We are keeping zigbees in AT mode as of now, so that we don’t have to specify the destination address

Tested sending msg from router to coordinator. They are able to communicate to each other without Arduino.

NOTES SECTION:

Tx of Arduino to Din(Rx) of XBee & Rx of Arduino to Dout(Tx) of XBee

Disconnect Tx & Rx pins of Arduino while dumping code, else it may throw an error.

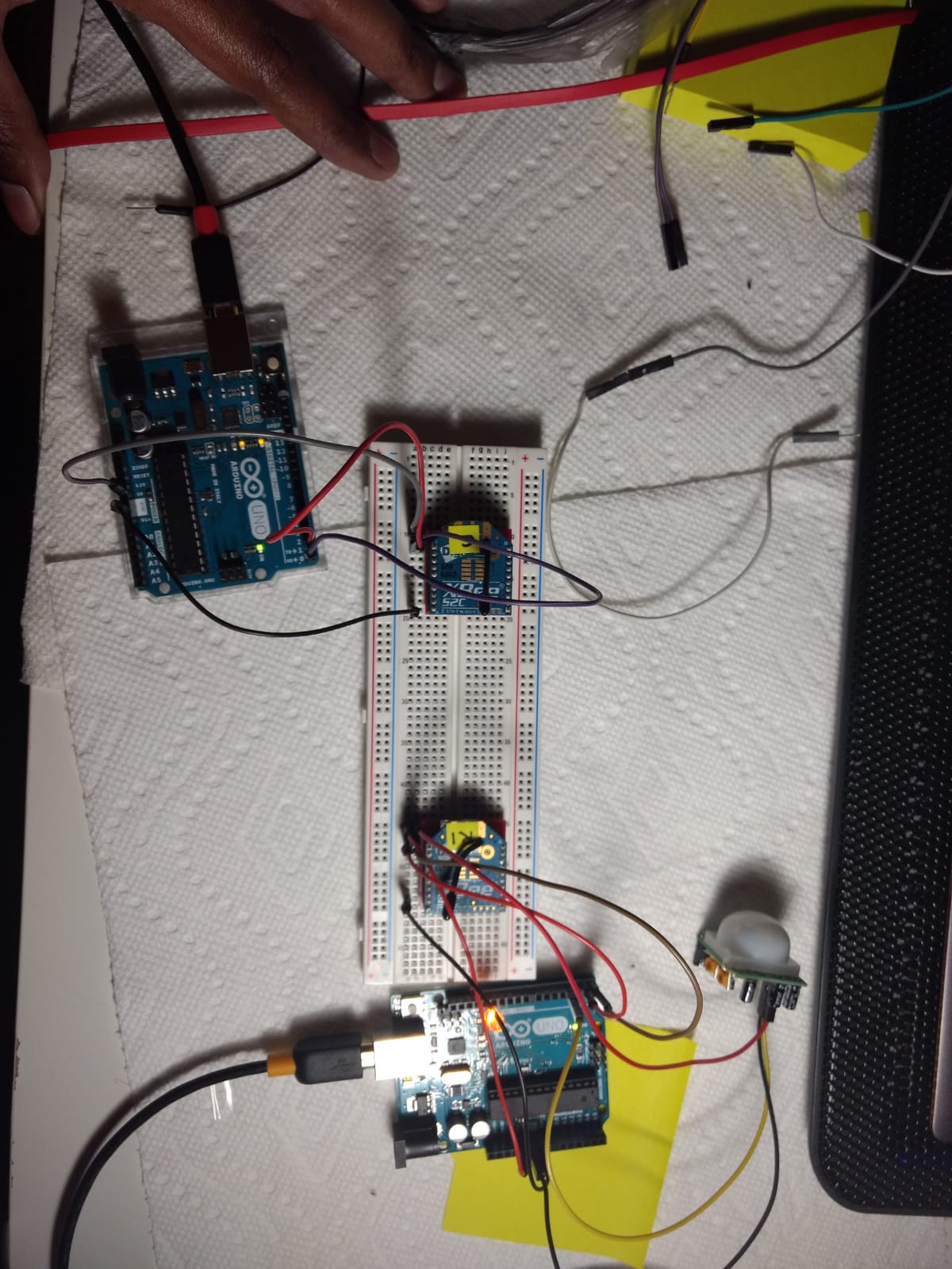
TESTING:

Test1] <https://www.youtube.com/watch?annotation_id=annotation_135090&feature=iv&src_vid=odekkumB3WQ&v=mPx3TjzvE9U>

Tried putting router in the type C shield and coordinator on breadboard with an Arduino for each. 🡪 Failed reasons unknown

Test 2]

Brought both coordinator and router on breadboard with an Arduino for each. Router code was using XBee library (temperature sensor example on youtube) 🡪 Failed



Test 3 ]

Maintained hardware setup as in test 2. Changed Zigbee modes to AT mode (In XCTU- change API Enable to Transparent Mode) with hello world code 🡪 **Success** (code files- arduino\03 & 04) Bug: Coordinator’s serial monitor was showing multiple copies of msg from zigbee

In transparent mode, the destination address us zero so router will send the package to the coordinator directly. In API mode, we have to specify the destination address.

Test 4]

Setup same as test 2 🡪 Changed code format as shown in above youtube link   
ie. No XBee library in router code, simple serial writes. They are being caught by serial read at coordinator.(code files- arduino\02 & 03).

A screen shot of a computer

Description generated with very high confidence

Test 5]

Router is on breadboard with an Arduino (with code in file: arduino\02) and coordinator (with code in file : arduino\03)is directly connected with USB shield to the laptop. Router’s msgs of motion detection can be seen in Serial monitor of Arduino to which it is connected. And Coordinator receives these msgs which can be seen in XCTU in CONSOLE tab after we click on CLOSE serial connection.

The bug in test 5 is also solved. There is no repetition of msgs. **SUCCESS.**

**A computer sitting on a table

Description generated with very high confidenceA circuit board

Description generated with very high confidenceA circuit board

Description generated with very high confidenceA screen shot of a computer

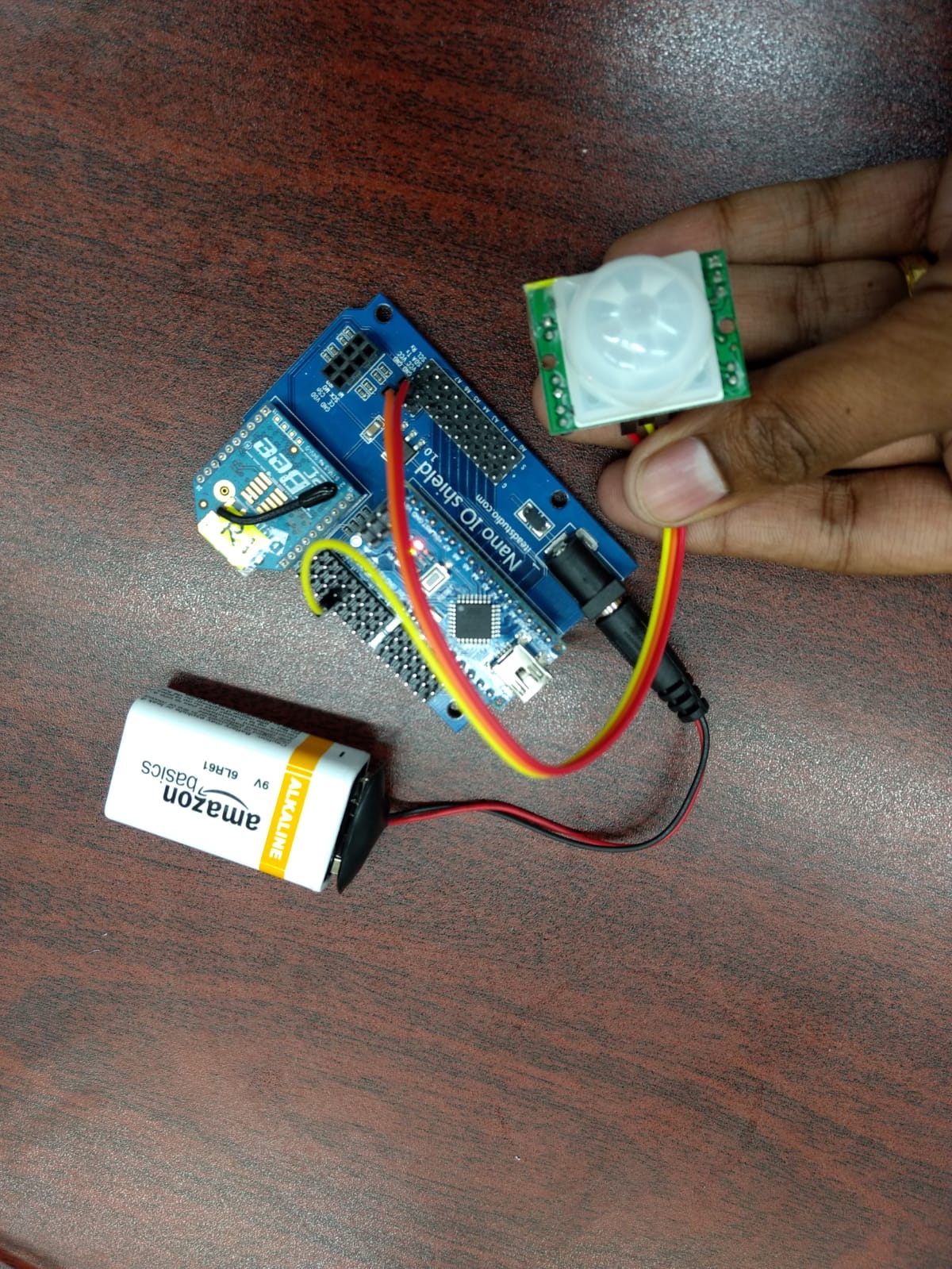
Description generated with very high confidenceA computer

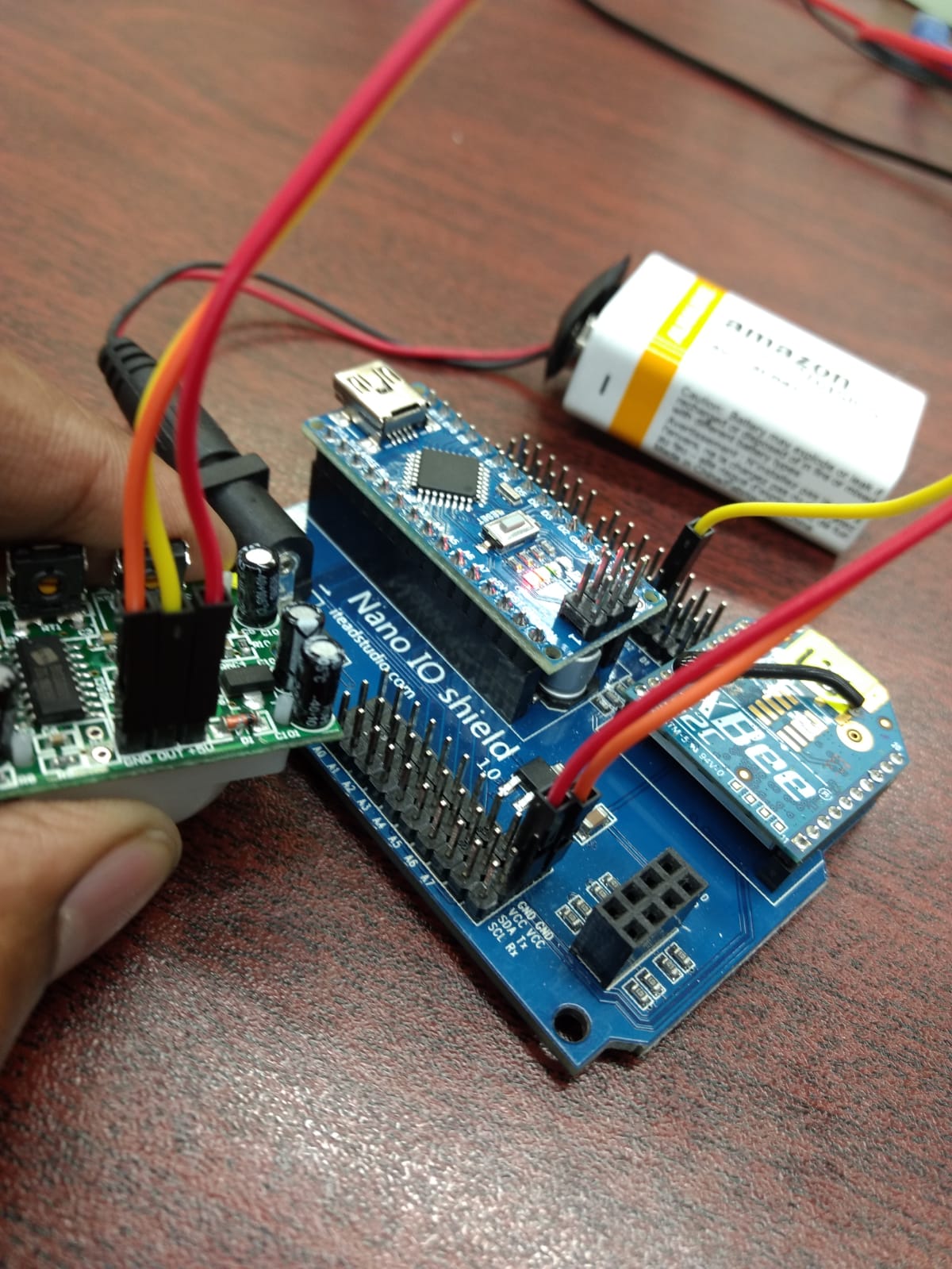
Description generated with very high confidence**

// include a flag at the Coordinator side – ack if the package is sent to the the laptop.

**PHASE 3:**

* Testing with Arudino Nano and Nano IO shield – Modular & Portable version:
* Connect sensor’s Vcc and Gnd to Vcc and Gnd of shield
* Connect PIR’s OUT to PIN3 of shield (‘S’ line)
* Connect Router Xbee Shield to the shield.
* The Arduino’s Tx is connected to Zigbee’s Rx and Arduino’s Rx is connected to Zigbee’s Tx internally – We don’t need to do it explicitly as we did it in the breadboard version.
* Pin 13 (O/P pin in our code has a red LED labelled ‘L’ on Arduino Uno board)
* Working perfect ! – **SUCCESS**





**References :**

<https://www.youtube.com/watch?v=uBkQUph9EKM>

<https://www.youtube.com/watch?annotation_id=annotation_135090&feature=iv&src_vid=odekkumB3WQ&v=mPx3TjzvE9U>

<https://www.youtube.com/watch?v=wtal7SWZek0>

<https://arduino.stackexchange.com/questions/16603/why-i-cannot-connect-directly-arduino-uno-and-xbee-s2>

<https://www.bananarobotics.com/shop/ITEAD-Arduino-Nano-IO-Shield>