ASSIGNMENT 1

Assignment Date	12 September 2022
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Max Marks	2

Question-1:

Build an smarthome iot device using an audrino uno microcontroller and attach at least 2 sensors in it .

```cpp
// C++ code
//
int gasSensor=A1;
int buzzer=13;
int led=12;
int motor=5;


void setup()
{
  pinMode(gasSensor, INPUT);
  pinMode(buzzer,OUTPUT);
  pinMode(led,OUTPUT);
  pinMode(motor,OUTPUT);
  Serial.begin(9600);
}



void loop()
{
  int sensorValue=analogRead(A1);
  Serial.print("GAS SENSOR LEVEL: ");
  Serial.println(sensorValue);
  delay(2000); // Wait for 2000 millisecond(s)

  if(sensorValue>200) //if sensor level detects above 200 buzzer sound will
produce
  {
    digitalWrite(buzzer,HIGH);// buzzer will turn on

        digitalWrite(led,HIGH); // led will glow

    digitalWrite(motor,HIGH);// exhaust fan will turn on
  }
  else
  {
    digitalWrite(buzzer,LOW);
    digitalWrite(led,LOW);
    digitalWrite(motor,LOW);
  }
}
```
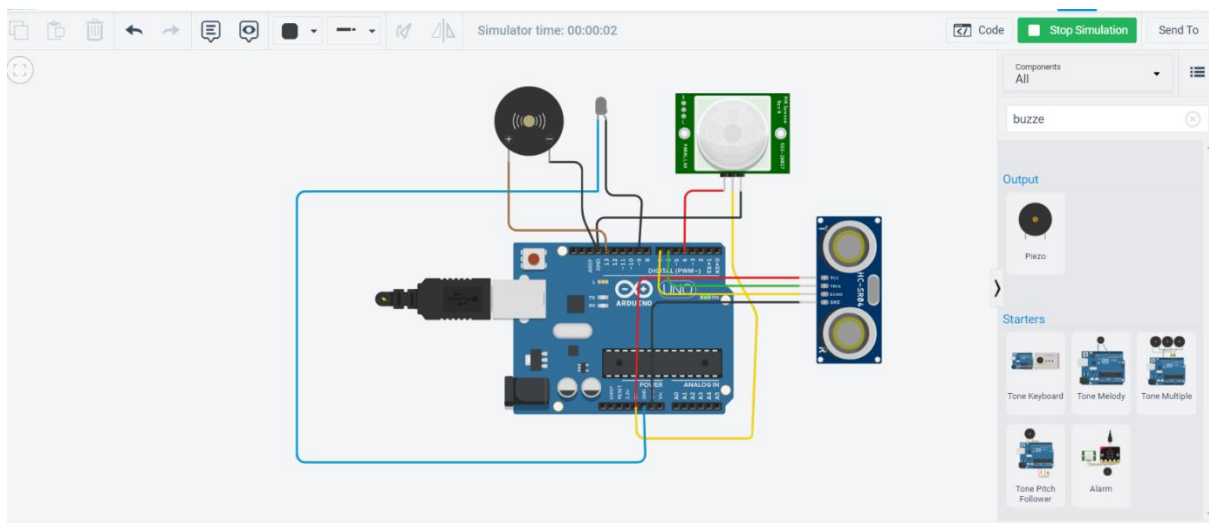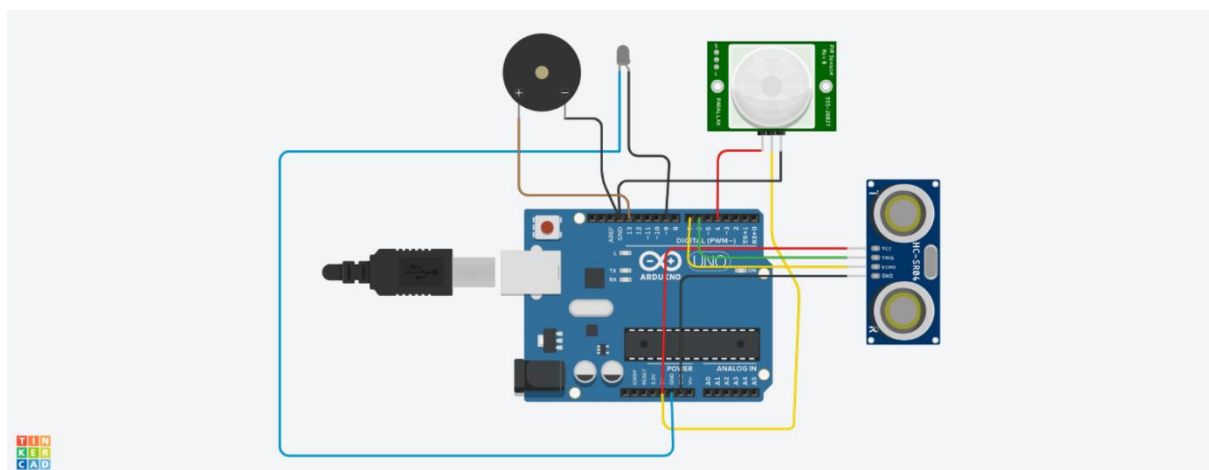
Components

Name	Quantity	Component
D1	1	Gas Sensor
Piezo 1	1	Piezo
D1	1	Red Led
M1	1	Dc Motor
U1	1	Arduino Uno R3

CIRCUIT DIAGRAM:

SIMULATION:

SCHEMATIC:

UARDUINO_BOARD_5V

UARDUINO_BOARD

RX	VIN
TX	5V
D2	3.3V
D3	
D4	AREF
D5	IOREF
D6	RES
D7	
D8	A0
D9	A1
D10	A2
D11	A3
D12	A4
D13	A5
SDA	
SCL	GND

Arduino UNO

PIRPIR_SENSOR

VCC
OUT
GND

PIR

DISTULTRASONIC

VCC
TRIG
ECHO
GND

D1
WHITE

UARDUINO_BOARD_GND