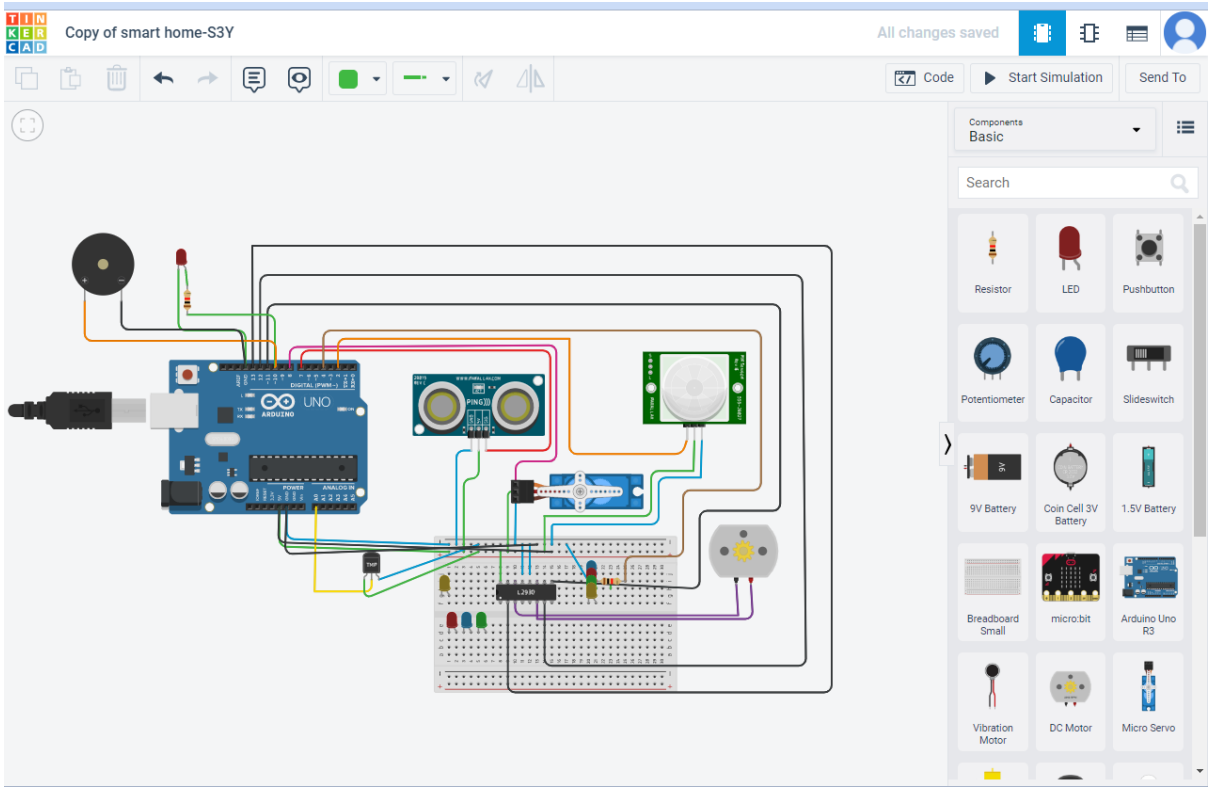
Assignment 1: Build a smart home in Thinkercad with 2 sensors, an Led, buzzer and submit it



Code

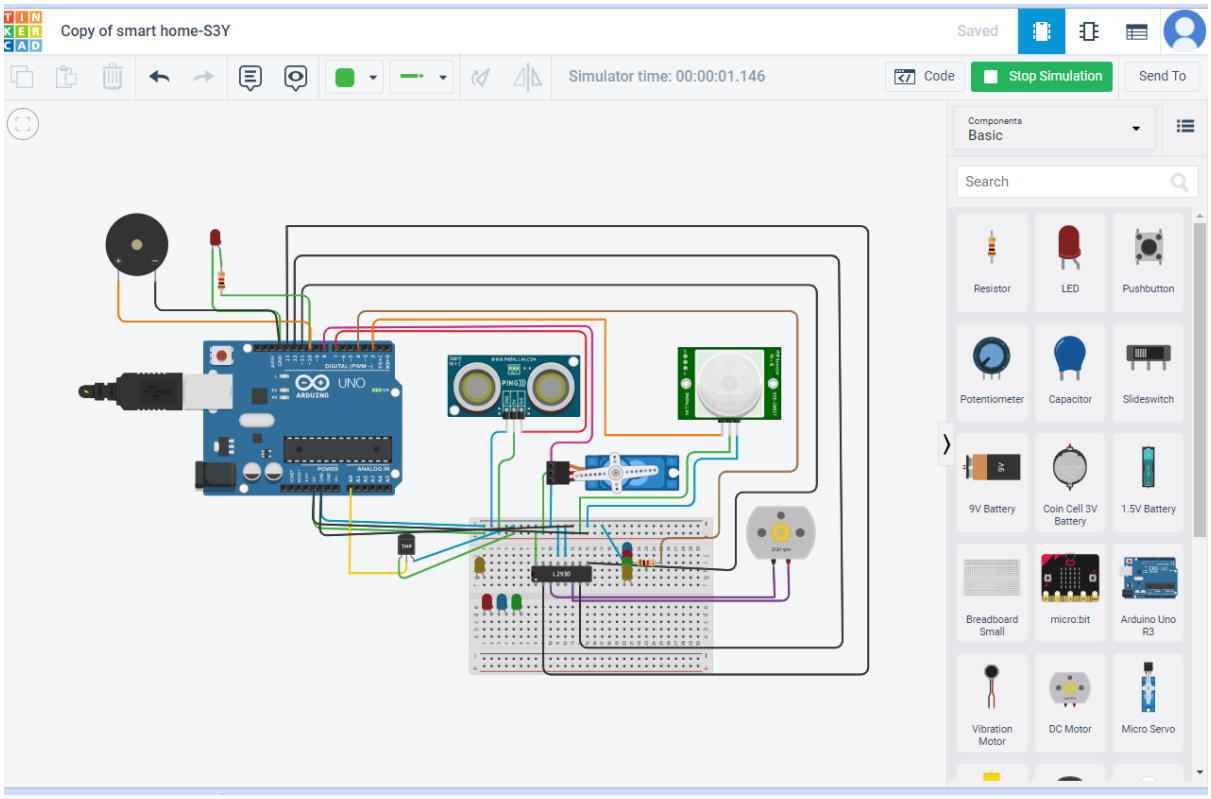
```
#include<Servo.h>

const int pingPin = 7;

int servoPin = 8;

Servo servo1;

void setup() {

   Serial.begin(9600);

 servo1.attach(servoPin);

 pinMode(2,INPUT);
```

```
 pinMode(4,OUTPUT);
 pinMode(11,OUTPUT);
 pinMode(12,OUTPUT);
 pinMode(13,OUTPUT);
 pinMode(A0,INPUT);
 digitalWrite(2,LOW);
 digitalWrite(11,HIGH);
  pinMode(2, INPUT);
 pinMode(10,OUTPUT);
}
void loop() {
  long duration, inches, cm;
 pinMode(pingPin, OUTPUT);
 digitalWrite(pingPin, LOW);
 delayMicroseconds(2);
 digitalWrite(pingPin, HIGH);
 delayMicroseconds(5);
 digitalWrite(pingPin, LOW);
 pinMode(pingPin, INPUT);
 duration = pulseIn(pingPin, HIGH);
 inches = microsecondsToInches(duration);
 cm = microsecondsToCentimeters(duration);
servo1.write(0);
 if(cm < 40)
 {
servo1.write(90);
```

```
  delay(2000);
}
else
{
servo1.write(0);
}
  int pir = digitalRead(2);
 if(pir == HIGH)
{
  digitalWrite(4,HIGH);
  delay(1000);
}
else if(pir == LOW)
{
  digitalWrite(4,LOW);
}
Serial.println(digitalRead(2));
if (digitalRead(2) == 1) {
  digitalWrite(10, HIGH);
} else {
  digitalWrite(10, LOW);
}
delay(10);
float value=analogRead(A0);
float temperature=value*0.48;
```

```
  Serial.println("temperature");
  Serial.println(temperature);
  if(temperature > 20)
  {
    digitalWrite(12,HIGH);
    digitalWrite(13,LOW);
  }
  else
  {
    digitalWrite(12,LOW);
    digitalWrite(13,LOW);
  }
}
long microsecondsToInches(long microseconds) {
  return microseconds / 74 / 2;
}
long microsecondsToCentimeters(long microseconds) {
  return microseconds / 29 / 2;
}
```

Output:



Thus the assigned task was completed successfully.