Components Used

1. Arduino Uno
2. Ultrasonic sensor Module
3. 16x2 LCD
4. 9-volt battery
5. Connecting wires

### **Ultrasonic Sensor Module**

**Ultrasonic sensor HC-SR04** is used here to measure distance in range of 2cm-400cm with accuracy of 3mm. The sensor module consists of ultrasonic transmitter, receiver and the control circuit. If the signal is received, then it is through high level. The time of high duration is the time gap between sending and receiving the signal.

**Distance= (Time x Speed of Sound in Air (340 m/s))/2**

The module works on the natural phenomenon of ECHO of sound. A pulse is sent for about 10us to trigger the module. After which the module automatically sends 8 cycles of 40 KHz ultrasound signal and checks its echo. The signal after striking with an obstacle returns back and is captured by the receiver.