```
/* This simple project describes how to make an ultrasonic alarm system
using
LED, Ultasonic Sensor(HC-SR04) and a buzzer.*/

//Firstly the connections of ultrasonic Sensor.Connect +5v and GND
normally and trigger pin to 12 & echo pin to 13.

#define trigPin 12
#define echoPin 13
int Buzzer = 8; // Connect buzzer pin to 8
int ledPin= 6; //Connect LEd pin to 6
int duration, distance; //to measure the distance and time taken

void setup() {
        Serial.begin (9600);
        //Define the output and input objects(devices)
        pinMode(trigPin, OUTPUT);
        pinMode(echoPin,  INPUT);
        pinMode(Buzzer,  OUTPUT);
        pinMode(ledPin,  OUTPUT);
}

void loop() {

    digitalWrite(trigPin, HIGH);
    delayMicroseconds(10);
    digitalWrite(trigPin,  LOW);
    duration = pulseIn(echoPin, HIGH);
    distance = (duration/2) / 29.1;
    //when distance is greater than or equal to 200 OR less than or
equal to 0,the buzzer and LED are off
  if (distance >= 200 || distance <= 0)
        {
        Serial.println("no object detected");
        digitalWrite(Buzzer,LOW);
        digitalWrite(ledPin,LOW);
        }
  else {
        Serial.println("object detected \n");
        Serial.print("distance= ");
        Serial.print(distance);          //prints the distance if it is
between the range 0 to 200
        tone(Buzzer,400);                // play tone of 400Hz for 500 ms
```

```
            digitalWrite(ledPin,HIGH);
    }
}
```

Output :