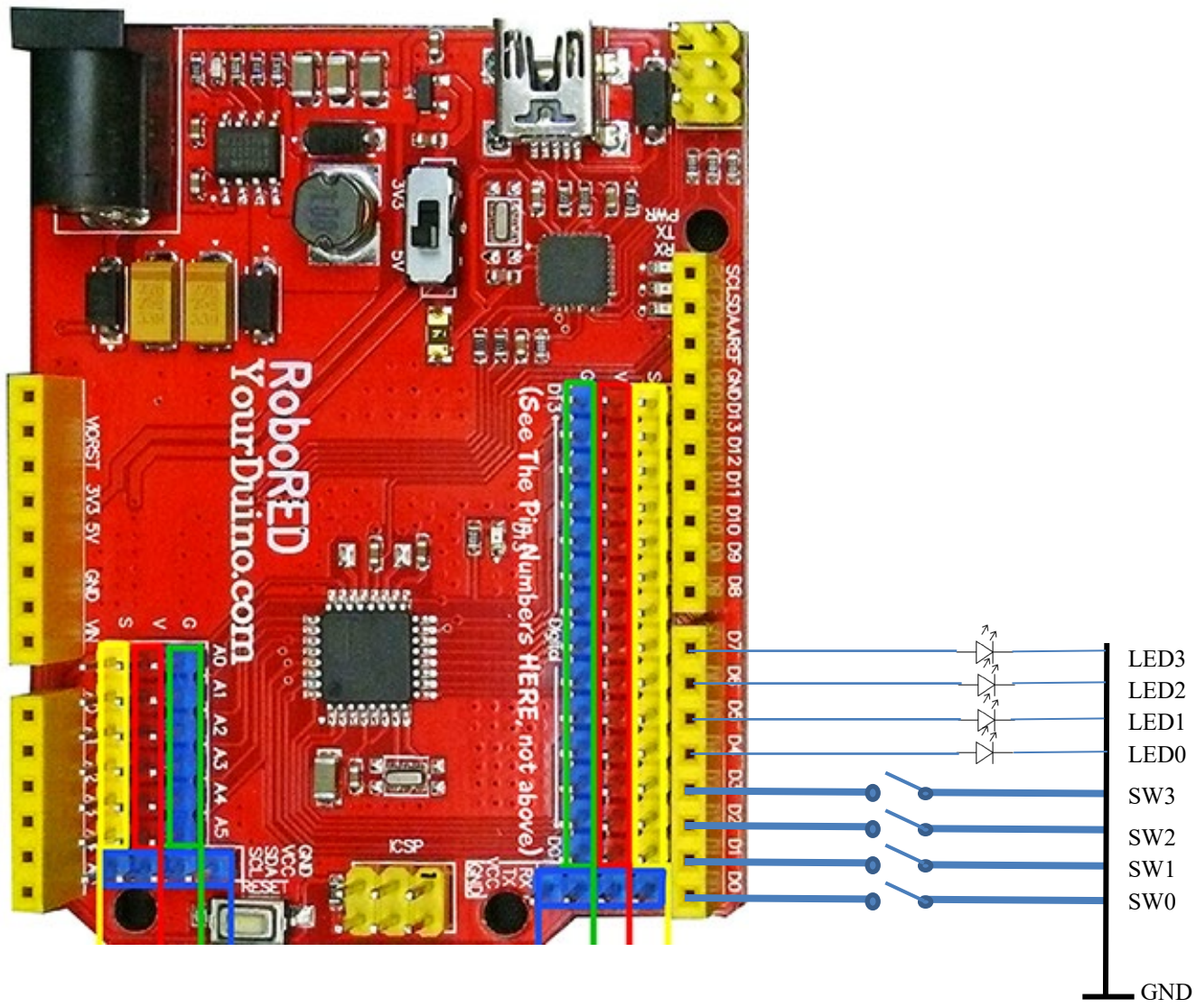
Homework #2 – Due 1/29/20
Please submit your work in the Dropbox in MyCourses

DataSheet Reading: I/O-Ports {Section 18 (2016 datasheet)}

Problems:

1. Rewrite the code from Lab 1 (page 15) using C code and registers. You may only use Arduino code for the serial and delay functions.

2. Assume the following hardware setup:



- Write a program using registers in C, which do the following.
    - Initialize the I/O ports appropriately
    - In a continuous loop, read the input pins and turn on the corresponding LED if the switch is closed.
    - For example, if SW1 is closed, LED1 is on. If SW1 is open, LED1 is off.

- Note: If you would like to test your code, you can wire it on a breadboard using your parts kit. I will also have a breadboard wired that you can borrow during office hours

3. Research Question:
   Explain briefly the steps/ precautions necessary while changing the state of any port, from input to output or vice versa.
   Note: A port (set of 8 physical pins) initialized as output, can be changed to act as input dynamically (or vice versa), but you need to exercise caution and follow a set procedure to transition from one mode to another.