Assignment – I

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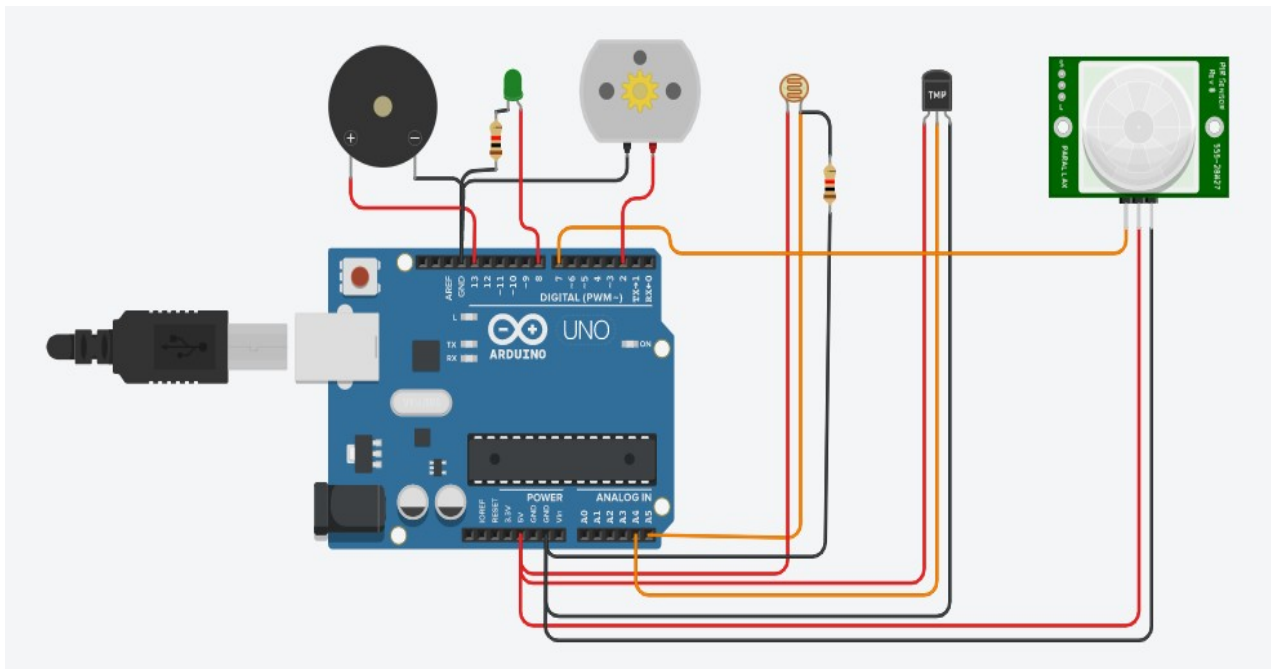Student Name   Tharun Prasath R C

Question:

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

Solution:
Circuit Diagram:

Code:

```cpp
// 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