

IBM - Nalaiya Thiran Project

Assignment 1

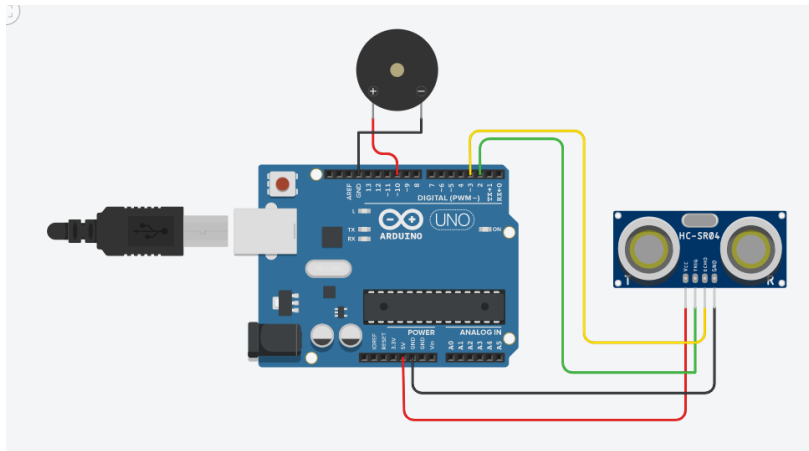
Smart Home

Door Buzzer

REG.NO:812019106029

NAME:M.SELVAGANAPATHI

CIRCUIT DIAGRAM



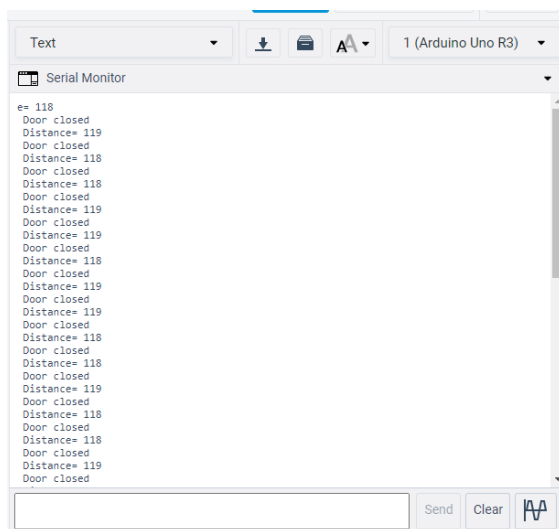
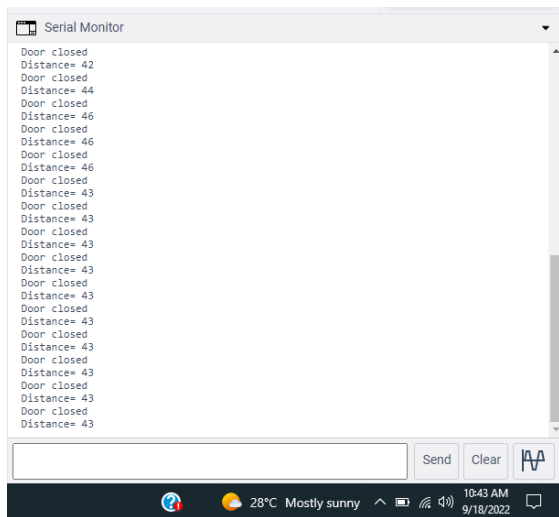
Source code

```
int trigger_pin = 2;
int echo_pin = 3;
int buzzer_pin = 10;
int time;
int distance;
void setup()
{
    Serial.begin (9600);
    pinMode (trigger_pin, OUTPUT);
    pinMode (echo_pin, INPUT);
    pinMode (buzzer_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 <= 10)
{
    Serial.println (" Door Open ");
    Serial.print (" Distance= ");
    Serial.println (distance);
    digitalWrite (buzzer_pin, HIGH);
    delay (500);
}
else {
    Serial.println (" Door closed ");
    Serial.print (" Distance= ");
    Serial.println (distance);
    digitalWrite (buzzer_pin, LOW);
    delay (500);
}
}
```

Serial Monitor



Link:

<https://www.tinkercad.com/things/bVJ4Nutp4JA?sharecode=f8YIDfDFxeRqMZRNERObh5yFOEHmQHEfS KKfRHt5wJA>