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

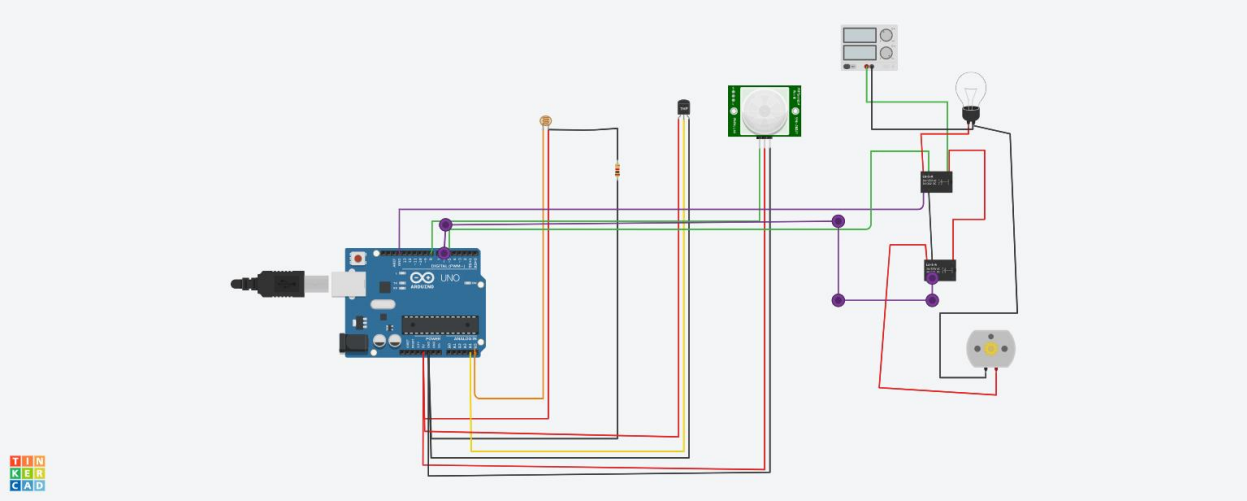
```
int trig=3;
 int echo=5;
 void setup()
 {
 pinMode(trig,OUTPUT);
 pinMode(echo,INPUT);
 pinMode(7,INPUT);
 Serial.begin(9600);
 pinMode(10,OUTPUT);
 pinMode(4,OUTPUT);
 pinMode(12,OUTPUT);
}
```

```
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