**Assignment - 1**

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| Assignment date | 19 September 2022 |
| Student Name | Gowtham J |
| Student Roll Number | 73771913402 |
| Maximum Marks | 2 marks |

**Question-1: smart home automation designs provide an unprecedented level of comfort and convenience in Melbourne homes, delivering you a personalised and innovative room experience.**

CIRCUIT DIAGRAM

Graphical user interface, application

Description automatically generated

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);

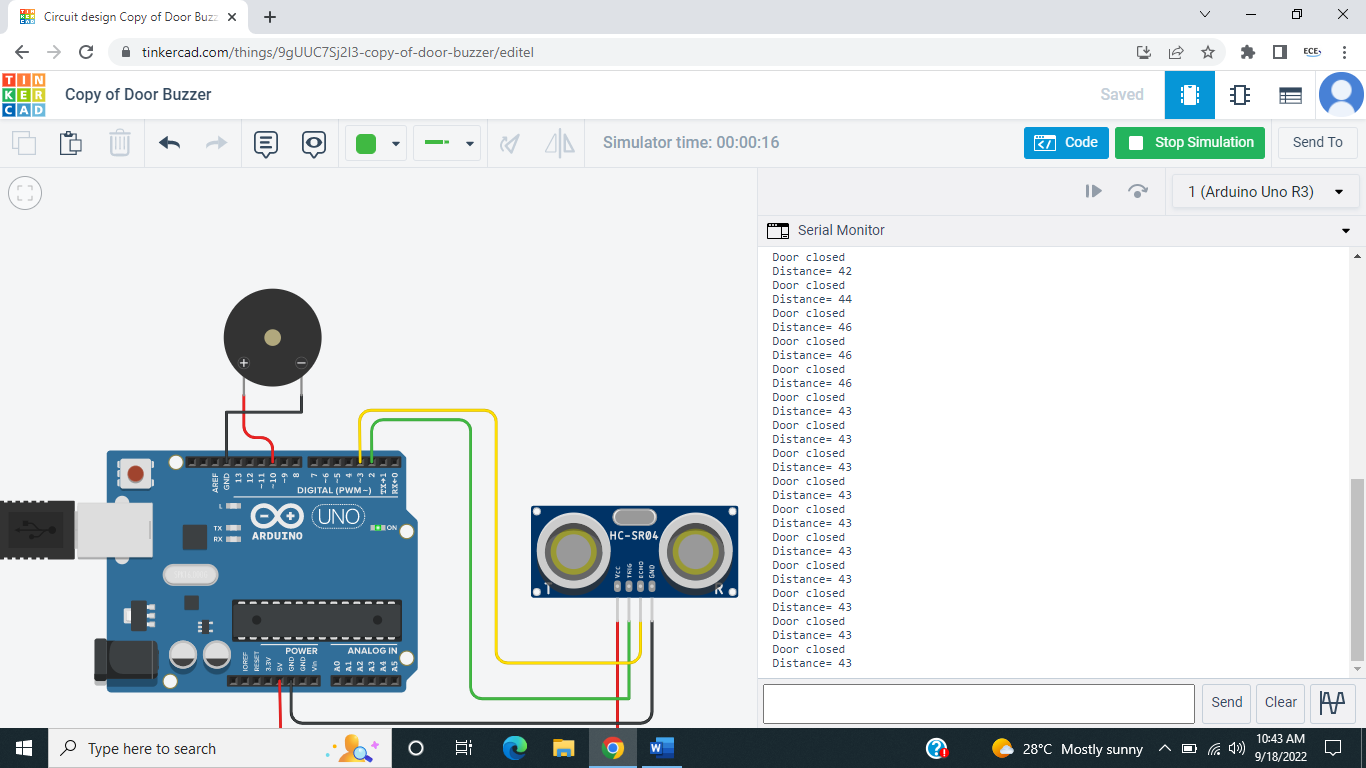
digitalWrite (buzzer\_pin, LOW);

delay (500);

}

}

Serial Monitor



Graphical user interface

Description automatically generated