VIT, Vellore-Externship Program

Assignment-1

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Wokwi Link:

https://wokwi.com/projects/365902301877798913

Code:

```cpp
#define TRIG_PIN 18
#define ECHO_PIN 5
#define LED 2
float duration_us, distance_cm;
void setup() {
  Serial.begin(9600);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
  pinMode(LED, OUTPUT);
}

void loop() {

  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);

  duration_us = pulseIn(ECHO_PIN, HIGH);

  distance_cm = 0.017 * duration_us;

  if (distance_cm < 100) {
    digitalWrite(LED, HIGH);
```
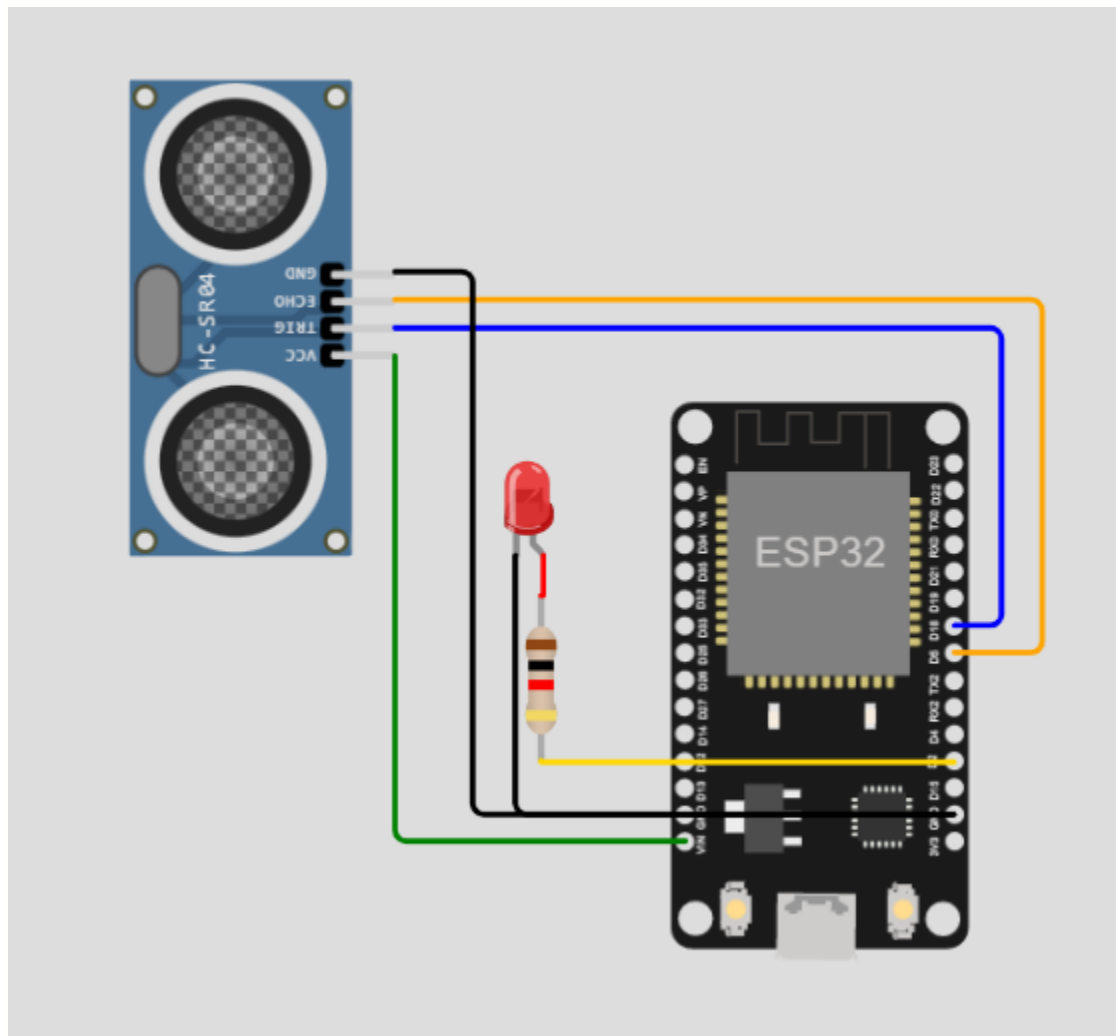
```
  }
  else{
    digitalWrite(LED, LOW);
  }
  Serial.print("distanceA: ");
  Serial.print(distance_cm);
  Serial.println(" cm        ");
}
```
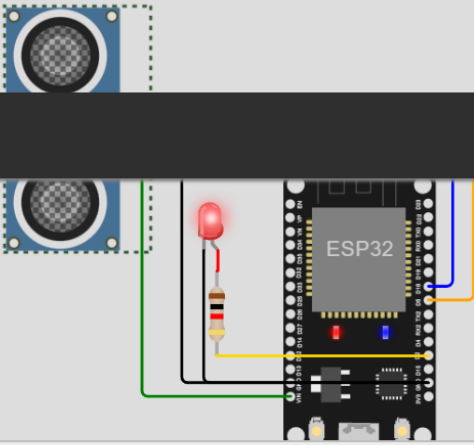
Circuit Diagram:

LED Glowing Screen shots:


```
Simulation
00:16.003    97%

Editing Ultrasonic Distance Sensor                                    ✕
Distance: ●————————34cm

distanceA: 33.98 cm
distanceA: 33.98 cm
distanceA: 33.98 cm
distanceA: 33.98 cm
distanceA: 33.97 cm
distanceA: 33.98 cm
distanceA: 33.98
```
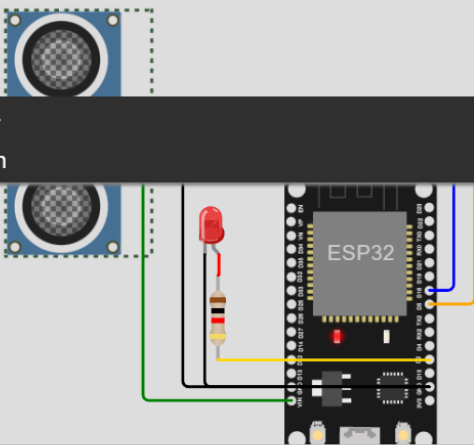


```
Simulation
00:33.179    86%

Editing Ultrasonic Distance Sensor                                    ✕
Distance: ——●——————109cm

distanceA: 108.97 cm
distanceA: 108.97 cm
distanceA: 108.97 cm
distanceA: 108.97 cm
distanceA: 108.95 cm
distanceA: 108.99 cm
distanceA: 109.02
```