

SMART HOME USING TINKERCAD

IBM ASSIGNMENT - 1

DESCRIPTION :

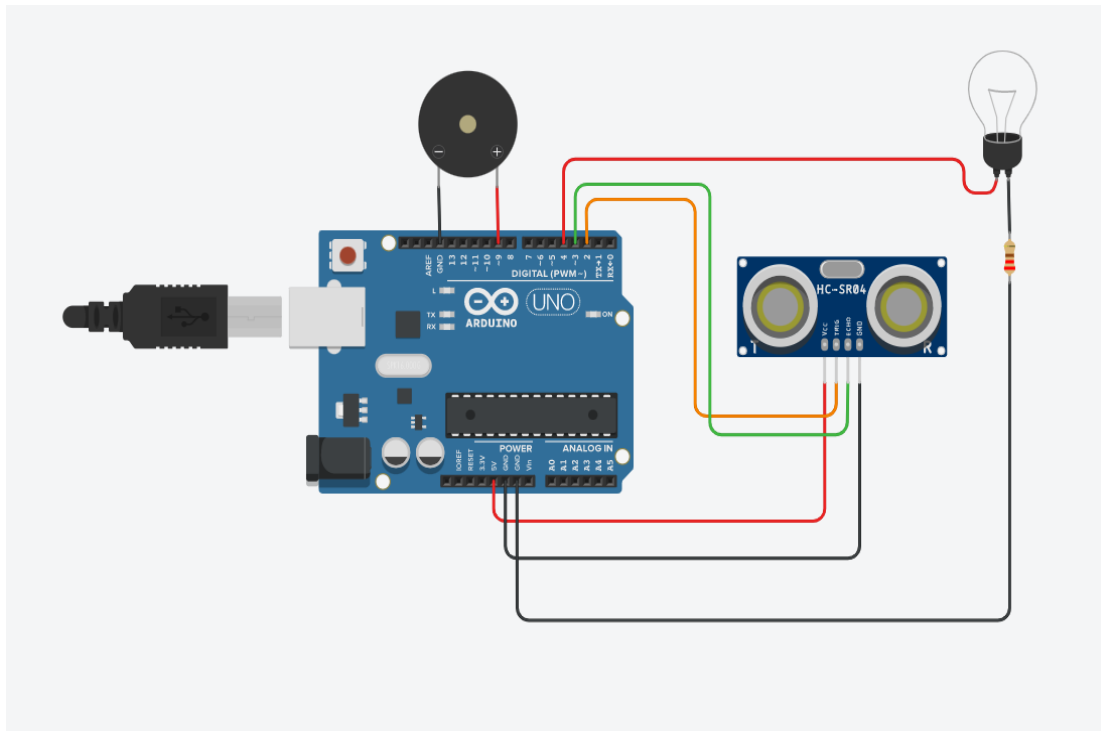
The circuit is a basic version of smart home using ultrasonic sensor which turns on the buzzer, bulb and setting doors open from close state while the person is within a particular range being set. Here the range being set is 15cm.

CODE :

```
int trigger_pin = 2;
int echo_pin = 3;
int buzzer_pin = 9;
int bulb_pin = 4;
int time;
int distance;
void setup()
{
    Serial.begin (9600);
    pinMode (trigger_pin, OUTPUT);
    pinMode (echo_pin, INPUT);
    pinMode (buzzer_pin, OUTPUT);
    pinMode (bulb_pin, OUTPUT);
}
void loop()
```

```
{  
    digitalWrite (trigger_pin, HIGH);  
    delayMicroseconds (10);  
    digitalWrite (trigger_pin, LOW);  
    time = pulseIn (echo_pin, HIGH);  
    distance = (time * 0.034) / 2;  
  
    if (distance <= 15)  
    {  
        Serial.println (" Door Open ");  
        Serial.print (" Distance= ");  
        Serial.println (distance);  
        digitalWrite (buzzer_pin, HIGH);  
        digitalWrite (bulb_pin, HIGH);  
        delay (500);  
    }  
    else {  
        Serial.println (" Door closed ");  
        Serial.print (" Distance= ");  
        Serial.println (distance);  
        digitalWrite (buzzer_pin, LOW);  
        digitalWrite (bulb_pin, LOW);  
        delay (500);  
    }  
}
```

CIRCUIT :



SUBMITTED BY :

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