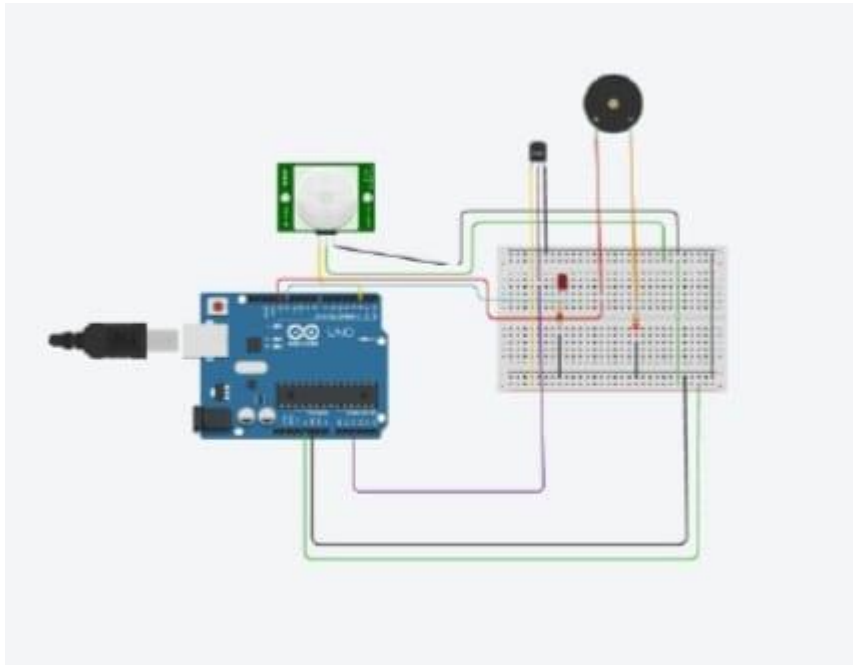


Assignment -1

Assignment Date	06 November 2022
Student Name	Ms.K.Priyadharshini
Student Roll Number	821719106020
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 {

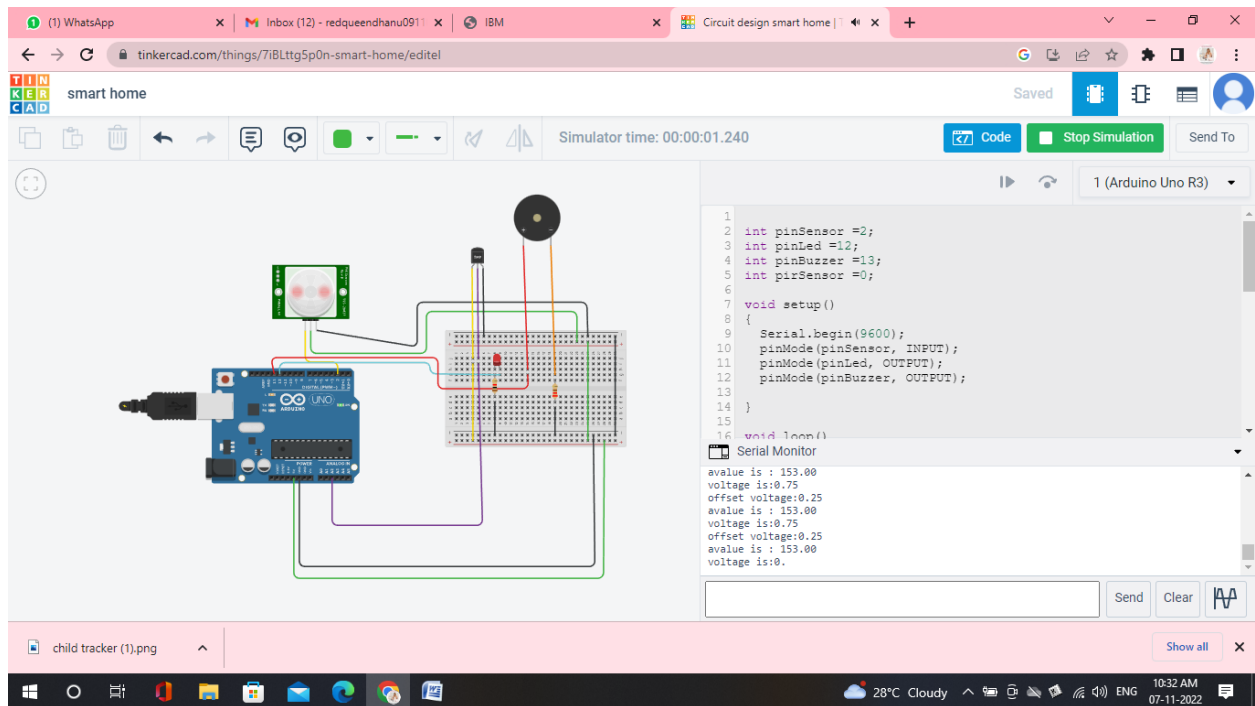
    digitalWrite(pinLed, LOW);

}

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 is also connected to the circuit. The code editor on the right shows the following code:

```

1 int pinSensor =2;
2 int pinLed =12;
3 int pinBuzzer =13;
4 int pinSensor =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 displays the output of the code, showing the values of the variables and the state of the LED and buzzer. The output is as follows:

```

1 avalue is : 153.00
2 voltage is:0.75
3 offset voltage:0.25
4 avalue is : 153.00
5 voltage is:0.75
6 offset voltage:0.25
7 avalue is : 153.00
8 voltage is:0.

```