

ASSIGNMENT 1

Name	P.SARAN
Project Name	SmartFarmer – IoT Enabled Smart Farming Application
Team ID	PNT2022TMID47823

QUESTION

Make a smart home with 2-3 sensors, LED, Buzzer, in single code and connections. submit it in the platform, any doubts ask in chat with mentor option

CODE

```
void setup()
{
  pinMode(13, OUTPUT); //led
  pinMode(2, OUTPUT); //buzzer
  pinMode(3, OUTPUT); //trigger
  pinMode(4, INPUT); //echo
  pinMode(5, INPUT); //pir
  pinMode(A5, INPUT); //temp
  Serial.begin(9600);
}

void loop()
{
  double a = analogRead(A5);
  double c = (((a/1024)*5)-0.5)*100;
  int pirdude = digitalRead(5);
  digitalWrite(3, LOW);
  digitalWrite(3, HIGH);
  delay(10);
  digitalWrite(3, LOW);
  float dur = pulseIn(4, HIGH);
  float dis = (dur*0.0343)/2;
  int b = digitalRead(5);
  Serial.print(c);
  Serial.print(" C, ");
  Serial.print(dis);
  Serial.print(" dist, ");
  Serial.print(b);
  Serial.print(" pir, ");
  if (dis < 200) {
    digitalWrite(13, HIGH);
    delay(2000);
    digitalWrite(13, LOW);
  }

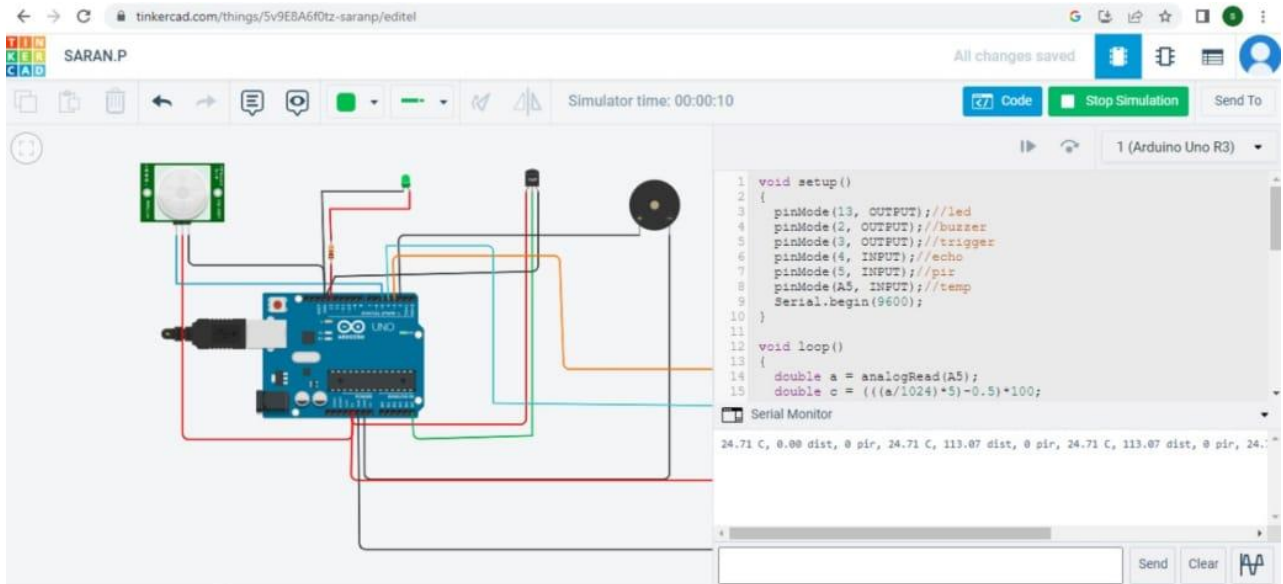
  if (c > 34.00) {
    digitalWrite(2, HIGH);
```

```

delay(2000);
digitalWrite(2,LOW);
}
if (a==HIGH){
  digitalWrite(2,HIGH);
  delay(3000);
  digitalWrite(2,LOW);
}
}

```

OUTPUT



The screenshot shows the Tinkercad web interface with an Arduino Uno R3 simulation. The circuit is connected as follows:

- PIR sensor VCC to 5V, GND to GND, and OUT to digital pin 5.
- Buzzer VCC to 5V, GND to GND, and OUT to digital pin 2.
- LED VCC to 5V, GND to GND, and OUT to digital pin 13.
- Temperature sensor VCC to 5V, GND to GND, and OUT to analog pin A5.

The code in the editor is as follows:

```

1 void setup()
2 {
3   pinMode(13, OUTPUT); //led
4   pinMode(2, OUTPUT); //buzzer
5   pinMode(3, OUTPUT); //trigger
6   pinMode(4, INPUT); //echo
7   pinMode(5, INPUT); //pir
8   pinMode(A5, INPUT); //temp
9   Serial.begin(9600);
10 }
11
12 void loop()
13 {
14   double a = analogRead(A5);
15   double c = ((a/1024)*5)-0.5)*100;

```

The Serial Monitor displays the following output:

```

24.71 C, 0.00 dist, 0 pir, 24.71 C, 113.07 dist, 0 pir, 24.71 C, 113.07 dist, 0 pir, 24.

```