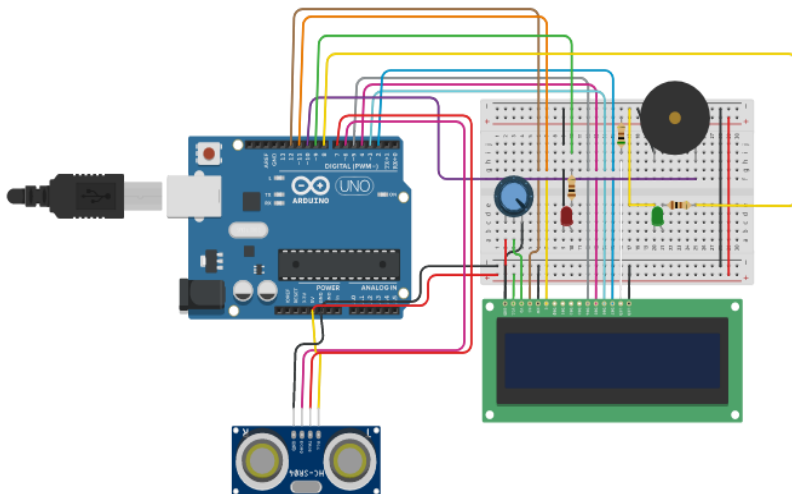


ASSIGNMENT 1:

Smart Home with in Thinkercard with 2 sensors, Led and Buzzer.



Arduino Uno Code:

```
const int TRIG_PIN = 6;  
const int ECHO_PIN = 7;  
const int LED_PIN = 3;  
const int DISTANCE_THRESHOLD = 50;
```

```
void setup() {  
  Serial.begin (9600);  
  pinMode(TRIG_PIN, OUTPUT);  
  pinMode(ECHO_PIN, INPUT);  
  pinMode(LED_PIN, OUTPUT);  
}
```

```
void loop() {  
  digitalWrite(TRIG_PIN, HIGH);  
  delayMicroseconds(10);  
  digitalWrite(TRIG_PIN, LOW);
```

```
duration_us = pulseIn(ECHO_PIN, HIGH);  
distance_cm = 0.017 * duration_us;  
  
if(distance_cm < DISTANCE_THRESHOLD)  
    digitalWrite(LED_PIN, HIGH); // turn on LED  
else  
    digitalWrite(LED_PIN, LOW); // turn off LED  
Serial.print("distance: ");  
Serial.print(distance_cm);  
Serial.println(" cm");  
  
delay(500);  
}
```