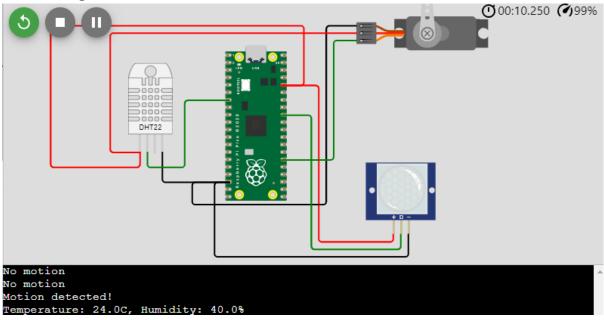
# Day 9 lab 2

# Motion sensor in wokwi

#### Parikshit Ramchandra Sahu

## Circuit diagram:



### Micropython code:

import machine

import utime

import dht

# we Initialize DHT22

dht\_pin = machine.Pin(5)

dht\_sensor = dht.DHT22(dht\_pin)

# we Initialize PIR Motion Sensor

pir pin = machine.Pin(27, machine.Pin.IN)

```
# we Initialize Servo Motor
servo pin = machine.Pin(20)
servo = machine.PWM(servo_pin)
servo.freq(50)
def set_servo_angle(angle):
  # now Duty cycle for servo is between 2.5% and 12.5% for 0 to 180 degrees
  duty = angle / 18 + 2.5
  servo.duty u16(int(duty * 65535 / 100))
def read_dht22():
  dht_sensor.measure()
  temp = dht sensor.temperature()
  humidity = dht sensor.humidity()
  return temp, humidity
def main():
  while True:
    if pir pin.value() == 1:
      print("Motion detected!")
      temp, humidity = read_dht22()
      print(f"Temperature: {temp}C, Humidity: {humidity}%")
      # now Move the servo to 90 degrees
      set_servo_angle(90)
      utime.sleep(1)
      # now Return the servo to 0 degrees
```

```
set_servo_angle(0)
    utime.sleep(1)
    else:
        print("No motion")

    utime.sleep(2)

if __name__ == "__main__":
    main()
```