

Assignment – I

Student Roll No

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Student Name

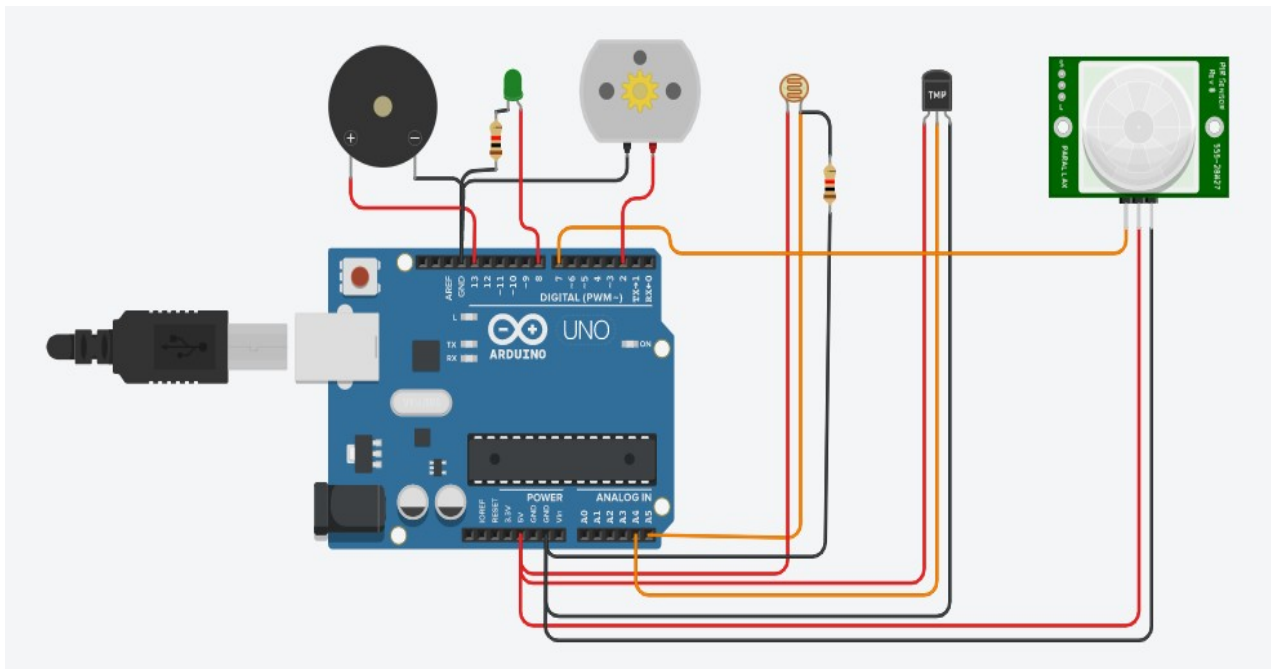
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Question:

To create a smart home using arduino in tinkercad with 2-3 sensors and an LED and Buzzer.

Solution:

Circuit Diagram:



Code:

```
// C++ code
//
float x,y,z,temp;
void setup()
{
  Serial.begin(9600);
  pinMode(2, OUTPUT);
  pinMode(7, INPUT);
  pinMode(8, OUTPUT);
  pinMode(13, OUTPUT);
  pinMode(A4, INPUT);
}
```

```

    pinMode(A5, INPUT);
}

void loop()
{
    x=analogRead(A5);
    y=analogRead(A4);
    z=digitalRead(7);
    temp = (double)y / 1024;
    temp = temp * 5;
    temp = temp - 0.5;
    temp = temp * 100;
    if(x<=550)
    {
        digitalWrite(8, HIGH);
        Serial.println(x);
        delay(1000);
        Serial.println("Room is Dark.....Light's ON");
        delay(1000);
    }
    else
    {
        digitalWrite(8, LOW);
        Serial.println(x);
        delay(1000);
        Serial.println("Room is Light.....Light's OFF");
        delay(1000);
    }

    if(temp>=30)
    {
        digitalWrite(2, HIGH);
        Serial.println(temp);
        delay(1000);
        Serial.println("Temperature is High.....Fan ON");
        delay(1000);
    }
    else
    {
        digitalWrite(2, LOW);
        Serial.println(temp);
        delay(1000);
        Serial.println("Temperature is Low.....Fan OFF");
        delay(1000);
    }
}

```

```
if(z>0)
{
  digitalWrite(13, HIGH);
  Serial.println(z);
  Serial.println("Someone is Entered.....");
}
else
{
  digitalWrite(13, LOW);
  Serial.println(z);
  Serial.println("No one is there.....");
}
}
```

Tinkercad Link:

<https://www.tinkercad.com/things/7G7NGHyALOr-brave-kup-curcan/editel?sharecode=O7IHSdwPV7uu2-IGbmFMoruW9nmADd1tzGRPjCP5LXE>