NAME : GUNTHA HARSHAVARDHAN **REG NO : 721419106011**	**CLG NAME**: NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY, COIMBATORE

HOME AUTOMATION USING SENSORS

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);

    pinMode (10,OUTPUT);

}

void loop()

{

    digitalWrite(13,HIGH);

    digitalWrite(13,LOW);

    double a = analogRead(A0);

    double c = (((a/1024)*5)-0.5)*100;

    Serial.print("Celsius value: ");
```

```cpp
   Serial.println(c);

   delay(1000);

   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);

     }

}
```

CIRCUIT: