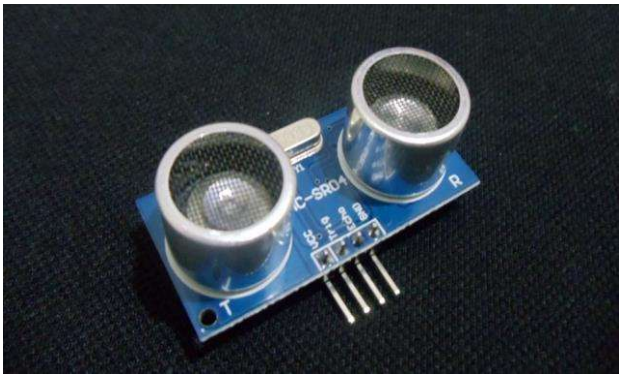
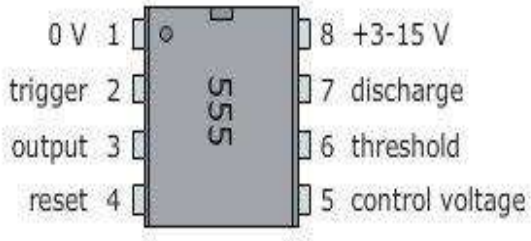
ULTRASONIC SENSOR WITH NE555 IC TIMER





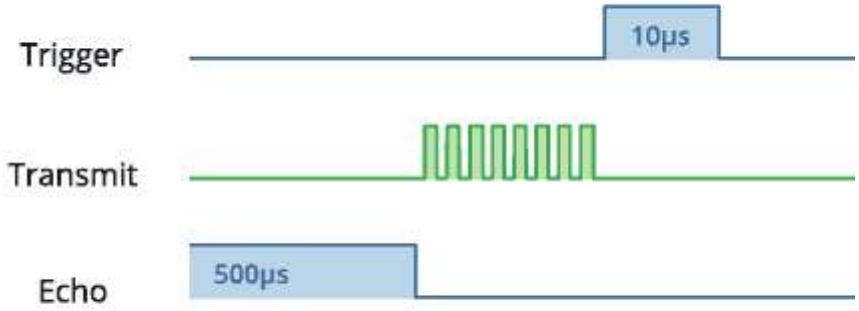
What do we know about Ultrasonic Sensor?

It is a sensing device which is based on ultrasonic waves, A ultrasonic sensor is an instrument that measures the distance to an object using ultrasonic sound waves. An ultrasonic sensor uses a transducer to send and receive ultrasonic pulses that relay back information about an object's proximity.

It can also be used to detect the presence of some object,

It works on the principle that whenever a trigger input is applied to its 2nd pin, in response it produces some echo signal.

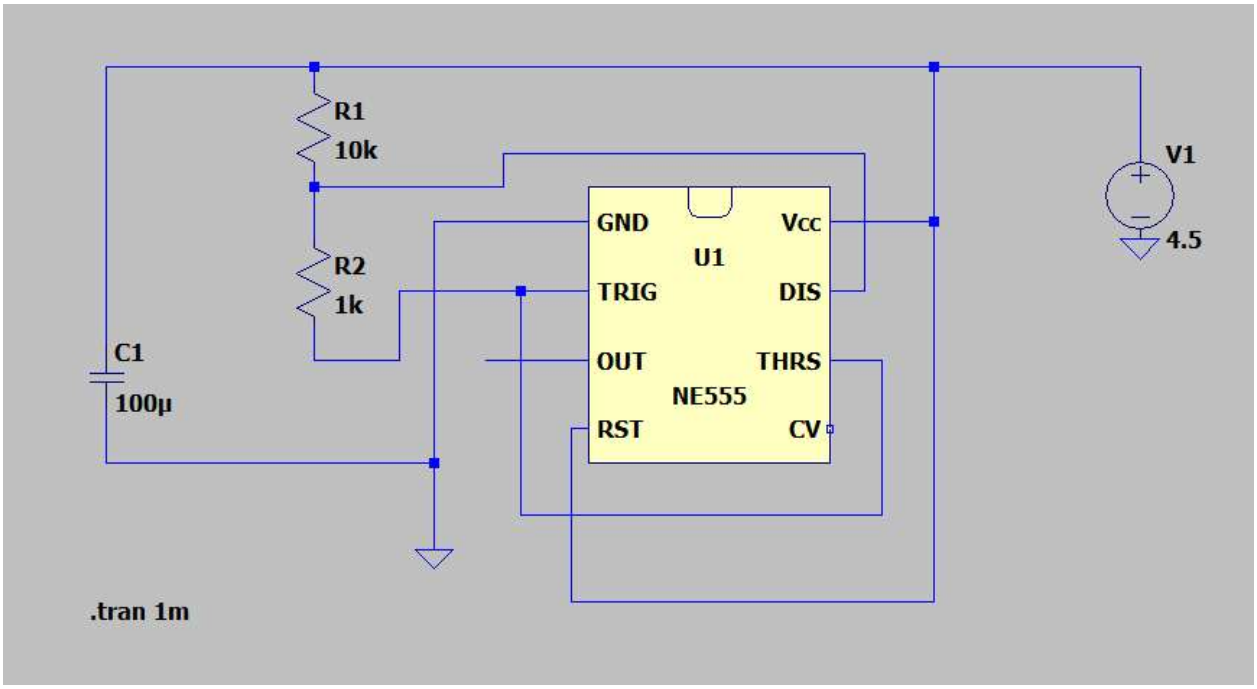
Usually Arduino, raspberry or microcontrollers are used to give appropriate pulses.

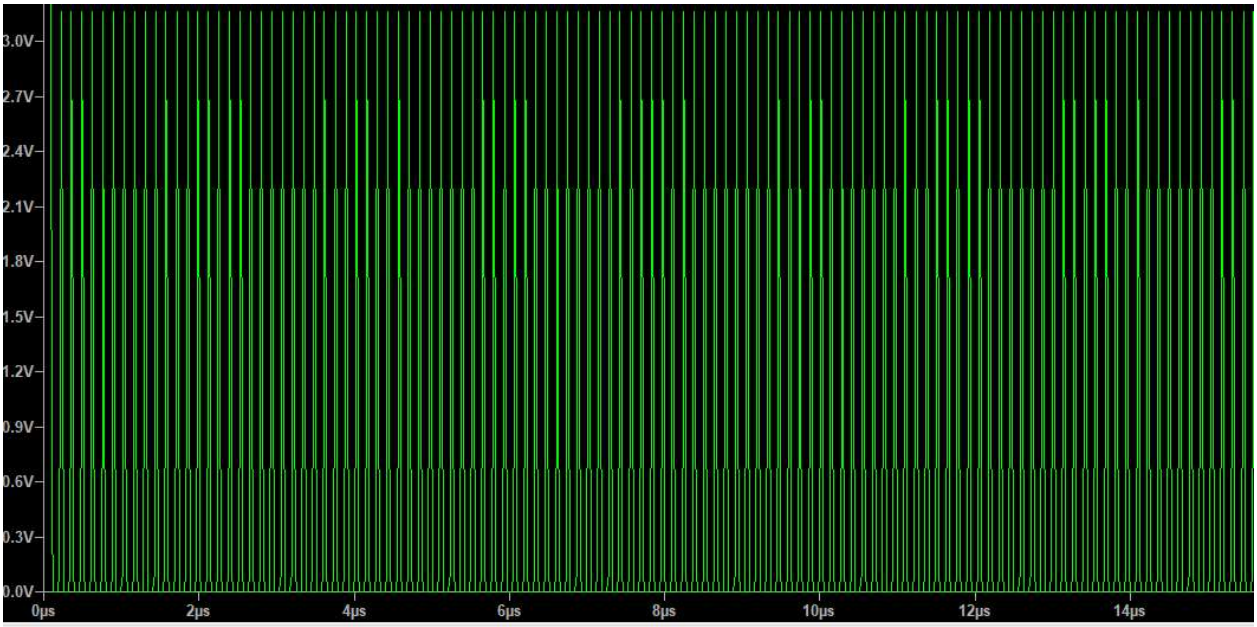


https://lastminuteengineers.com/arduino-sr04-ultrasonic-sensor-tutorial/

We can also make use of it by NE555 timer to produce the trigger.

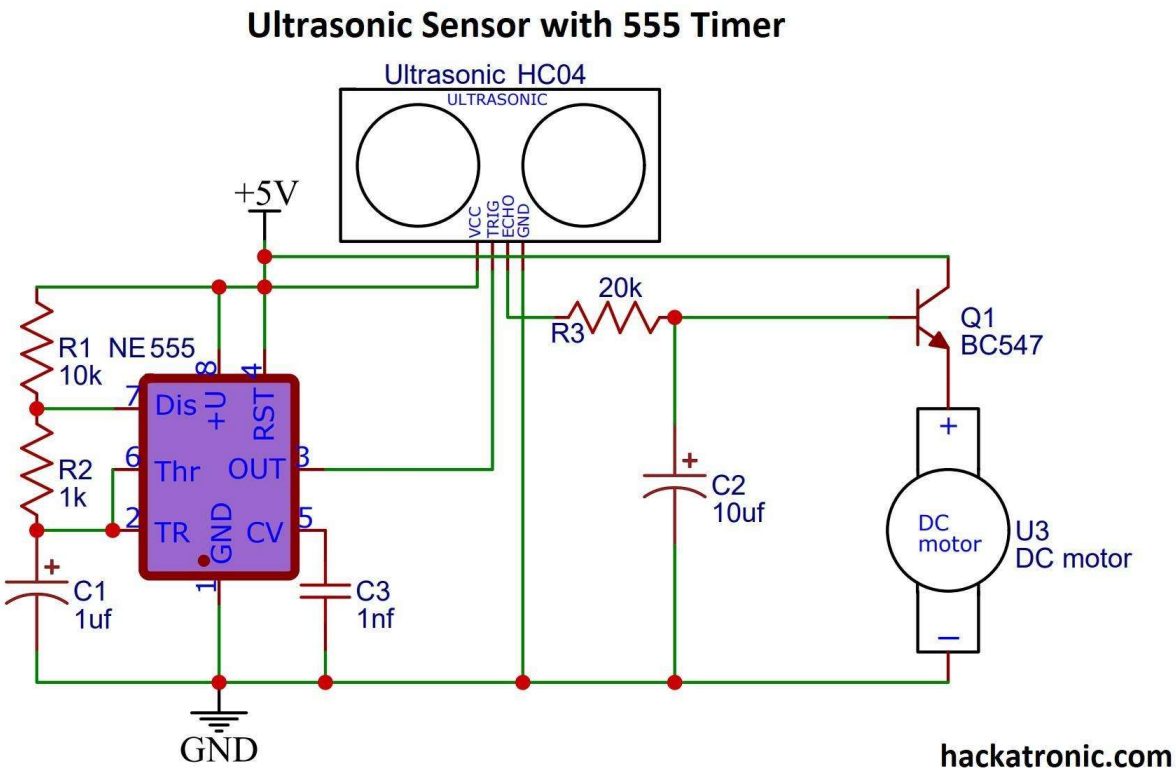
Here is a simulation that will show the circuit and its response:





The trigger has been devised by the 555 timer now all we have to do just to associate one indicator (buzzer) to echo output pin of the sensor to detect the presence.

The whole circuit is as follow:



All we had used is as follow:

An ultrasonic sensor

100uf & 10uf capacitors

10k and 1k resistance

NE555

Buzzer for indicator