**SMART HOME AUTOMATION – IBM ASSIGNMENT**

**PROGRAM:**

int sensor=0;  
int distanceThreshold = 0;  
const int buzzer = 8;  
int echopin = 7;  
int trigpin = 6;  
int cm = 0;  
int inches = 0;  
  
int mesafe;  
int sure;  
void setup()  
{  
 pinMode(buzzer, OUTPUT);  
  pinMode(trigpin, OUTPUT);  
  pinMode(echopin, INPUT);  
  pinMode(13,OUTPUT);  
  pinMode(2,INPUT);  
  Serial.begin(9600);  
}  
void loop()  
{  
  sensor=digitalRead(2);  
  if(sensor==HIGH){  
  digitalWrite(13,HIGH);  
  }else{  
  digitalWrite(13,LOW);  
  }  
  delay(10);  
  digitalWrite(trigpin,LOW);  
 delayMicroseconds(2);  
 digitalWrite(trigpin,HIGH);  
 delayMicroseconds(10);  
 digitalWrite(trigpin,LOW);  
 sure = pulseIn(echopin,HIGH);  
 mesafe = (sure/2)/29.0;  
   
 if(mesafe <= 15)  
 {  
  digitalWrite(buzzer,HIGH);  
   
 }  
 else  
 {  
  digitalWrite(buzzer,LOW);  
   
 }  
   
}

**TINKERCAD CIRCUIT:**

