TANSAM

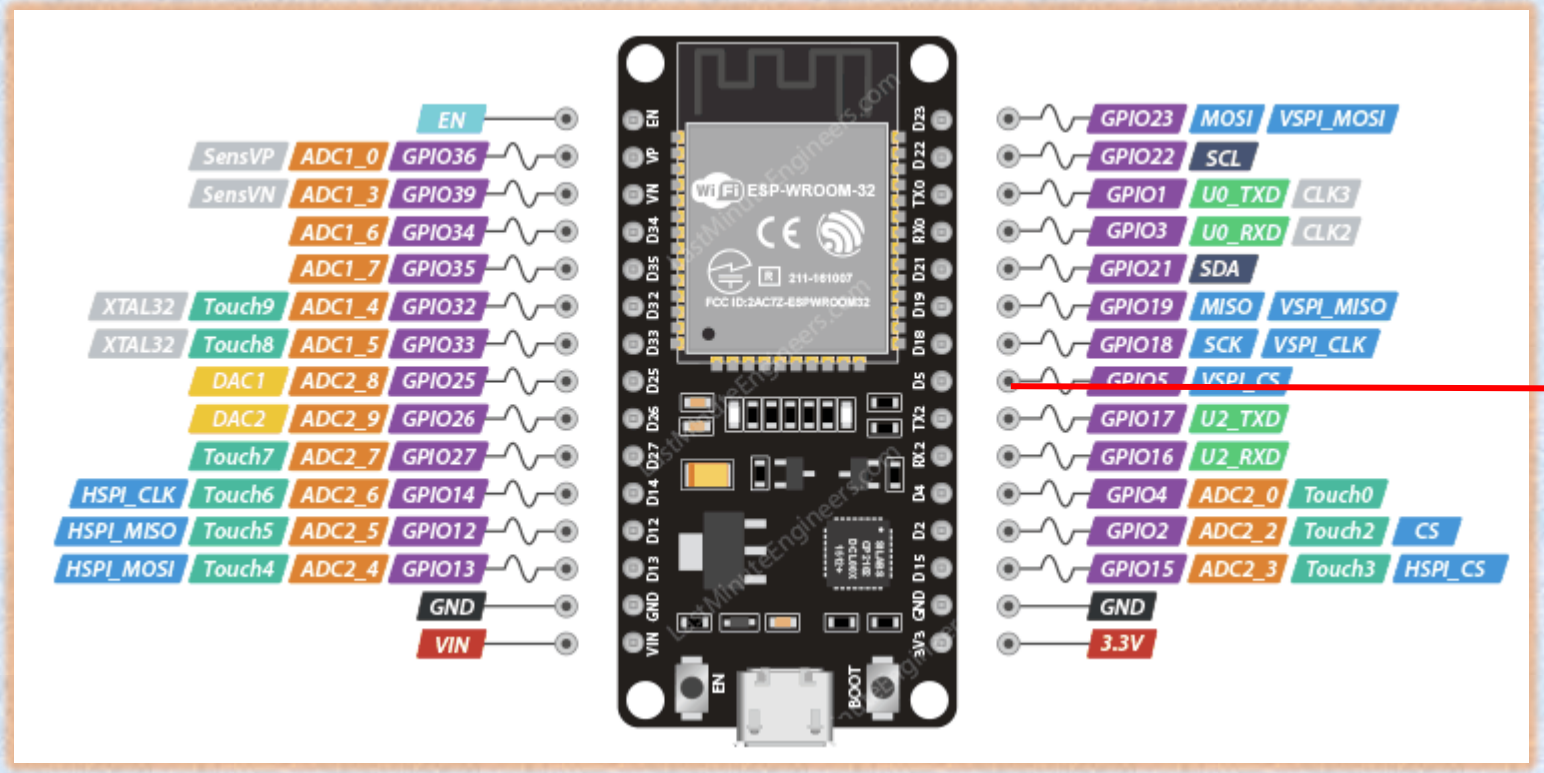
Powered by SIEMENS

Sculpting Smart Distance Monitoring

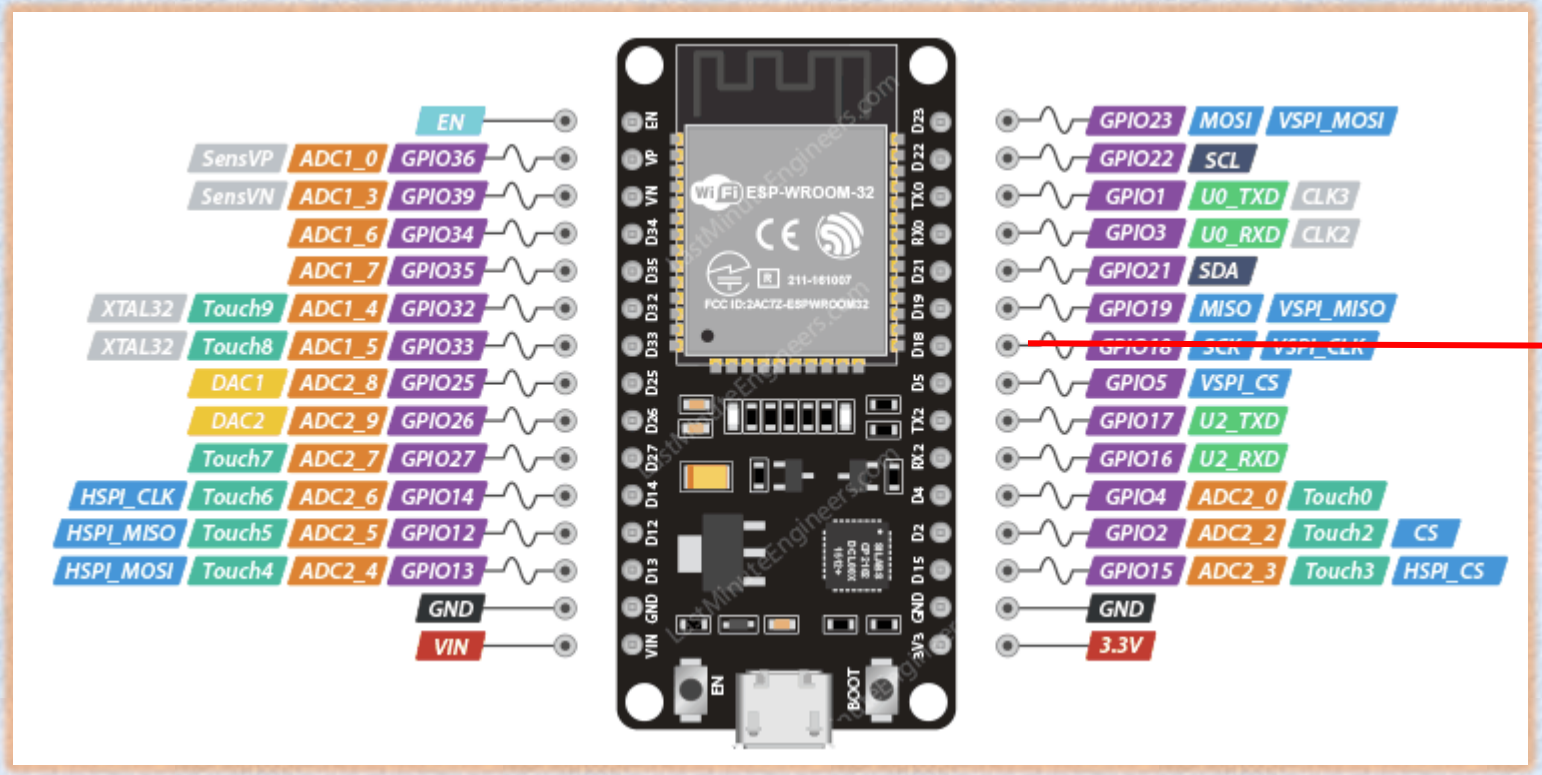
LIST OF COMPONENTS:

1. ESP32 MICROCONTROLLER
2. ULTRASONIC SENSOR(HC-SR04)
3. BREAD BOARD
4. JUMPER WIRES

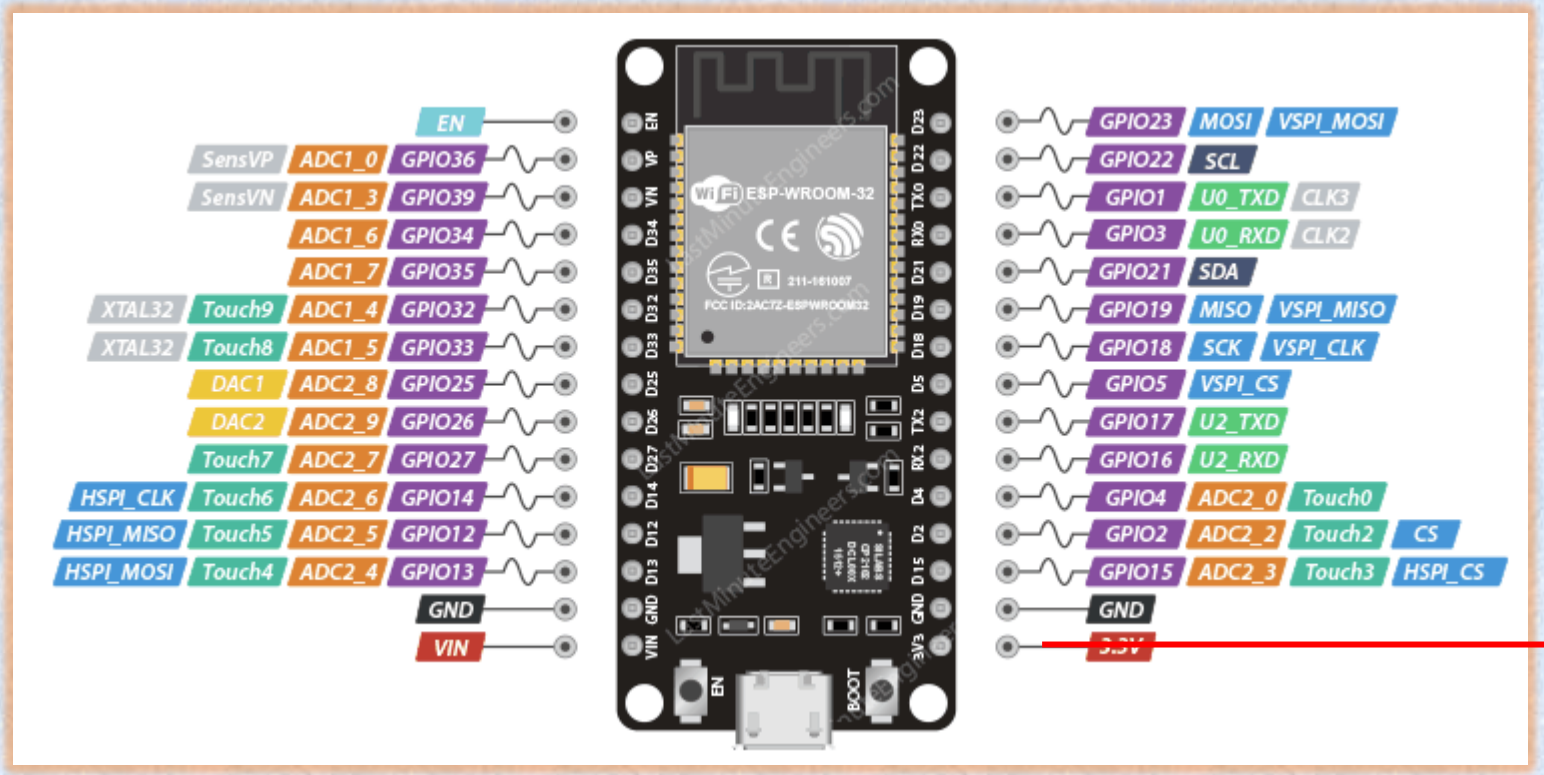
CIRCUIT DAIGRAM:



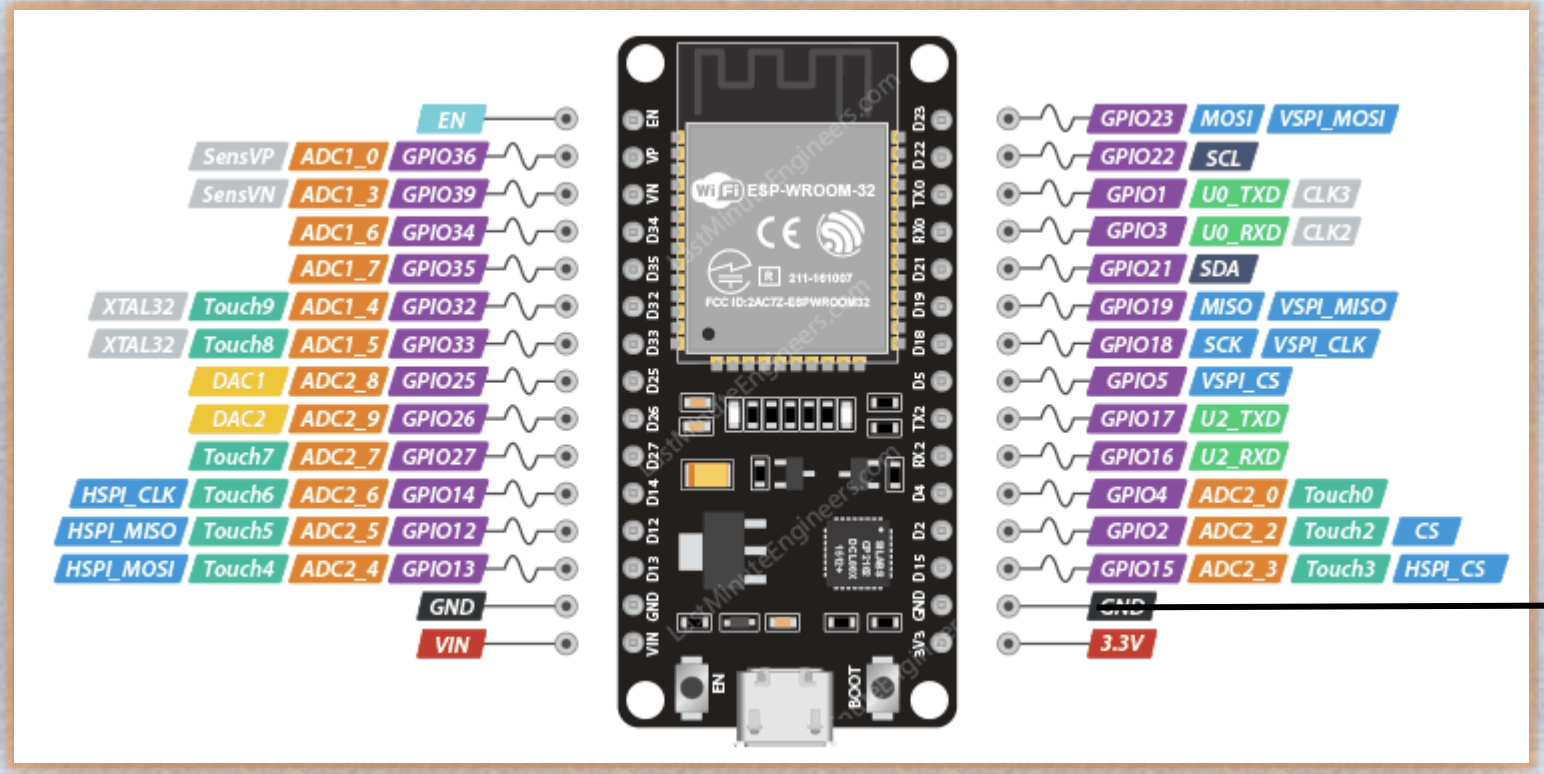
CONNECT TRIG PIN-D5



CONNECT ECHO PIN -D18



CONNECT VCC-3.3V



CONNECT GND-GND

CODE:

```
#define TRIG_PIN 5
#define ECHO_PIN 18
#define OBSTACLE_DISTANCE 20
void setup() {
  Serial.begin(115200);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
}

void loop() {
  long duration, distance;
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  duration = pulseIn(ECHO_PIN, HIGH);
  distance = duration * 0.034 / 2;
  Serial.print("Distance: ");
  Serial.print(distance);
  Serial.println(" cm");
  if (distance <= OBSTACLE_DISTANCE) {
    Serial.println("Obstacle detected!");
  }
  delay(500);
}
```

STEP 1

Copy code paste in Arduino new Sketch

ULTRASONIC | Arduino IDE 2.3.2

File Edit Sketch Tools Help

ESP32-WROOM-DA M...

ULTRASONIC.ino

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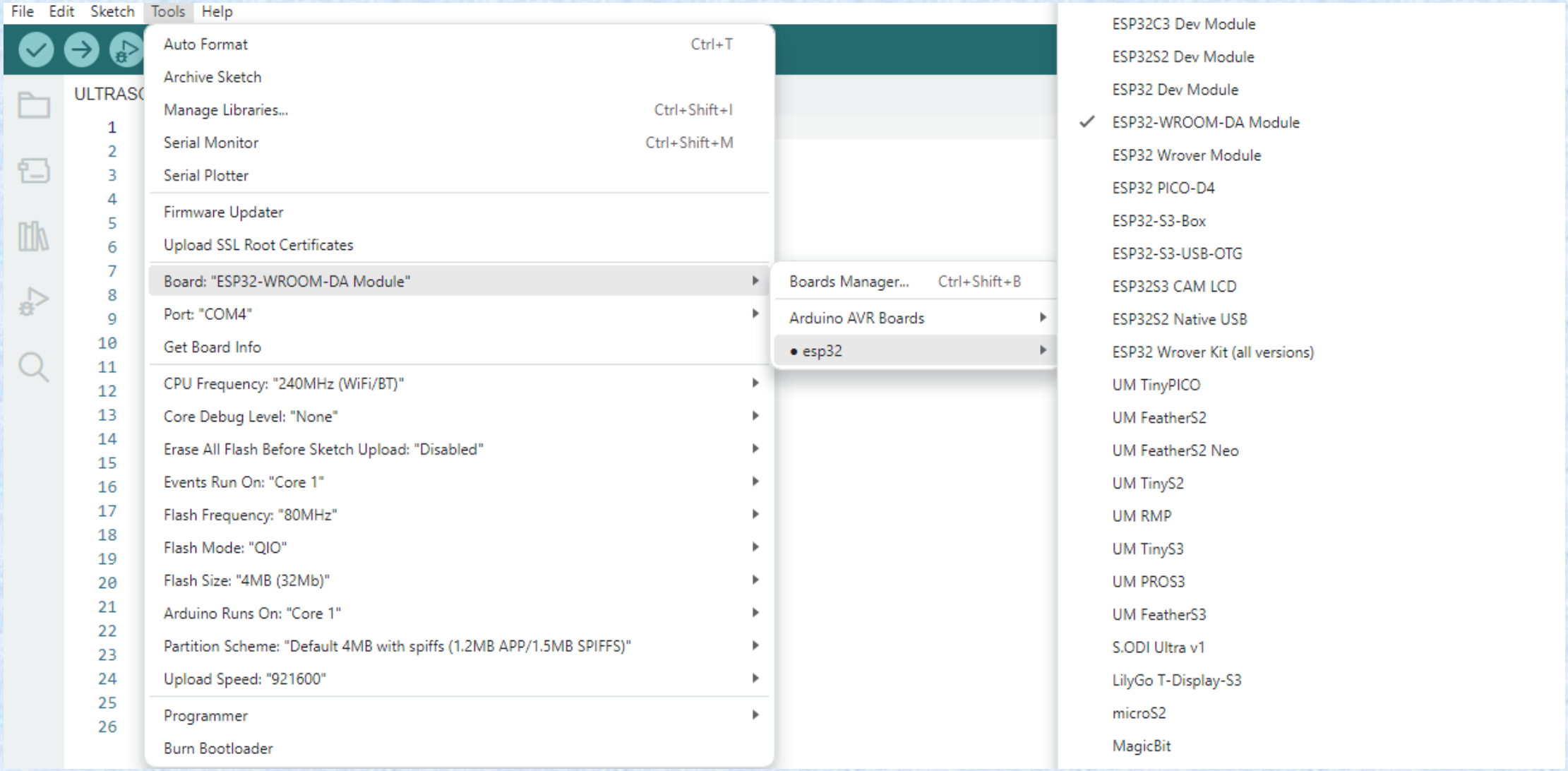
  delay(500);
}
```

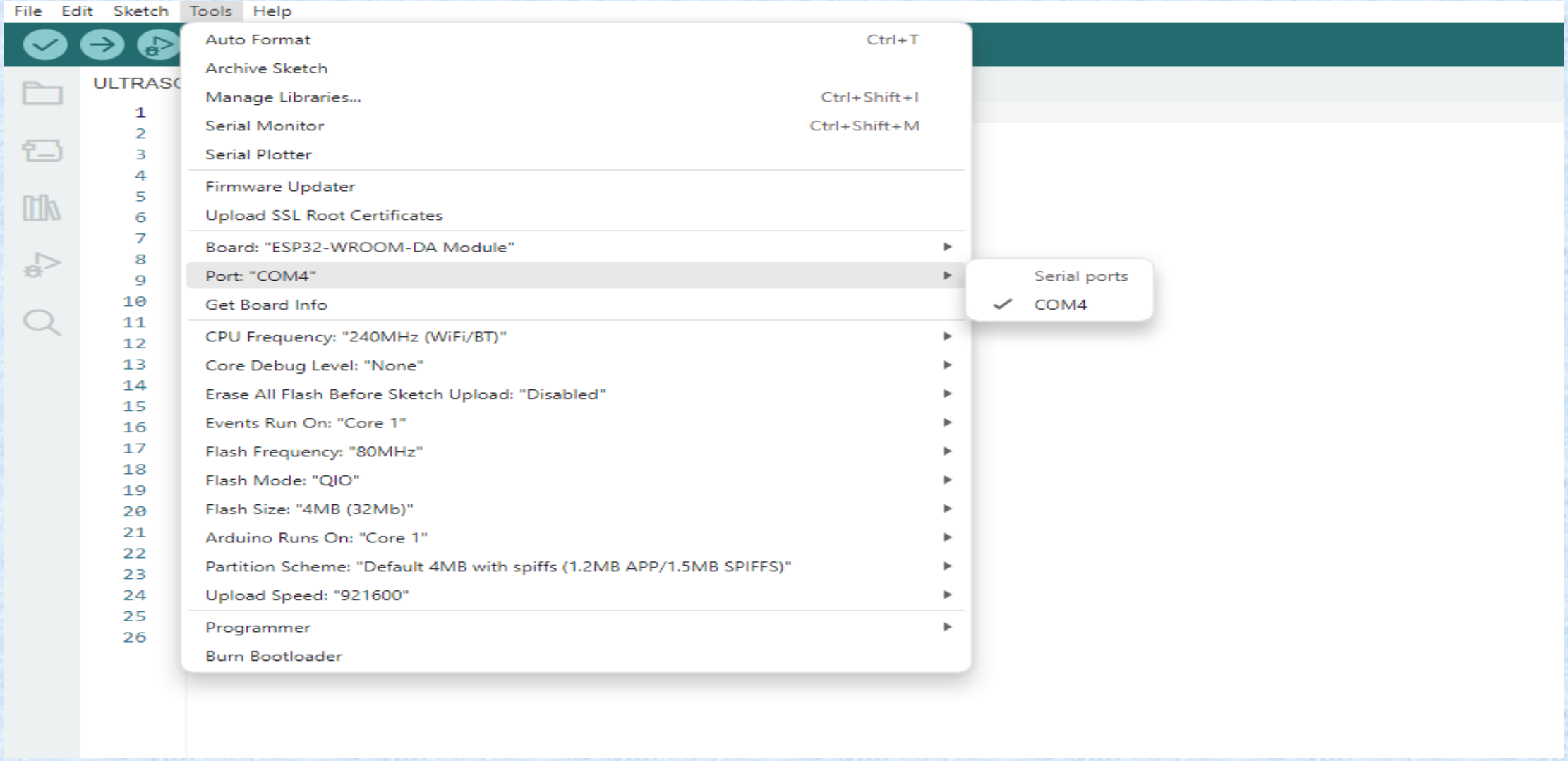
STEP 2:

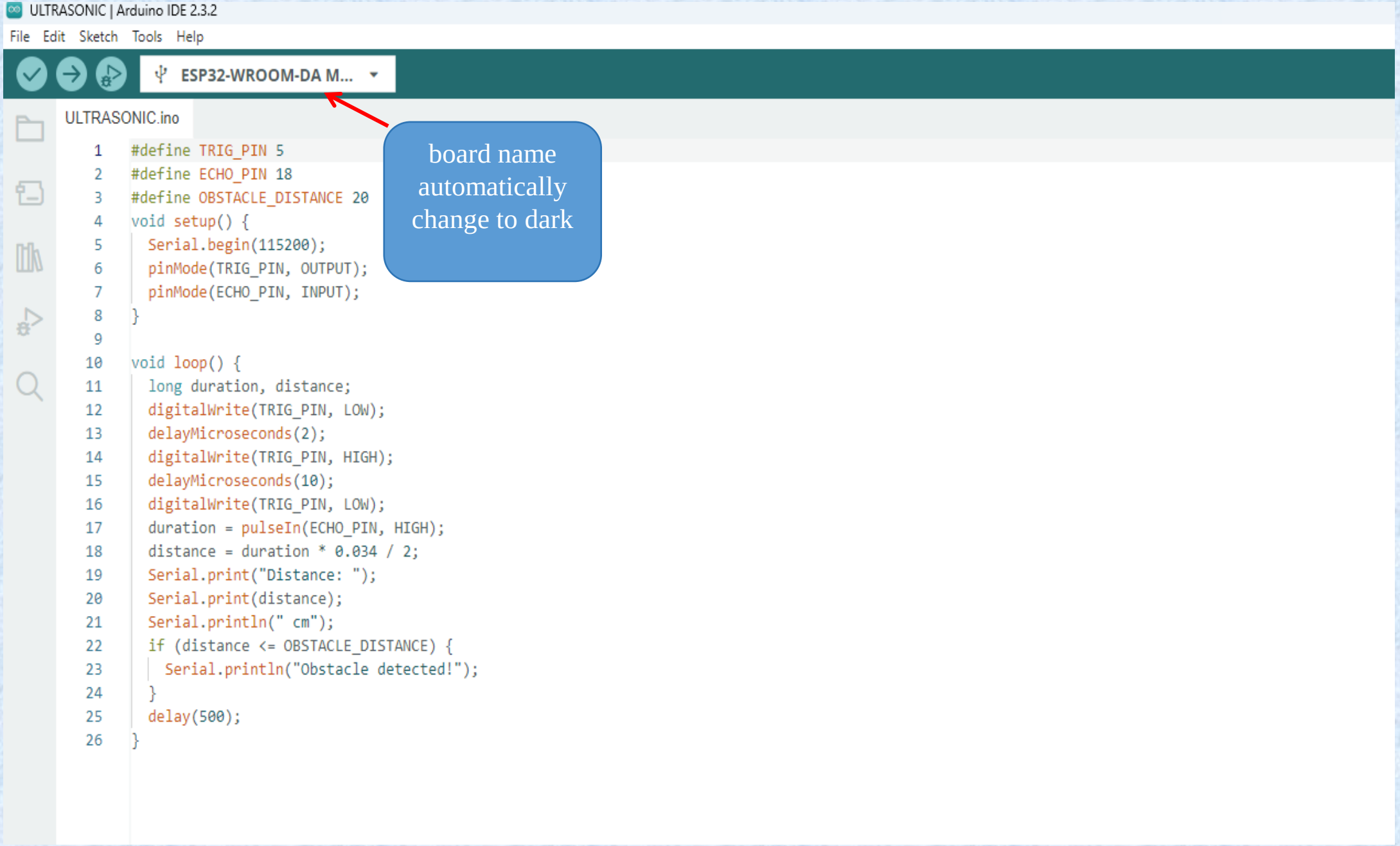
Board---->esp32---->esp32-wroom-DA module



STEP 3:

Tools---->port---->select your com




ULTRASONIC | Arduino IDE 2.3.2
File Edit Sketch Tools Help
ESP32-WROOM-DA M...
ULTRASONIC.ino
board name automatically change to dark
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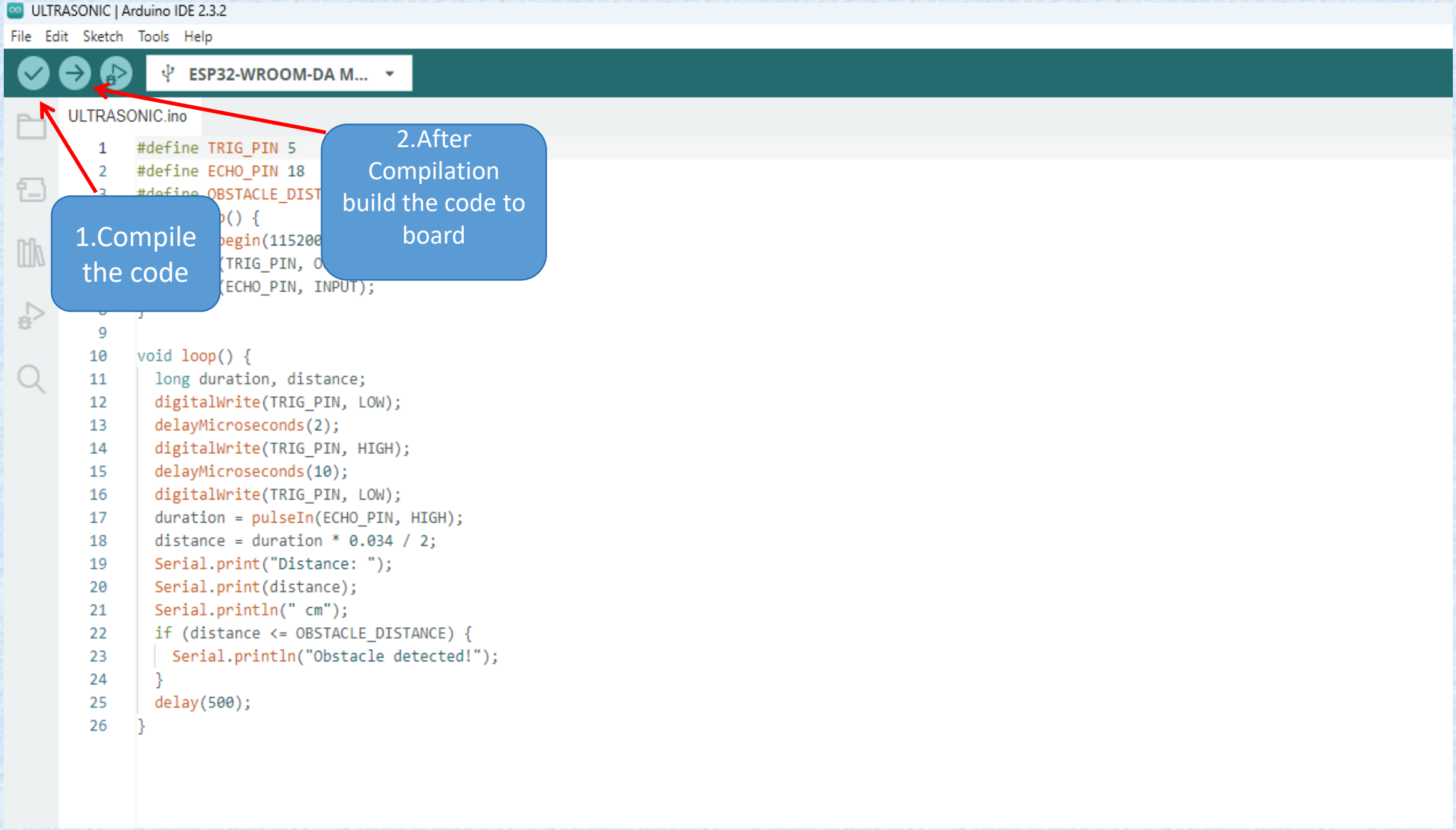
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ESP32-WROOM-DA M...
ULTRASONIC.ino
1.Compile the code
2.After Compilation build the code to board
#define TRIG_PIN 5
#define ECHO_PIN 18
#define OBSTACLE_DIST
() {
egin(115200
(TRIG_PIN, O
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ULTRASONIC | Arduino IDE 2.3.2

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ESP32-WROOM-DA M...

ULTRASONIC.ino

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  }
  delay(500);
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```

After Build the code the output like this

Output Serial Monitor

Message (Enter to send message to 'ESP32-WROOM-DA Module'

```
Obstacle detected!
Distance: 6 cm
Obstacle detected!
Distance: 5 cm
Obstacle detected!
Distance: 5 cm
Obstacle detected!
Distance: 5 cm
Obstacle detected!
Distance: 6 cm
```