

Assignment -1

Arduino

Assignment Date	18 September 2022
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Maximum Marks	2 Marks

Question:

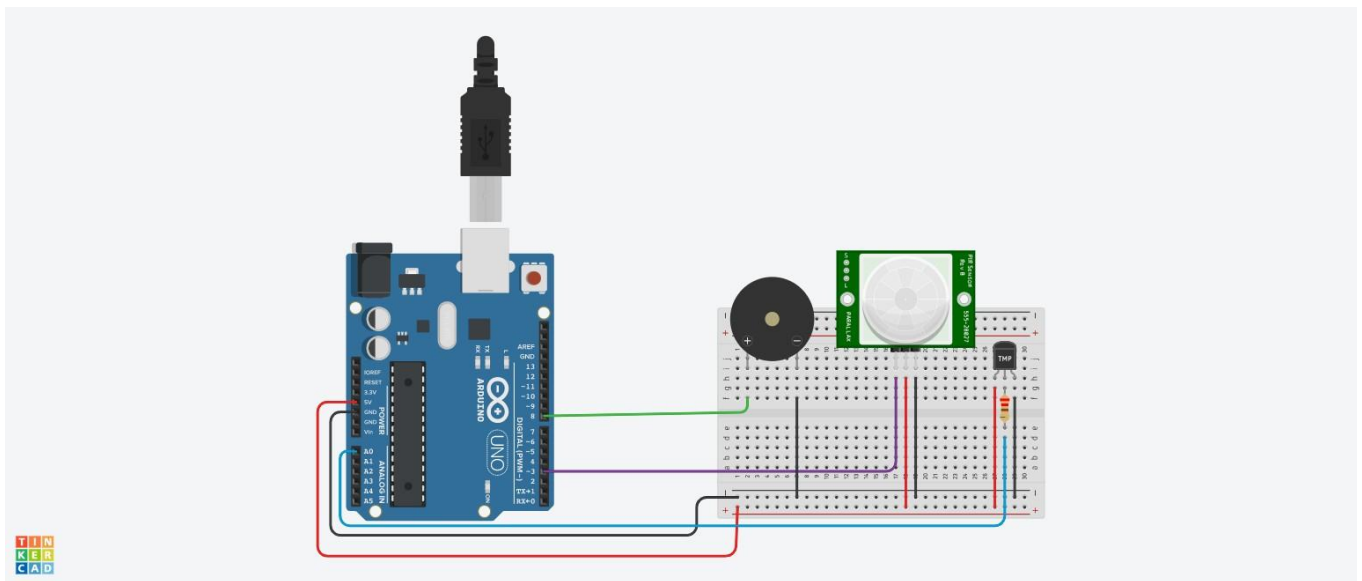
Using PIR sensor and tmp36(Temperature sensor), piezo alarm, Create a circuit with Arduino uno with below functionalities.

1. Alarm should give one sound when there is a motion near PIR sensor
2. Alarm should sound with different sound when the temperature is above 60 degrees.

Software Used:

TinkerCad

Circuit :



TinkerCad Simulation link :

<https://www.tinkercad.com/things/eQ9IK16HwD4?sharecode=gcAqdoyCQTdqT6ok8OzhMW75mIJmiG97F-uej50LhtA>

Arduino Code:

```
#define temp A0

#define pir 3

#define buzzer 8

int motion =0;

double t;

void setup()
{
    pinMode(buzzer, OUTPUT);
    pinMode(temp, INPUT);
    pinMode(pir, INPUT);
    Serial.begin(9600);
}

void loop()
{
    motion = digitalRead(pir);
    int reading = analogRead(temp);
    t = (double)reading / 1024;
    t = t * 5;
    t = t-0.5;
    t = t * 100;
    Serial.println("motion not detected");
    Serial.println("Temperature: ");
    Serial.println(t);
    if (motion == 1)
    {
        Serial.println("Motion Detected!!!");
        digitalWrite(buzzer,HIGH);
        delay(1000);
        digitalWrite(buzzer,LOW);
    }
}
```

```
    delay(10);
}
else if(t > 60)
{
    Serial.println("High Temperature Detected!!!");
    for(int i=0;i<3;i++)
    {
        digitalWrite(buzzer,HIGH);
        delay(1500);
        digitalWrite(buzzer,LOW);
        delay(500);
        i++;
    }
}
delay(1000);
}
```