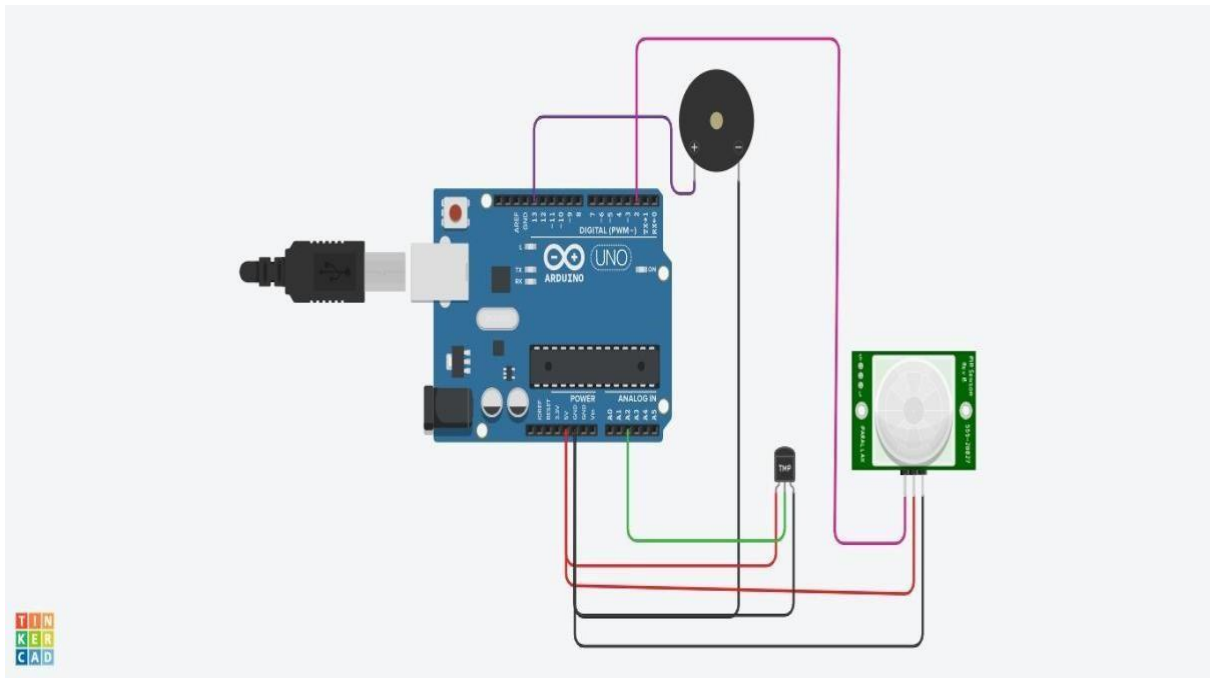


ASSIGNMENT 1

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 connected to a PIR sensor and a buzzer. The PIR sensor is labeled 'Name 1'. The code in the Serial Monitor is as follows:

```

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);

```

The Serial Monitor output shows:

```

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. The code in the Serial Monitor is as follows:

```

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);

```

The Serial Monitor output shows:

```

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

```