Programming ‘Things’ Individual Assignment Report – Jamie Pounds

<https://learn.sparkfun.com/tutorials/connecting-arduino-to-processing>

* This tutorial was paramount in getting Arduino to connect to processing so that I could use my GUI to control my Zumo, told me the basis for the myPort.write usage and slightly integrated into how I use the buttons to send a char to be read by arduino

<https://gist.github.com/flakas/3294829>

* This bit of code did not help in the end with my project as the object detection did not work and I ended up trying to use the New Ping library instead and therefore commenting out the code related to this.

Achievements:

* W, S, A, D functions work through GUI button presses.
* Border detect works and keeps zumo within the track.
* Corner detect stops the zumo when both sensors are over edge of track

Problems:

* xbee was plugged in the wrong way around so it didn’t send commands properly.
* Light sensors had to be adjusted to not be too sensitive
  + otherwise the border detect function would be detecting an end in the track or a change in the course where there is none.
* Lines on track were too thin to be picked up properly
* Couldn’t find right port from Arduino to processing for their link up
* Couldn’t get corridor and room constructors to work properly within Arduino to log corridors and rooms the zumo enters.
  + Tried researching how to use proper scope and other things to then keep logged data in constructors even when not in certain functions but to no avail
* Couldn’t get object detection working with sensor as I could not integrate New Ping library properly enough for it to work
* Problem with border detect that it doesn’t stay within loop and work properly after turn completed is pressed
  + Attempted to use while loops to keep within certain functions but ended up being stuck in those functions despite break attempts.