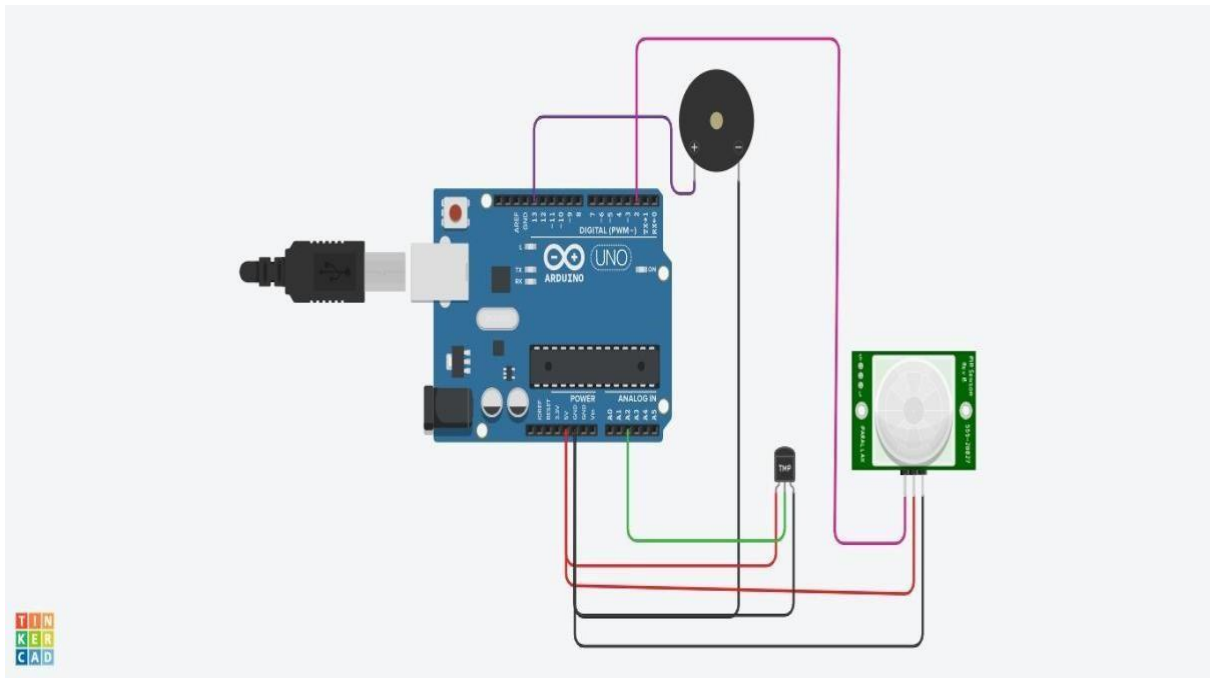


ASSIGNMENT 1

Create a circuit with piezo alarm, PIR sensor, tmp sensor with below functionalities:

1. Alarm should sound in one manner if temp is above 60 C
2. Alarm should sound with another frequency if motion is detected in PIR sensor



CIRCUIT

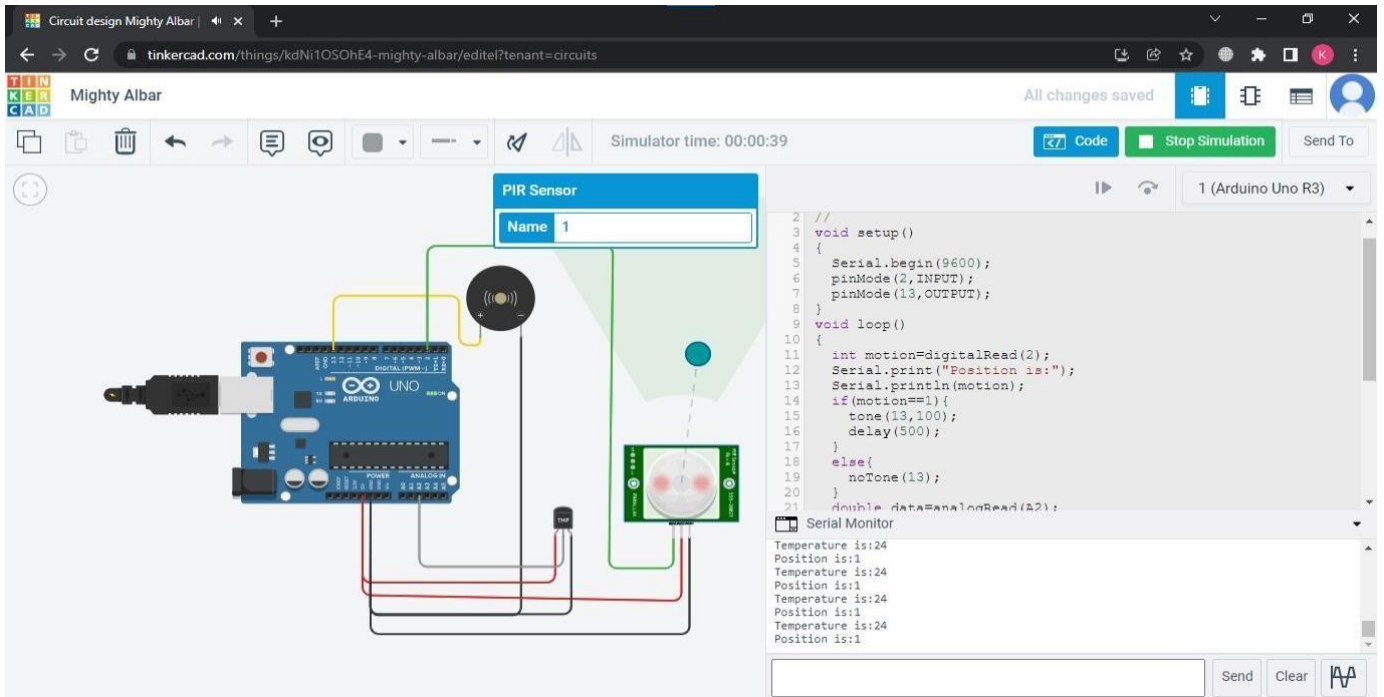
```
// C++ code
//
void setup()
{
    Serial.begin(9600);
    pinMode(2,INPUT);
    pinMode(13,OUTPUT);
}
void loop()
{
    int motion=digitalRead(2);
    Serial.print("Position is");
    Serial.println(motion);
    if(motion==1){
        tone(13,100);
        delay(500);
    }
    else{
        noTone(13);
    }
    double data=analogRead(A2);
    double n=data/1024;
    double volt=n*5;
    double off=volt-0.5;
    int temp=off*100;
    Serial.print("Temperature is:");
    Serial.println(temp);
    if(temp>=60){
        tone(13,400);
    }
}
```

```

    delay(500);
}
else{
    noTone(13);
}
}

```

OUTPUT :



The screenshot shows a Tinkercad simulation of an Arduino Uno R3 connected to a PIR sensor and a buzzer. The PIR sensor is connected to digital pin 2, and the buzzer is connected to digital pin 13. The code in the Serial Monitor shows the sensor detecting motion and triggering the buzzer.

```

2 //
3 void setup()
4 {
5   Serial.begin(9600);
6   pinMode(2, INPUT);
7   pinMode(13, OUTPUT);
8 }
9 void loop()
10 {
11   int motion=digitalRead(2);
12   Serial.print("Position is:");
13   Serial.println(motion);
14   if(motion==1){
15     tone(13,100);
16     delay(500);
17   }
18   else{
19     noTone(13);
20   }
21   double data=analogRead(A2);

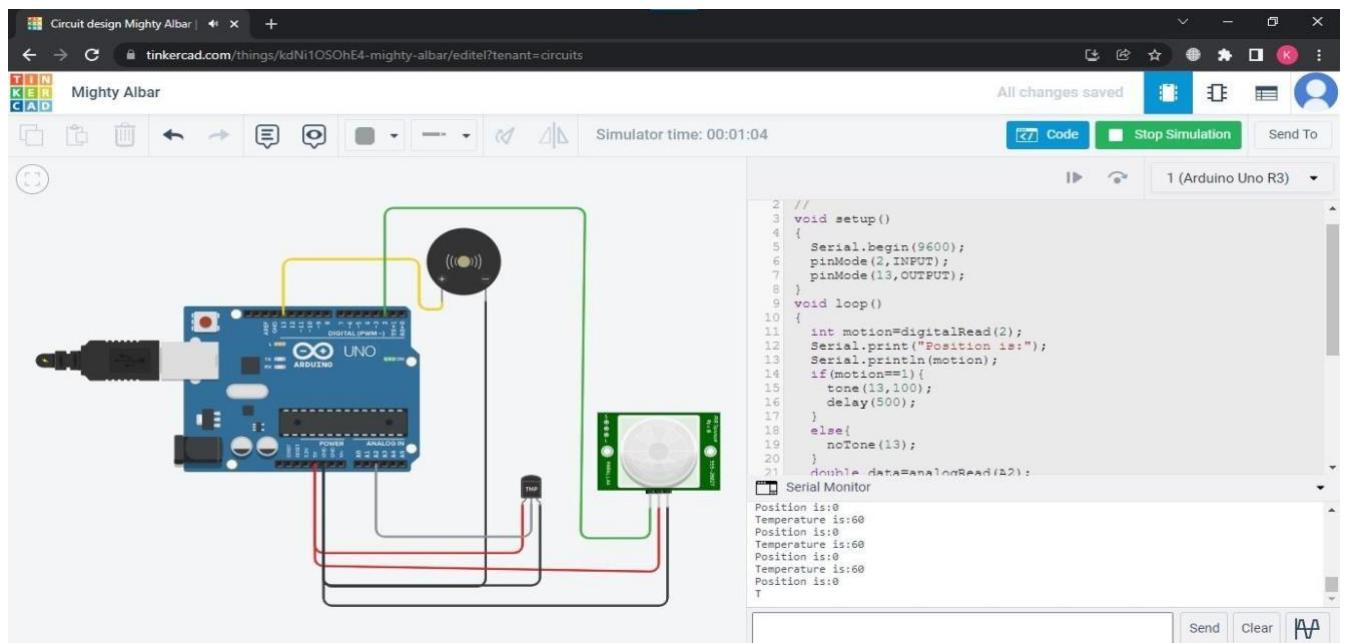
```

Serial Monitor output:

```

Temperature is:24
Position is:1
Temperature is:24
Position is:1
Temperature is:24
Position is:1
Temperature is:24
Position is:1

```



The screenshot shows the same Tinkercad simulation setup, but the buzzer is not triggered. The code in the Serial Monitor shows the sensor detecting no motion.

```

2 //
3 void setup()
4 {
5   Serial.begin(9600);
6   pinMode(2, INPUT);
7   pinMode(13, OUTPUT);
8 }
9 void loop()
10 {
11   int motion=digitalRead(2);
12   Serial.print("Position is:");
13   Serial.println(motion);
14   if(motion==1){
15     tone(13,100);
16     delay(500);
17   }
18   else{
19     noTone(13);
20   }
21   double data=analogRead(A2);

```

Serial Monitor output:

```

Position is:0
Temperature is:60
Position is:0
Temperature is:60
Position is:0
Temperature is:60
Position is:0

```