ASSIGNMENT-1

Smart home circuit connections in Tinkercad

Assignment Date	20 September 2022
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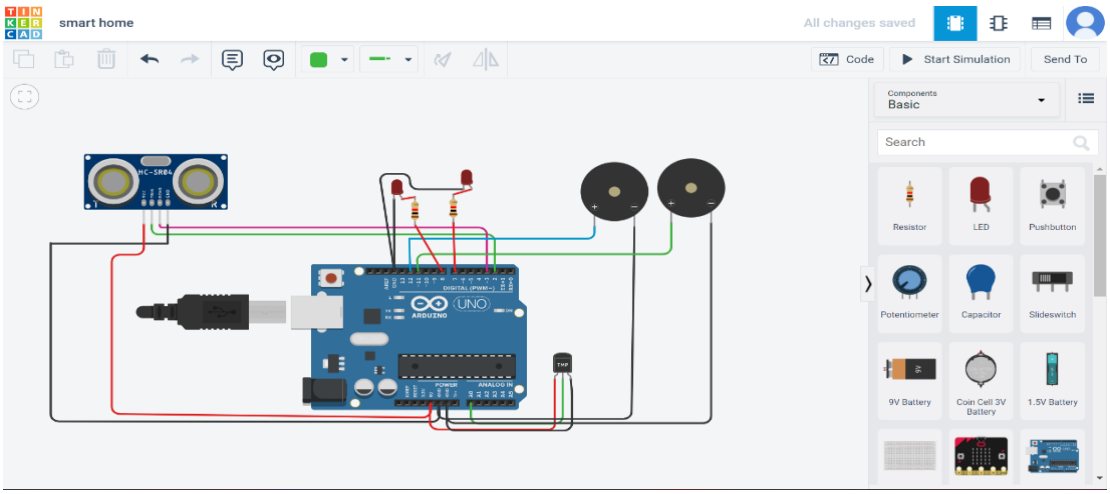
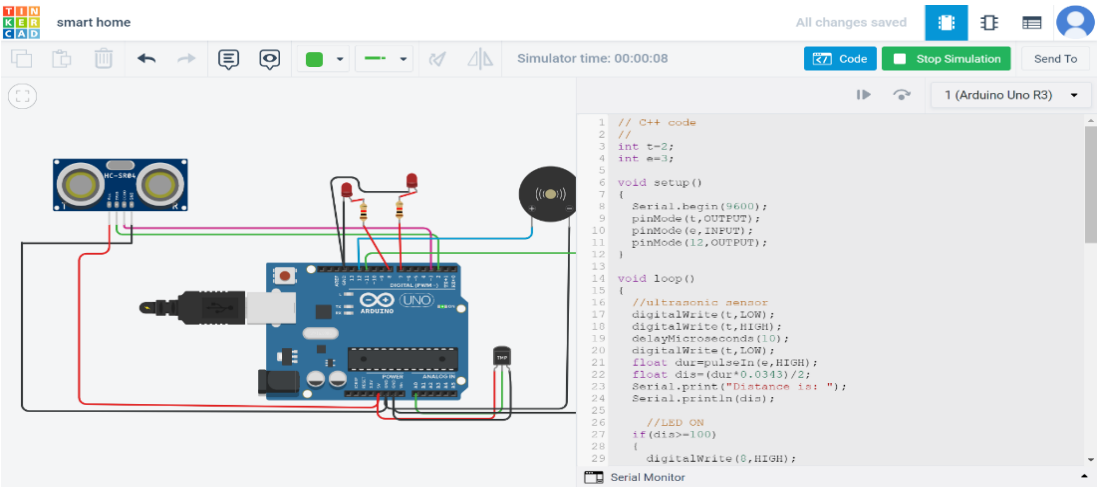
Maximum Marks	2 Marks

Question:

Make a Smart Home in Tinkercad, using 2+ sensors, LED, Buzzer in single code and circuit.

Solution:





Code:

```
// C++ code
//
int t=2;
int e=3;

void setup()
{
  Serial.begin(9600);
  pinMode(t,OUTPUT);
  pinMode(e,INPUT);
  pinMode(12,OUTPUT);
}

void loop()
{
  //ultrasonic sensor
  digitalWrite(t,LOW);
  digitalWrite(t,HIGH);
  delayMicroseconds(10);
```

```
digitalWrite(t,LOW);
float dur=pulseIn(e,HIGH);
float dis=(dur*0.0343)/2;
Serial.print("Distance is: ");
Serial.println(dis);
  //LED ON
if(dis>=100)
{
  digitalWrite(8,HIGH);
  digitalWrite(7,HIGH);
}

//Buzzer For ultrasonic Sensor
if(dis>=100)
{
for(int i=0; i<=30000; i=i+10)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}

  //Temperate Sensor
double a= analogRead(A0);
double t=(((a/1024)*5)-0.5)*100;
Serial.print("Temp Value: ");
Serial.println(t);
```

```
 delay(1000);



 //LED ON
 if(t>=100)
 {
  digitalWrite(8,HIGH);
  digitalWrite(7,HIGH);
 }

 //Buzzer for Temperature Sensor
 if(t>=100)
 {
 for(int i=0; i<=30000; i=i+10)
 {
 tone(12,i);
 delay(1000);
 noTone(12);
 delay(1000);
 }
 }

  //LED OFF
 if(t<100)
 {
  digitalWrite(8,LOW);
  digitalWrite(7,LOW);
 }
}
```

TINKERCAD LINK :

https://www.tinkercad.com/things/lrehdP4YGxC-smart-home/editel