Brief instructions

Pairing devices

To connect the devices, make sure Bluetooth is enabled on your computer. Connect the devices one device at the time, meaning that when pairing a new device, all of the other ones have to be turned off.

On Windows 10, navigate to *Bluetooth & other devices* (Fig. 1) and click on *Add Bluetooth or other device* (yellow). A list of devices ready to be paired will show up, select the one that is called HC-06. You will be required to put in the pairing code, which is **1234**.

Alternatively, on the panel on the right, click on *Devices and printers* (green).
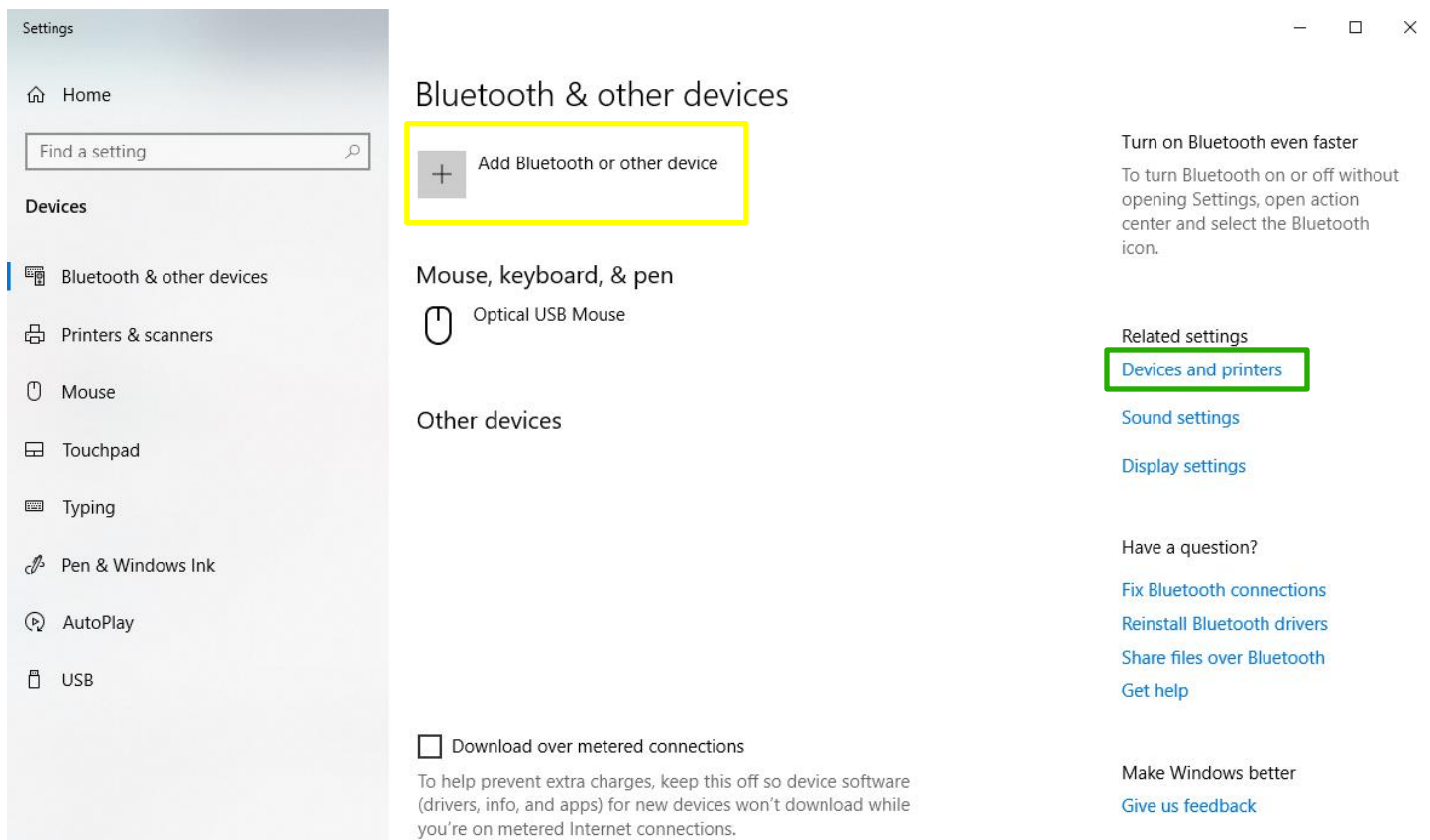

Figure 1 Bluetooth & other devices

If you have clicked on *Devices and printers* (Fig. 2), click on *Add a device* (green). A list of devices ready to be paired will show up, select the one that is called HC-06. You will be required to put in the pairing code, which is **1234**.
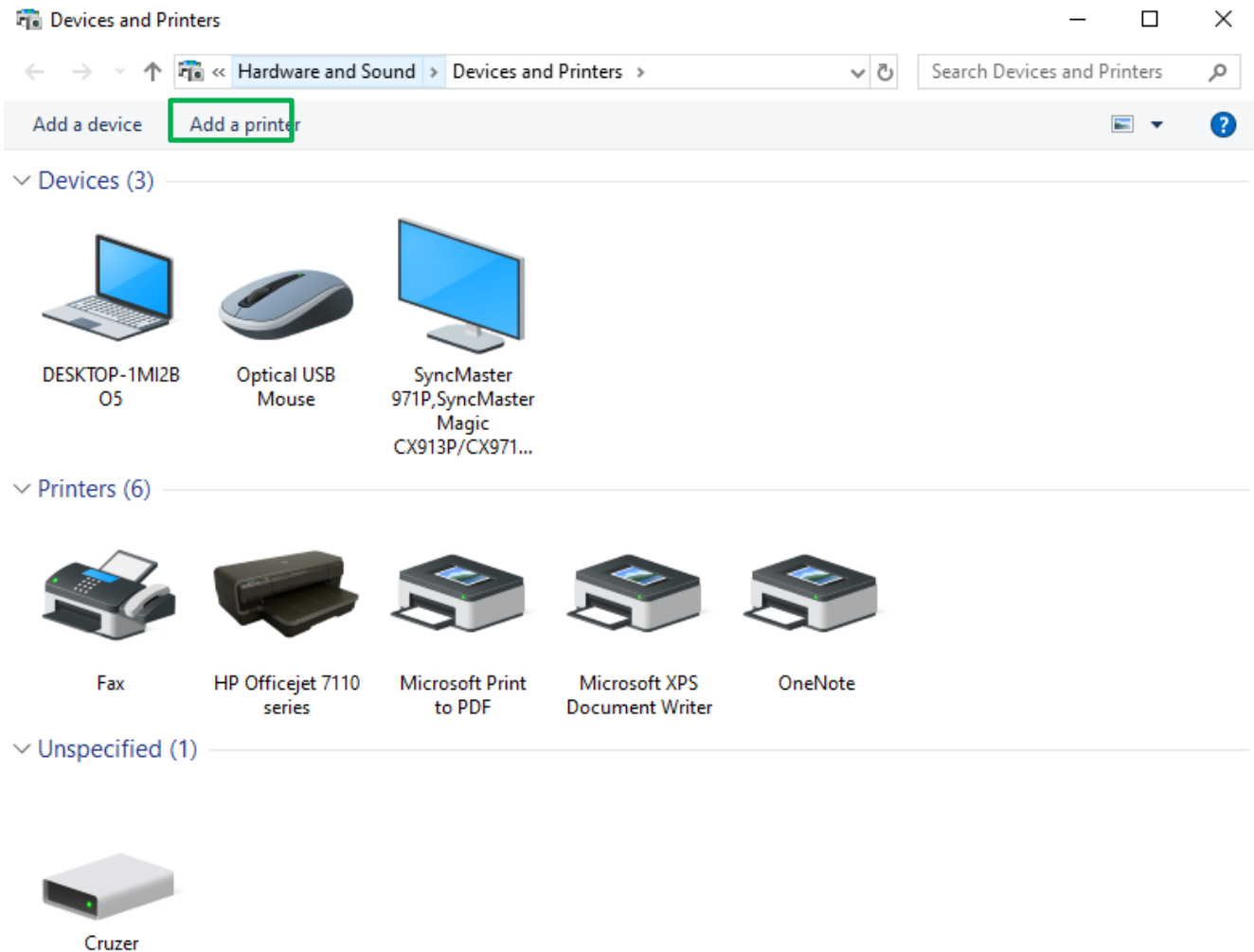
Figure 2 Devices and Printers

Once everything has been paired, you will have to right click on the device either on *Bluetooth & other devices* or *Devices and Printers* and write down the COM port (*Properties->Hardware* tab). This will have to be done for all of the devices, as they all have unique COM ports associated with them. While these ports will not change, they will be different on every machine the devices are connected to.

Additionally, it would be highly recommended to rename the paired devices so that all of them are not called HC-06.

Changing the code

Base Station

For the base station, we have to make sure we're not in *the simulation mode*. The simulation mode allows for easy development of visualizations without having the Base Station being connected. We do so, by simply simulating the incoming data using Perlin noise.

To alternate between *the simulation mode* and *the physical mode*, we do the following:

In setup (line 61):

```
//IF USING THE ACTUAL BASE STATION, LEAVE UNCOMMENTED
//otherwise, to conduct tests in simulated mode, comment
//the following two lines out:

//Port_1 = new Serial(this, "COM4", 9600);
//Port_1.bufferUntil(13); //13 is the ASCII linefeed value
```

COM port specification will be different on your machine, therefore make sure it corresponds to the port identified on *Devices and Printers* window.

Thus the result becomes:

```
//IF USING THE ACTUAL BASE STATION, LEAVE UNCOMMENTED
//otherwise, to conduct tests in simulated mode, comment
//the following two lines out:

Port_1 = new Serial(this, "COM4", 9600);
Port_1.bufferUntil(13); //13 is the ASCII linefeed value
```

In draw (line 92):

```
//IF USING THE ACTUAL BASE STATION, LEAVE UNCOMMENTED
//otherwise, to conduct tests in simulated mode, comment
//the following line out:

// Port_1.write('0');

//and uncomment the following line:
simulateData();
```

Thus the result becomes:

```
//IF USING THE ACTUAL BASE STATION, LEAVE UNCOMMENTED
//otherwise, to conduct tests in simulated mode, comment
//the following line out:

Port_1.write('0');

//and uncomment the following line:
//simulateData();
```

Wearables

For the Wearables, since we do not have a simulation mode yet, we only have to select the number of devices we would like to have connected. Additionally, the *verifiedPorts* array would have to be updated, based on your PC's COM ports.

Above setup (line 10):

```
//DECLARING THE NUMBER OF USERS
int No_Users=4;
//A LIST OF CONNECTED PORTS ON THE PC (UNIQUE FOR EACH MACHINE)
String [] verifiedPorts={"COM11", "COM13", "COM18", "COM20", "COM23", "COM25"};
```

This list will be different on your machine, therefore it would be a good idea to write down what port corresponds to each wearable.