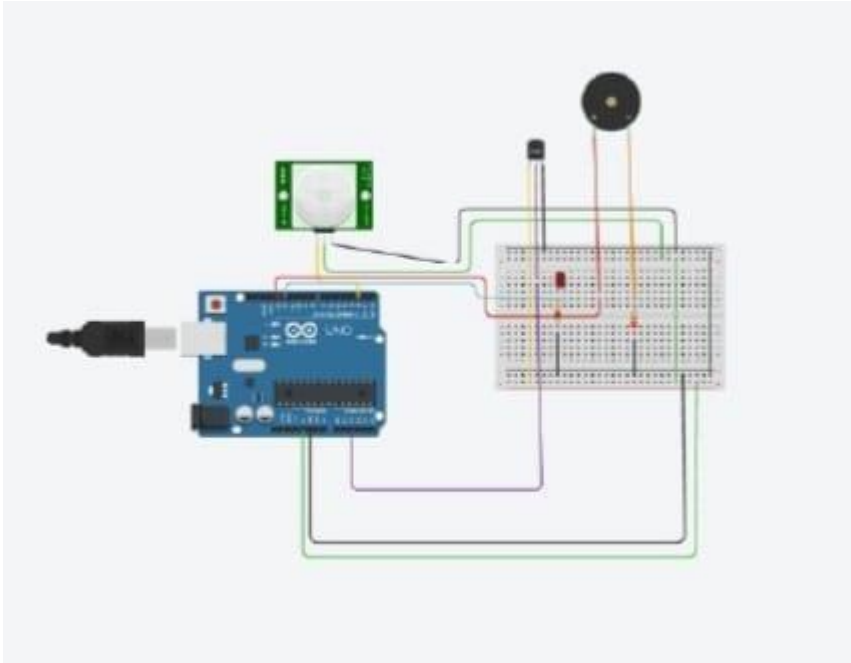


Assignment -1

Assignment Date	06 November 2022
Student Name	Ms.K.Suriya
Student Roll Number	821719106026
Maximum Marks	2 Marks

Question-1:

Build a smart home in thinkercad with 2 sensors, an LED , buzzer.



Coding:

```
int pinSensor =2;
int pinLed =12;
int pinBuzzer =13;
int pirSensor =0;

void setup()
{
  Serial.begin(9600);
  pinMode(pinSensor, INPUT);
  pinMode(pinLed, OUTPUT);
  pinMode(pinBuzzer, OUTPUT);
}

void loop()
{
  double avalue=analogRead(A2);
```

```

Serial.print("avalue is : ");
Serial.println(avalue);
double ca= avalue/1024;
double v= ca* 5;
Serial.print("voltage is:");
Serial.println(v);
double o =v-0.5;
Serial.print("offset voltage:");
Serial.println(o);
pirSensor = digitalRead(pinSensor);
if (pirSensor == HIGH)
{

    digitalWrite(pinLed, HIGH);
    tone(pinBuzzer, 1000, 500);

}

else {

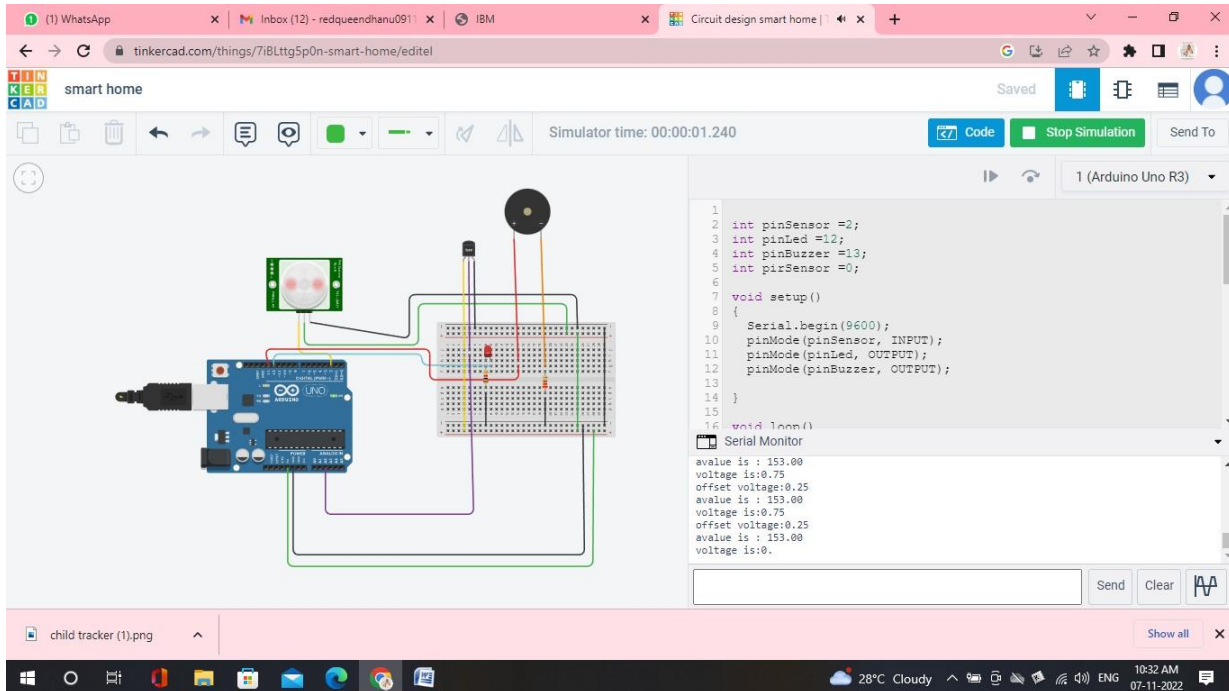
    digitalWrite(pinLed, LOW);

}

delay(10);
}

```

Output :



The screenshot shows the Tinkercad web interface for a smart home project. The circuit diagram on the left features an Arduino Uno R3 connected to a breadboard. The breadboard contains a buzzer and an LED. A PIR sensor module is also connected to the circuit. The code editor on the right displays the following Arduino sketch:

```

1 int pinSensor =2;
2 int pinLed =12;
3 int pinBuzzer =13;
4 int pirSensor =0;
5
6 void setup()
7 {
8   Serial.begin(9600);
9   pinMode(pinSensor, INPUT);
10  pinMode(pinLed, OUTPUT);
11  pinMode(pinBuzzer, OUTPUT);
12
13 }
14
15 void loop()
16 {
17   Serial Monitor
18   avalue is : 153.00
19   voltage is:0.75
20   offset voltage:0.25
21   avalue is : 153.00
22   voltage is:0.75
23   offset voltage:0.25
24   avalue is : 153.00
25   voltage is:0.

```

The serial monitor at the bottom right shows the output of the program, displaying the calculated values for avalue, voltage, and offset voltage. The status bar at the bottom indicates the system temperature is 28°C and the date is 07-11-2022.