

ASSIGNMENT-3

NAME	SUSAN JENOVA .J
ASSIGNMENT NAME	Build wowki product, use ultrasonic sensor and detect the distance from the object. Whenever distance is less than 100cms

LINK: <https://wokwi.com/projects/364455598752471041>

The screenshot displays the Wokwi web IDE interface. On the left, the 'sketch.ino' file is open, showing the following code:

```
1 int t_p=5;
2 int e_p=18;
3 float ss=0.034;
4 long durn;
5 float dist_cm;
6
7 void setup() {
8
9   Serial.begin(115200);
10  pinMode(t_p, OUTPUT);
11  pinMode(e_p, INPUT);
12
13 }
14
15 void loop()
16 {
17   digitalWrite(t_p,LOW);
18   delayMicroseconds(2);
19   digitalWrite(t_p,HIGH);
20   delayMicroseconds(10);
21   digitalWrite(t_p,LOW);
22   durn=pulseIn(e_p,HIGH);
23   dist_cm=durn*ss/2;
24   Serial.print("distance= ");
25   Serial.println(dist_cm);
26   delay(1000);
27 }
```

On the right, the 'Simulation' tab shows a circuit diagram. It features an ESP32 microcontroller board connected to an HC-SR04 ultrasonic sensor. The wiring is as follows: the sensor's VCC pin is connected to the ESP32's 5V pin, the sensor's GND pin is connected to the ESP32's GND pin, and the sensor's TRIG pin is connected to the ESP32's pin 18. The sensor's ECHO pin is connected to the ESP32's pin 5. The sensor is labeled 'HC-SR04'.

WOKWI | SAVE | SHARE | susan jenova project | Docs | SIGN UP

sketch.ino | diagram.json | Library Manager

```
1 int t_p=5;
2 int e_p=18;
3 float ss=0.034;
4 long durn;
5 float dist_cm;
6
7 void setup() {
8
9   Serial.begin(115200);
10  pinMode(t_p, OUTPUT);
11  pinMode(e_p, INPUT);
12
13 }
14
15 void loop()
16 {
17   digitalWrite(t_p,LOW);
18   delayMicroseconds(2);
19   digitalWrite(t_p,HIGH);
20   delayMicroseconds(10);
21   digitalWrite(t_p,LOW);
22   durn=pulseIn(e_p,HIGH);
23   dist_cm=durn*ss/2;
24   Serial.print("distance= ");
25   Serial.println(dist_cm);
26   delay(1000);
27 }
```

Simulation

00:12.259 59%

distance= 98.94
distance= 98.94
distance= 98.94
distance= 98.94
distance= 98.94

Type here to search

PROGRAM:

```
int t_p=5;
int e_p=18;
float ss=0.034;
long durn;
float dist_cm;

void setup() {

    Serial.begin(115200);
    pinMode(t_p, OUTPUT);
    pinMode(e_p, INPUT);

}

void loop()
{
    digitalWrite(t_p,LOW);
    delayMicroseconds(2);
    digitalWrite(t_p,HIGH);
    delayMicroseconds(10);
    digitalWrite(t_p,LOW);
    durn=pulseIn(e_p,HIGH);
}
```

```
dist_cm=durn*ss/2;  
Serial.print("distance= ");  
Serial.println(dist_cm);  
  delay(1000);  
}
```