interrupt.

The switches will be read from the “MAIN” loop, then that number will be modified by the arithmetic instructions to a value which can be used by the delay routine.

CONNECTIONS:

A Servo is a relatively easy device to interface with a microcontroller. There are 3 wires, typically black is ground, red is 5v, and white or yellow is the signal wire that will be driven buy your Port I/O Pin.

MATERIALS:

You will have to provide your own Servo, I suggest the HS-311 found at any Hobby store. But you can use any that changes angle based from a Positive Pulse within a 10-20ms cycle. Hobby stores also sell a "digital" servo, these won't work and are much more expensive anyways. I can help any students that have difficulty getting this.

LAB WRITE-UP AND DELIVERABLES:

- The lab write-up will include this page as the cover sheet and the source code.
- A schematic of your specific implementation will be included. Your schematic will have to be done with Circuit Maker but cannot be hand-drawn. You must label all devices, values.
- 2 Screenshots/Pictures from an oscilloscope. These must show one entire period of the signal and the rising edge of the next repetition. A measurement of the start and end of the positive pulse must be clearly visible using the vertical cursor bars. One image should be of the shortest pulse (1ms) with a switch value of 0x00 and the 2$^{nd}$ image should be of the longest pulse (2ms) with a switch value of 0xFF.

DEMO AND GRADING:

When your project is ready, you will demonstrate the functionality to the instructor and hand in the write-up. Your demo will be graded on its ability to correctly resolve a desired angle from the value set on the switches. Also I will be looking for good coding techniques which will be discussed during the lab period. Code structure and flow of data in your programs become crucial with the use of interrupts.