**STIMULATION 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);

}

}

**STIMULATION OUTPUT:**



