

SMARTBRIDGE EXTERNSHIP

INTERNET OF THINGS

ASSIGNMENT – 1

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20BEC1338

TASK : In Wokwi, if the distance is less than 100 cms for ultrasonic sensor, glow a LED.

BOARD USED: ESP32

SENSOR : HC-SR04 (ULTRASONIC)

CODE:

```
//done by JESU RAJA STEPHIN M(20BEC1338)
int trig=15;
int echo=2;
int red=12;
int blue=13;
float s=0.034;
long a;
long t;
float d;
void setup() {
    // put your setup code here, to run once:
    Serial.begin(115200);
    pinMode(trig, OUTPUT);
    pinMode(echo, INPUT);
    pinMode(red, OUTPUT);
    pinMode(blue, OUTPUT);
}

void loop() {
    digitalWrite(trig,0);
    delayMicroseconds(2);
    digitalWrite(trig,1);
    delayMicroseconds(2);
    digitalWrite(trig,0);
```

```

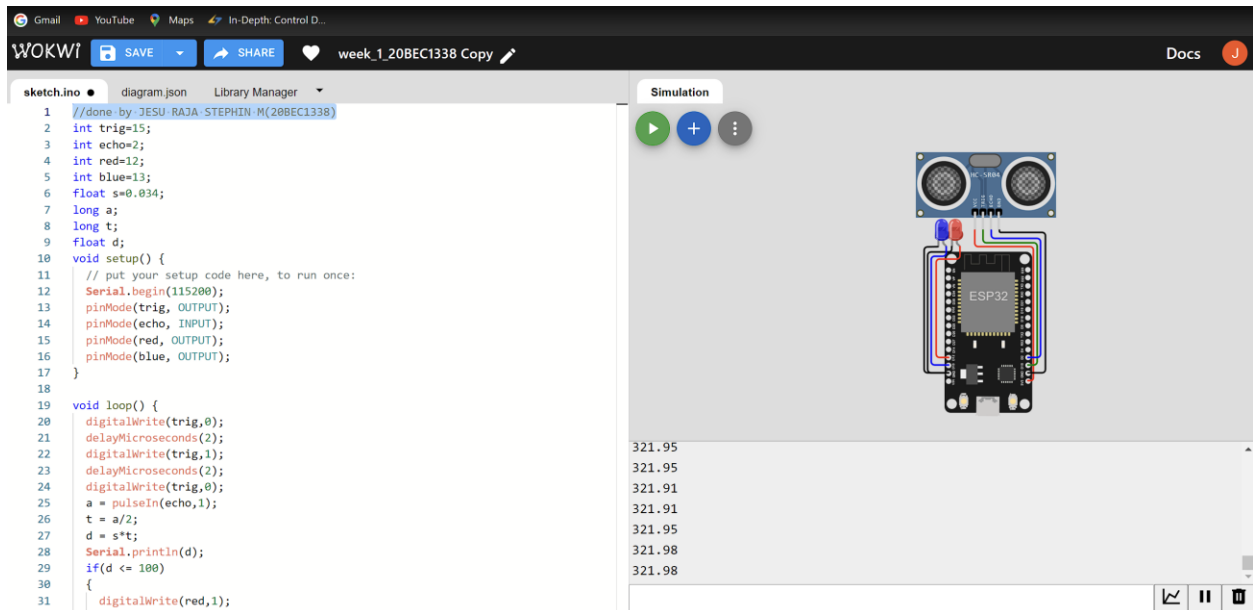
a = pulseIn(echo,1);
t = a/2;
d = s*t;
Serial.println(d);
if(d <= 100)
{
    digitalWrite(red,1);
    delay(100);
    digitalWrite(red,0);
    digitalWrite(blue,1);
    delay(100);
    digitalWrite(blue,0);
}
// put your main code here, to run repeatedly:
// this speeds up the simulation
}

```

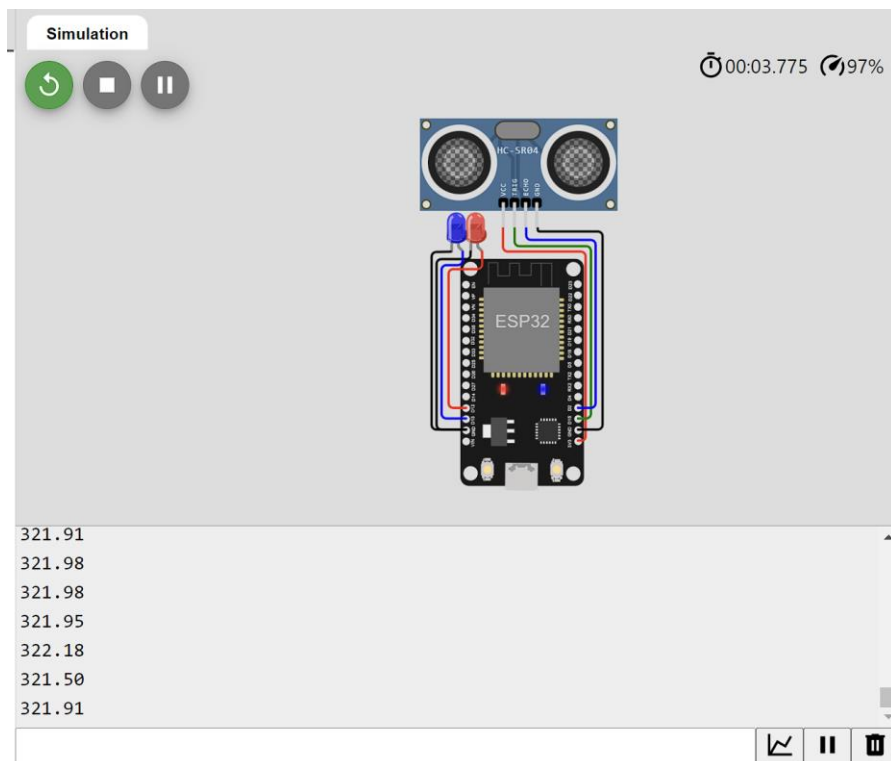
CIRCUIT:



SCREEN SHOT:



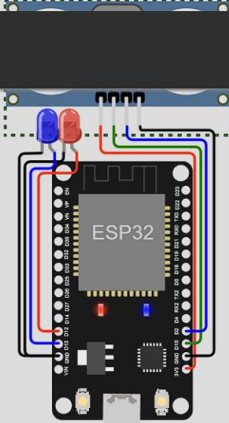
OUTPUT:



00:51.271

Editing Ultrasonic Distance Sensor

Distance: 101cm



100.95
100.98
100.95
101.22
100.50
100.98
100.98

01:14.038 94%

Editing Ultrasonic Distance Sensor

Distance: 99cm

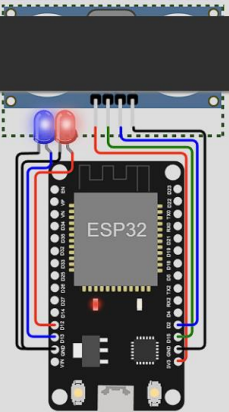


98.94
98.94
98.94
98.94
98.94
98.94

01:31.339 104%

Editing Ultrasonic Distance Sensor

Distance: 45cm



44.95

44.95

44.95

44.95

44.95

44.95

44.95