

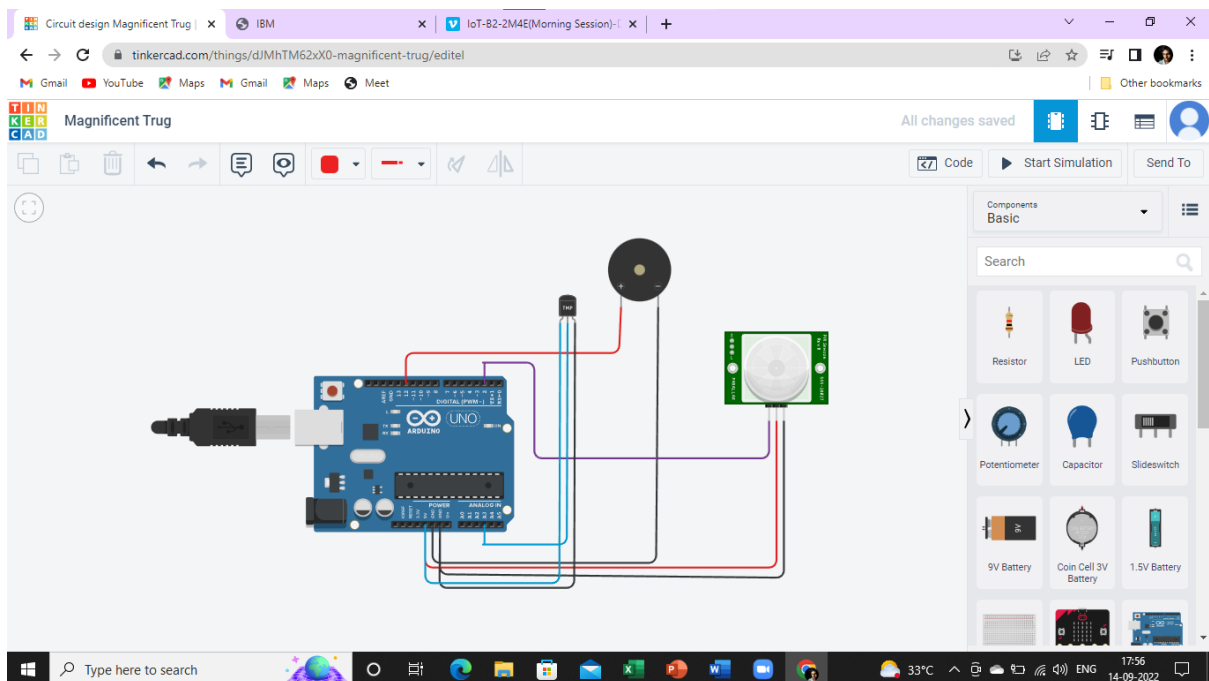
IBM ASSIGNMENT-1

NAME : BALAJI.T

TEAM ID : PNT2022TMID26620

REGISTER NO : 212919106013

CIRCUIT LAYOUT :



Coding :

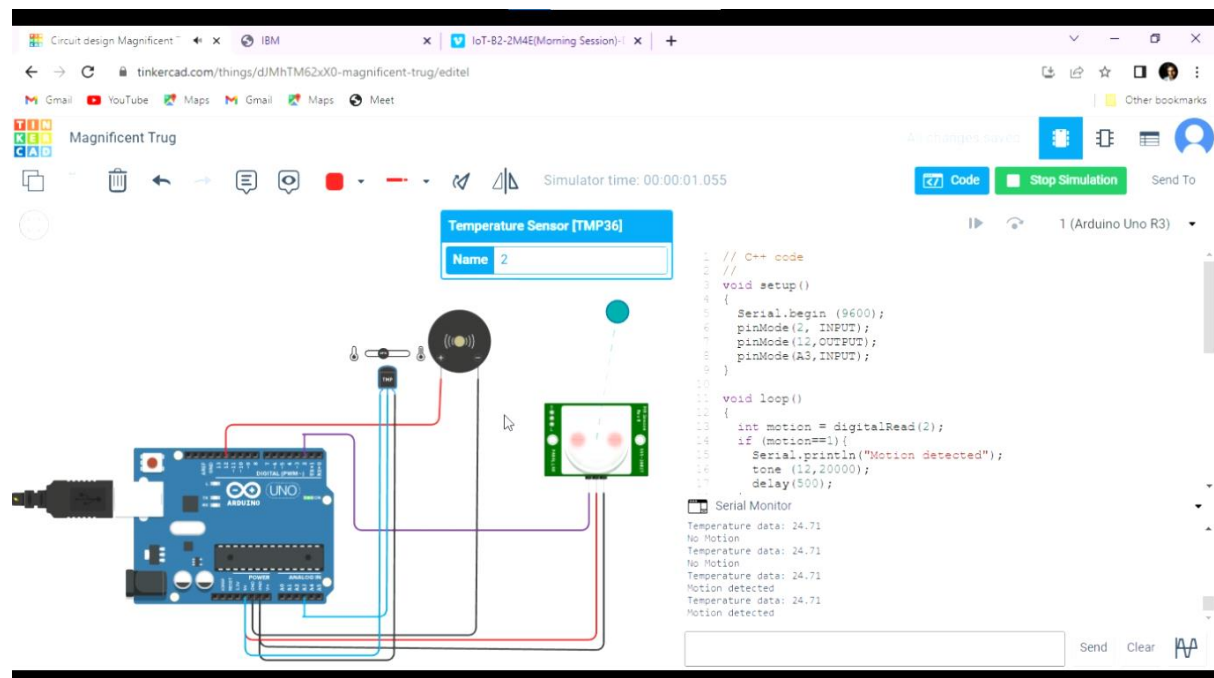
```
void setup()
{
  Serial.begin (9600);
  pinMode(2, INPUT);
  pinMode(12,OUTPUT);
  pinMode(A3,INPUT);
}

void loop()
{
  int motion = digitalRead(2);
  if (motion==1){
    Serial.println("Motion detected");
    tone (12,20000);
    delay(500);
  }
  else{
    Serial.println("No Motion");
    noTone(12);
  }
  {
    double data=analogRead(A3);
    double n=data/1024;
```

```
double volt=n*5;
double off=volt-0.5;
double temperature=off*100;
if (temperature>59.99){
  Serial.print("Temperature data:");
  Serial.println(temperature);
  tone(12,10000);
  delay(500);
}
else
  Serial.print("Temperature data: ");
  Serial.println(temperature);
  noTone(12);
}
}
```

Output :

1).Passive Infrared Sensor :



The screenshot shows a Tinkercad simulation of an Arduino Uno R3 connected to two sensors. A Passive Infrared (PIR) sensor is connected to digital pin 2, and a Temperature Sensor (TMP36) is connected to analog pin A3. The code in the Serial Monitor shows the following output:

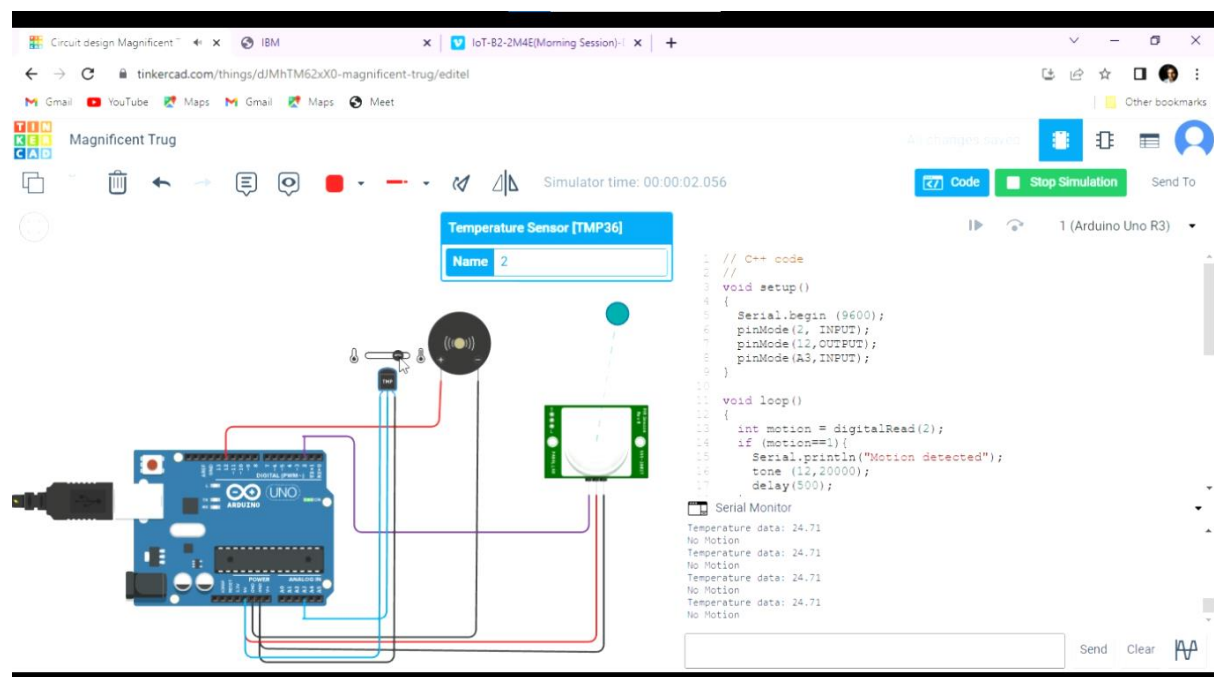
```
// C++ code
void setup()
{
  Serial.begin(9600);
  pinMode(2, INPUT);
  pinMode(A3, OUTPUT);
  pinMode(A3, INPUT);
}

void loop()
{
  int motion = digitalRead(2);
  if (motion==1){
    Serial.println("Motion detected");
    tone(12,20000);
    delay(500);
  }
}
```

Serial Monitor output:

```
Temperature data: 24.71
No Motion
Temperature data: 24.71
No Motion
Temperature data: 24.71
Motion detected
Temperature data: 24.71
Motion detected
```

2).Temperature Sensor :



The screenshot shows a Tinkercad simulation of an Arduino Uno R3 connected to two sensors. A Passive Infrared (PIR) sensor is connected to digital pin 2, and a Temperature Sensor (TMP36) is connected to analog pin A3. The code in the Serial Monitor shows the following output:

```
// C++ code
void setup()
{
  Serial.begin(9600);
  pinMode(2, INPUT);
  pinMode(A3, OUTPUT);
  pinMode(A3, INPUT);
}

void loop()
{
  int motion = digitalRead(2);
  if (motion==1){
    Serial.println("Motion detected");
    tone(12,20000);
    delay(500);
  }
}
```

Serial Monitor output:

```
Temperature data: 24.71
No Motion
Temperature data: 24.71
No Motion
Temperature data: 24.71
No Motion
Temperature data: 24.71
No Motion
```