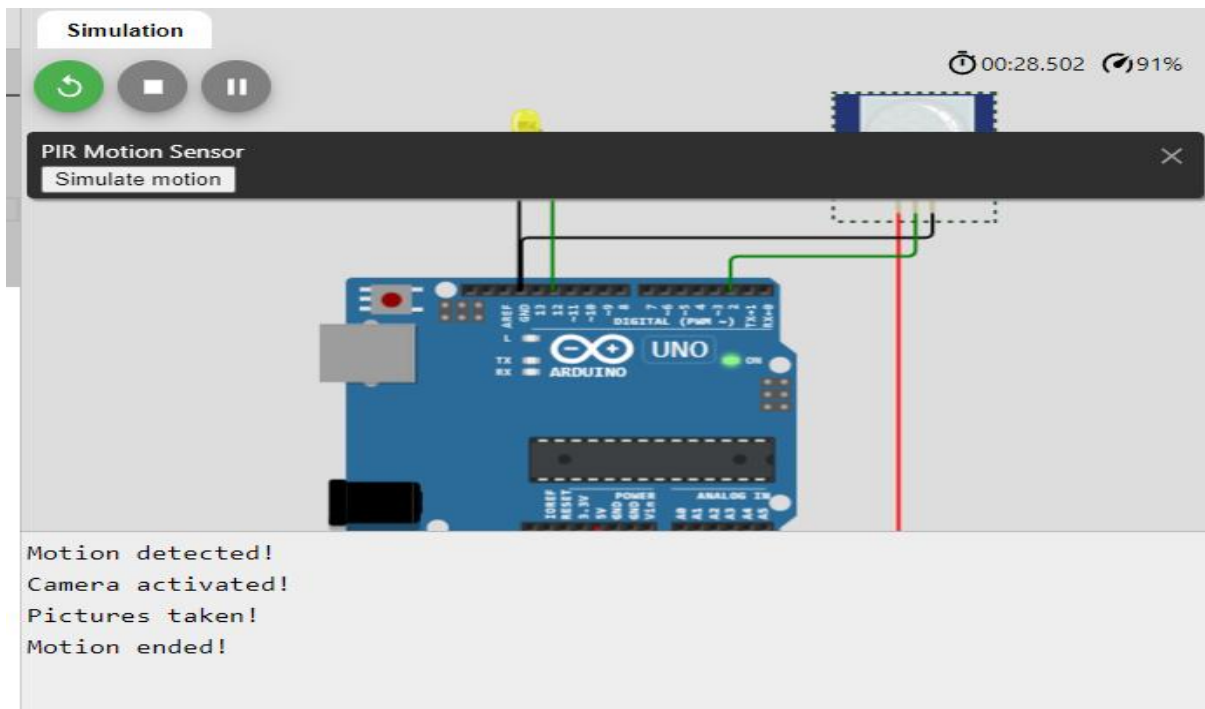
00:20.198 99%

PIR Motion Sensor

Simulate motion



Motion detected!
Camera activated!
Pictures taken!
Motion ended!



PYTHON CODE:

```
/*PIR sensor tester*/
#include <WiFi.h>
#include <PubSubClient.h>
WiFiClient wifiClient;
String data3;
#define ORG "z22obn"
#define DEVICE_TYPE "Project"
#define DEVICE_ID "123456789"
#define TOKEN "y6Lb7lznmbD&Iv9euq"
int ledPin = 12; // choose the pin for the LED
int inputPin = 2; // choose the input pin (for PIR sensor)
int pirState = LOW; // we start, assuming no motion detected
int val = 0; // variable for reading the pin status
void setup() {
  pinMode(ledPin, OUTPUT); // declare LED as output
  pinMode(inputPin, INPUT); // declare sensor as input
  Serial.begin(9600);
}
void loop() {
  val = digitalRead(inputPin); // read input value
  if (val == HIGH) { // check if the input is HIGH
    digitalWrite(ledPin, HIGH); // turn LED ON
    //void publishData();
    if (pirState == LOW) {
      // we have just turned on
      Serial.println("Motion detected!");
      Serial.println("Camera activated!");
```

```
delay(1000);
Serial.println("Pictures taken!");
// We only want to print on the output change, not state
pirState = HIGH;
}
}
else {
digitalWrite(ledPin, LOW); // turn LED OFF
//void publishData();
if (pirState == HIGH) {
// we have just turned of
Serial.println("Motion ended!");
// We only want to print on the output change, not state
pirState = LOW;
}}}
```

WOKWI LINK: <https://wokwi.com/projects/347392355240772180>