**Output with ESP32 Module**

Software used:

Thonny

Programming Language:

Python

Python Code

from machine import Pin, time\_pulse\_us

import time

# Define the pins for the Ultrasonic Sensor

TRIG\_PIN = 23 # GPIO pin for TRIG

ECHO\_PIN = 22 # GPIO pin for ECHO

# Set up the pins

trigger = Pin(TRIG\_PIN, Pin.OUT)

echo = Pin(ECHO\_PIN, Pin.IN)

# Function to measure distance

def measure\_distance():

# Send a 10us pulse to trigger the sensor

trigger.value(0)

time.sleep\_us(2)

trigger.value(1)

time.sleep\_us(10)

trigger.value(0)

# Measure the duration of the echo pulse

duration = time\_pulse\_us(echo, 1)

# Calculate the distance in centimeters

distance = duration \* 0.0343 / 2 # Speed of sound is 343m/s, divided by 2 because the pulse travels out and back

return distance

# Main loop

while True:

distance = measure\_distance()

print("Distance: {:.2f} cm".format(distance))

time.sleep(1) # Wait for 1 second before taking the next reading

Sample Output



