Lab 2: Joystick, loops, and functions

E21 Lab Report

Name 1 and Name 2

1. What are the minimum and maximum readings for each axis?
2. An [analog to digital converter](https://en.wikipedia.org/wiki/Analog-to-digital_converter) or ADC converts a voltage to a binary integer. For example, a 10-bit ADC has 210=1,024 possible voltage readings ranging from 0 to 1,023. Based on your answer to **Q1**, what is the minimum number of bits required to express the values being displayed by this program?
3. What module(s) and class(es) are used to sample, or get readings from, the ADCs in the **lab2\_ex1()** function? Include a link to the documentation for these module(s) and class(es) found on <https://docs.circuitpython.org>. Click on “Core Modules” in the upper left.
4. What module(s) and class(es) are used to sample the SEL output in the **lab2\_ex1()** function? Include a link to the documentation for these module(s) and class(es) found on <https://docs.circuitpython.org>. Click on “Core Modules” in the upper left.
5. Is SEL active high, or active low? That is, does pushing the joystick in cause the SEL pin to have a non-zero voltage (active high), or a voltage close to zero (active low)? How can you tell?
6. What is the URL to the video you recorded for exercise 3? Make sure it is shared with my Swarthmore email address (wjohnso3@swarthmore.edu). Please be nice to my inbox and **uncheck** "Notify people" when you share it.
7. What is the URL to the video you recorded for exercise 4? Make sure it is shared with my Swarthmore email address ([wjohnso3@swarthmore.edu](mailto:wjohnso3@swarthmore.edu)). Please be nice to my inbox and **uncheck** “Notify people” when you share it.
8. Please describe the intended behavior of your program. How do the joystick axes affect the color of each NeoPixel? How about when SEL is active?
9. What is the URL to the video you recorded for exercise 4? Make sure it is shared with my Swarthmore email address ([wjohnso3@swarthmore.edu](mailto:wjohnso3@swarthmore.edu)). Please be nice to my inbox and **uncheck** “Notify people” when you share it.
10. Did all group members contribute equally to all tasks? If not, who did what for each exercise?