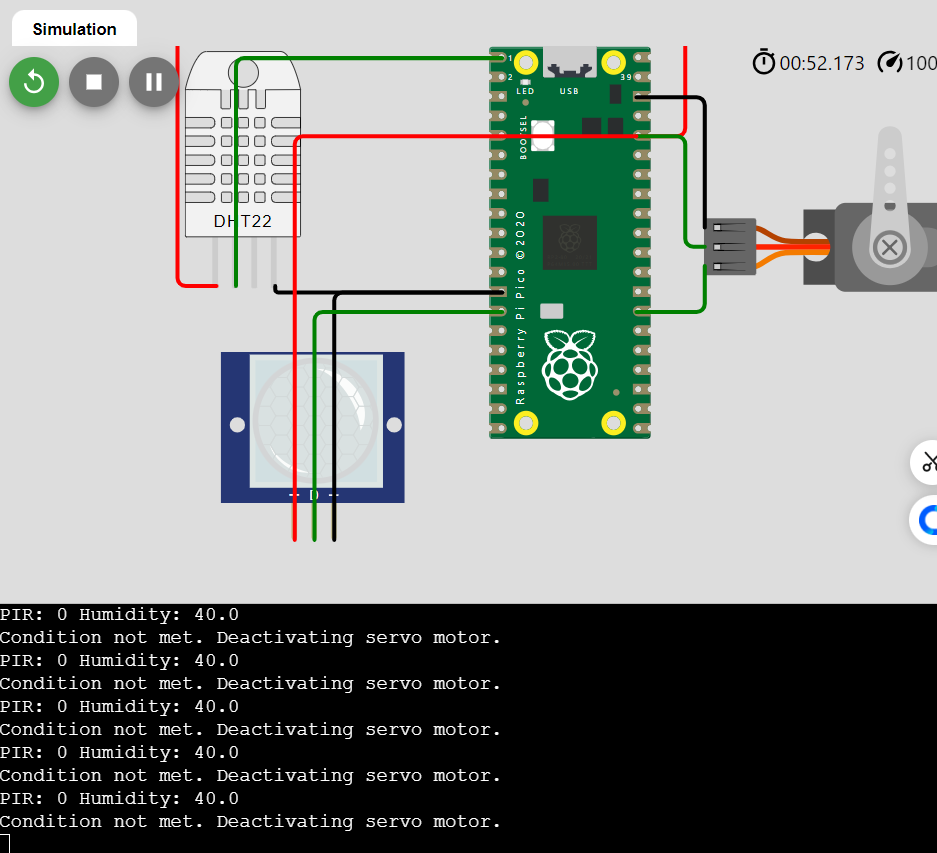
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Humidity and PIR sensor for Door Indoor weather monitoring



Working Code:

from machine import Pin, PWM

from time import sleep

import dht

# Define threshold for humidity

HUMIDITY\_THRESHOLD = 70  # Adjust the threshold as needed

# Setup PIR sensor

pir\_sensor = Pin(10, Pin.IN)

# Setup DHT22 sensor

dht\_sensor = dht.DHT22(Pin(0))

# Setup servo motor

servo = PWM(Pin(21))

servo.freq(50)  # 50Hz for servo motor

# Function to set servo angle

def set\_servo\_angle(angle):

    # Duty cycle for the given angle (0-180 degrees mapped to duty\_u16 range 0-65535)

    min\_duty = 1638  # 2.5% duty cycle

    max\_duty = 8192  # 12.5% duty cycle

    duty = int((angle / 180) \* (max\_duty - min\_duty) + min\_duty)

    servo.duty\_u16(duty)

try:

    while True:

        # Read PIR sensor

        pir\_value = pir\_sensor.value()

        # Read DHT22 sensor

        dht\_sensor.measure()

        humidity = dht\_sensor.humidity()

        # Print sensor values for debugging

        print("PIR:", pir\_value, "Humidity:", humidity)

        # Check if the conditions are met to start the motor

        if pir\_value == 1 or humidity > HUMIDITY\_THRESHOLD:

            print("Condition met. Activating servo motor.")

            set\_servo\_angle(0)  # Set servo to 0 degrees (activate)

        else:

            print("Condition not met. Deactivating servo motor.")

            set\_servo\_angle(-90)  # Set servo to -90 degrees (deactivate)

        # Wait for a second before next reading

        sleep(1)

except KeyboardInterrupt:

    print("Program stopped")