

## ASSIGNMENT 4

```
#define ECHO_PIN 2
```

```
#define TRIG_PIN 3
```

```
void setup() {
```

```
    Serial.begin(115200);
```

```
    pinMode(LED_BUILTIN, OUTPUT);
```

```
    pinMode(TRIG_PIN, OUTPUT);
```

```
    pinMode(ECHO_PIN, INPUT);
```

```
}
```

```
float readDistanceCM() {
```

```
    digitalWrite(TRIG_PIN, LOW);
```

```
    delayMicroseconds(2);
```

```
    digitalWrite(TRIG_PIN, HIGH);
```

```
    delayMicroseconds(10);
```

```
    digitalWrite(TRIG_PIN, LOW);
```

```
    int duration = pulseIn(ECHO_PIN, HIGH); return
```

```
    duration * 0.034 / 2;
```

```
}
```

```
void loop() {
```

```
    float distance = readDistanceCM();
```

```
    bool isNearby = distance < 100;
```

```
    digitalWrite(LED_BUILTIN, isNearby);
```

```
    Serial.print("Measured distance: ");
```

```
    Serial.println(readDistanceCM());
```

```
    delay(100);
```

```
}
```