#define trigPin 6

#define echoPin 5

#define red 3

#define blue 2

#define buzzer 4

// frequency of sound produced is 250 Hz

int sound = 250;

void setup()

{

//baud rate

Serial.begin (9600);

// Declaring the input pns and their correspoding output pins

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(red, OUTPUT);

pinMode(blue, OUTPUT);

pinMode(buzzer, OUTPUT);

}

void loop()

{

// declaring variables

long duration, distance;

// digitalwrite function write high or low to the desired pin

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);

//Duration is divided by two because we get the distance of two sides.

distance = (duration/2) / 29.1;

// Ultrasonic HC-Sr04 sensor works for 2-400cm.

if (distance >0 && distance <= 400 )

{

digitalWrite(red, HIGH);

digitalWrite(blue, HIGH);

// sound sets the frequency of sound produced by buzzer.

tone(buzzer, sound);

delayMicroseconds(10);

digitalWrite(red, LOW);

digitalWrite(blue, LOW);

tone(buzzer, sound);

delayMicroseconds(10);

}

else

{

digitalWrite(red, LOW);

digitalWrite(blue, LOW);

// stops the generation of square wave

noTone(buzzer);

Serial.println("Distance is either <= 0cm or greater than 400cm ");

}

Serial.print(distance);

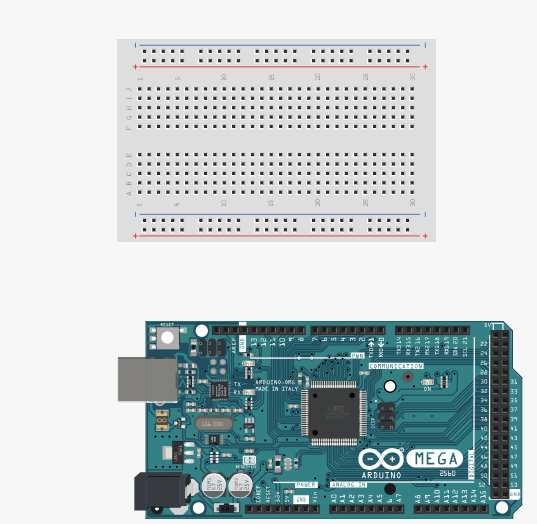
Serial.println(" cm");

delay(500);

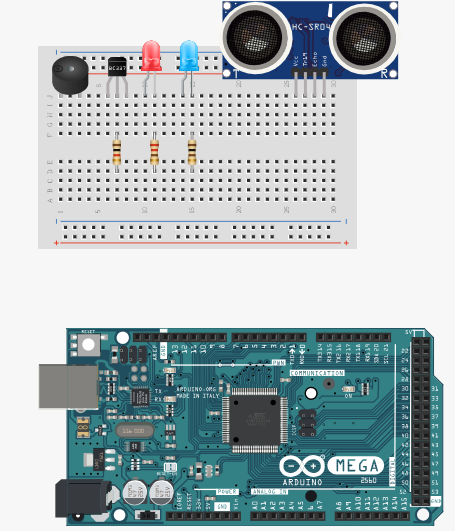
}

**Schematic**

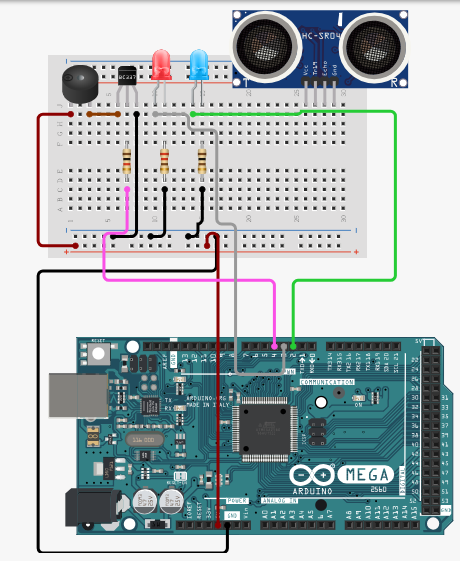
Placing Arduino Mega 2560 and bread board



Attaching all components on a bread board



Making connections except of Ultrasonic senor



Making connections of ultrasonic. Circuit complete.

