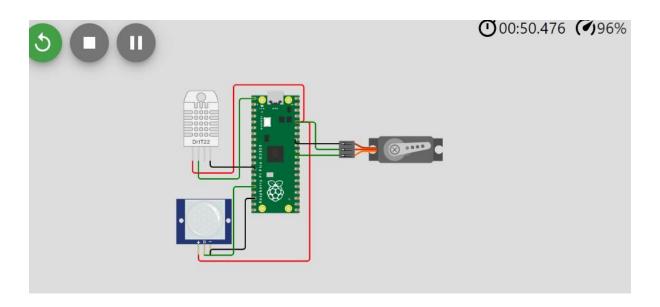
WOKWI Ventilation System

```
import machine
import utime
import dht
# Pin definitions
pir pin = machine.Pin(16, machine.Pin.IN)
dht22 pin = machine.Pin(0)
servo_pin = machine.Pin(26)
# Initialize DHT22 sensor
dht22 = dht.DHT22(dht22 pin)
# Initialize Servo Motor
servo = machine.PWM(servo_pin)
servo.freq(50)
def set_servo_angle(angle):
    duty = int((angle / 18) + 2)
    servo.duty u16(duty * 65535 // 100)
def read_dht22():
   try:
        dht22.measure()
        temperature = dht22.temperature()
        humidity = dht22.humidity()
        return temperature, humidity
    except Exception as e:
        print('Failed to read DHT22 sensor:', e)
        return None, None
def main():
   while True:
        if pir_pin.value():
            print("Motion detected! Turning servo on.")
            set_servo_angle(90) # Move servo to 90 degrees
        else:
            print("No motion detected. Turning servo off.")
            set_servo_angle(0) # Move servo to 0 degrees
        temperature, humidity = read_dht22()
        if temperature is not None and humidity is not None:
            print("Temperature:", temperature, "C")
            print("Humidity:", humidity, "%")
```

```
utime.sleep(1)
```

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



```
Motion detected! Turning servo on.
Temperature: 24.0 C
Humidity: 40.0 %
Motion detected! Turning servo on.
Temperature: 24.0 C
Humidity: 40.0 %
Motion detected! Turning servo on.
Temperature: 24.0 C
Humidity: 40.0 %
Motion detected! Turning servo on.
Temperature: 24.0 C
Humidity: 40.0 %
Motion detected! Turning servo on.
Temperature: 24.0 C
Humidity: 40.0 %
Motion detected! Turning servo on.
Temperature: 24.0 C
Humidity: 40.0 %
Motion detected! Turning servo on.
Temperature: 24.0 C
Humidity: 40.0 %
```