

ASSIGNMENT – 1

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OBJECTIVES

To built a smart home in tinkercad, using atleast 2 sensors, LED and buzzer in a circuit and simulate it in a single code.

CODE

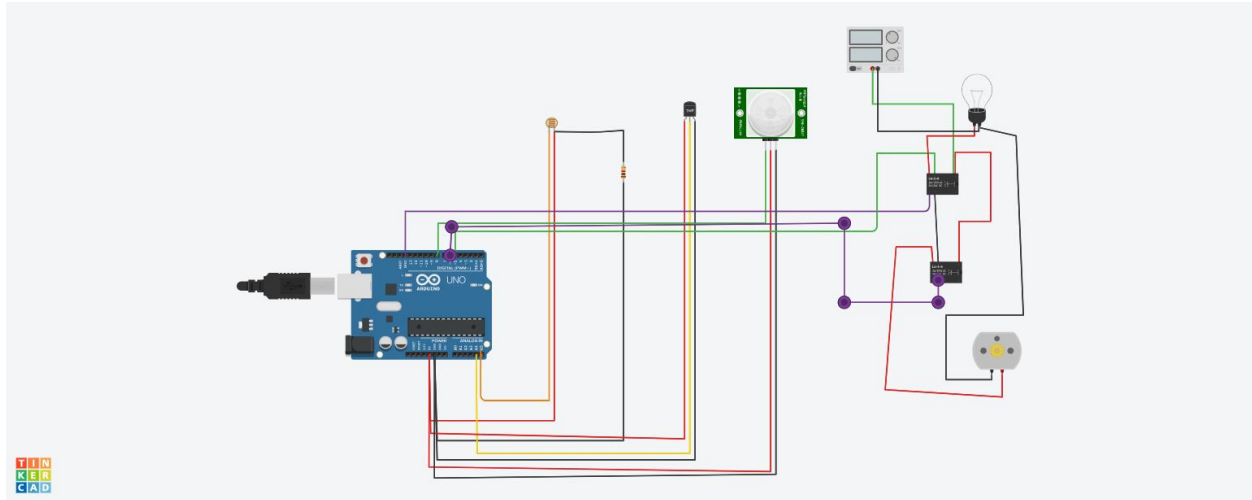
```
int trig=3;
int echo=5;
void setup()
{
  pinMode(trig,OUTPUT);
  pinMode(echo,INPUT);
  pinMode(7,INPUT);
  Serial.begin(9600);
  pinMode(10,OUTPUT);
  pinMode(4,OUTPUT);
  pinMode(12,OUTPUT);
}
```

```
void loop()
{
double a=analogRead(A2);
Serial.print("adc value:");
  Serial.println(a);
  double v=a/1024;
  double tvolt=v*5;
Serial.print("temp volt:");
  Serial.println(tvolt);
double o=tvolt-0.5;
  double t=o*100;
Serial.print("temp is:");
Serial.println(t);
  digitalWrite(trig,LOW);
digitalWrite(trig,HIGH);
  delayMicroseconds(10);
digitalWrite(trig,LOW);
  float dur=pulseIn(echo,HIGH);
float dist=(dur*0.0343)/5;
  Serial.println("distance:");
  Serial.println(dist);
```

```
int m=digitalRead(7);
  Serial.print("motion detected : ");
  Serial.println(m);
  if(t>=60)
  {
    Serial.println("high temperature");
    digitalWrite(10,HIGH);
  }
  else
  {
    Serial.println("low temperature");
    digitalWrite(10,LOW);
  }
  if(dist<=20)
  {
    Serial.println("door open");
    digitalWrite(4,HIGH);
  }
  else
  {
    Serial.println("door close");
```

```
digitalWrite(4,LOW);  
}  
if(m==1)  
{  
  Serial.println("on the light");  
  digitalWrite(12,HIGH);  
  delay(50);  
}  
else  
{  
  Serial.println("off the light");  
  digitalWrite(12,LOW);  
}  
delay(50);  
}
```

OUTPUT



SIMULATION LINK

SIMULATION LINK: <https://www.tinkercad.com/things/3VhxxwkXLSM-assignment1/editel>