Aim: To display the distance the object is placed from the sensor using Arduino

Apparatus:

1) Arduino UNO board

2) Ultrasonic Sensor HCSR04

3) LCD

4) Two Resistors 100Ω each

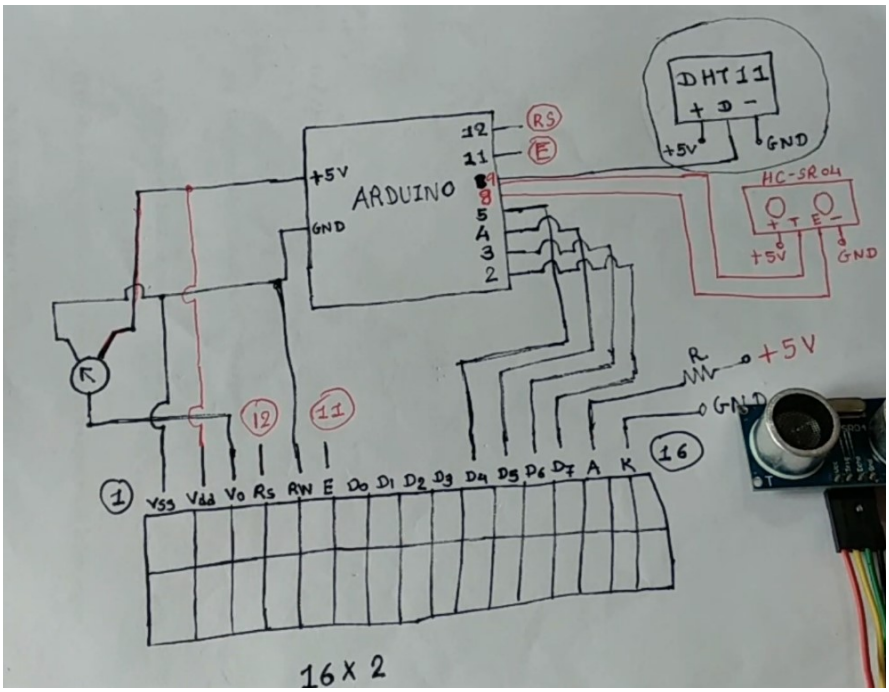
5) Two LEDs

6) Small Bread Board

7) Connecting wires

8) Arduino software

Circuit diagram:



Program:

```
#include <LiquidCrystal.h>

const int rs = 12, en = 11,  d4 =  5, d5 = 4, d6 = 3, d7 =  2;

LiquidCrystal lcd (rs, en, d4, d5, d6, d7);

#define echo 8

#define trig 9

long duration;

int distance;

void setup () {

                        pinMode (trig, OUTPUT);

                        pinMode (echo, INPUT);

}

void loop () {

digitalWrite (trig, LOW);

delayMicroseconds (2);

digitalWrite (trig, HIGH);

delayMicroseconds (10);

digitalWrite (trig, LOW);

duration = pulseIn (echo, HIGH)

distance = (duration/2)*0.034;

lcd.clear ();
```

```
lcd.begin (16,2);

lcd.setCursor (4,0);

lcd.print (“HC-SR04”);

lcd.setCursor (0,1);

lcd.print (“Distance= “);

lcd.print (distance);

lcd.print (“cm”);

delay (500);

}
```

Output: