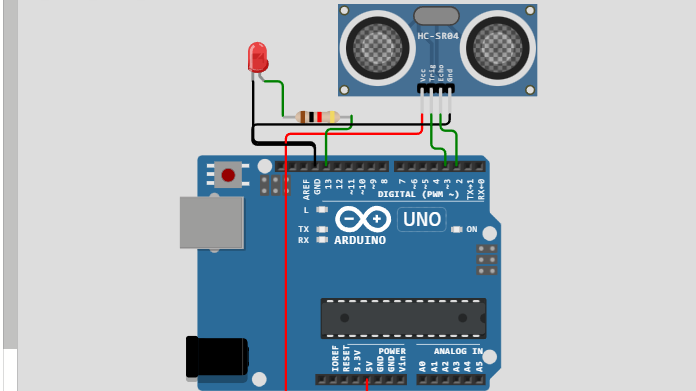
**ULTRASONIC SENSOR**

****

const int TRIG\_PIN = 7;

const int ECHO\_PIN = 8;

const unsigned int MAX\_DIST = 23200;

void setup() {

pinmode(TRIG\_PIN, OUTPUT);

digitalWrite(TRIG\_PIN, low);

pinMode(ECHO\_PIN, INPUT);

Serial.begin(9600);

}

Void loop() {

Unsigned long t1;

Unsigned long t2;

Unsigned long pulse\_width;

float cm;

float inches;

digitalWrite(TRIG\_PIN, HIGH);

digitalMicriseconds(10);

digitalWrite(TRIG\_PIN, LOW);

while ( digitalRead(ECHO\_PIN) == 0 );

t1 = micros();

  while ( digitalRead(ECHO\_PIN) == 1);

  t2 = micros();

  pulse\_width = t2 - t1;

cm = pulse\_width / 58.0;

  inches = pulse\_width / 148.0;

if ( pulse\_width> MAX\_DIST ) {

**Serial**.println("Out of range");

  } else {

**Serial**.print(cm);

**Serial**.print(" cm \t");

**Serial**.print(inches);

**Serial**.println(" in");

  }

delay(60);

}