


```

# 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()
```