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### ECET 17900 - Introduction to Digital Systems - Lab #3

Name: Alec Derwent

Date: January 31, 2020

Lab Day and Time: Friday @ 9:30

Included file: <stdio.h> and "serial.c"

IO Connections: none for this procedure

Description: This is a simple serial test program that includes the required files to utilize standard input and output function. The program will display and initial message then do nothing.

Key Takes: This is the approach required to display information throughout the semester.

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#include <avr/io.h>
#define F_CPU 16000000L
#include <util/delay.h>
#include <stdio.h>
#include "serial.c"

int main(void)
{
    init_UART();          // turn on and setup the serial port connection

    //printf("STDIO Test Program for Lab 3 - Alec Derwent \n\r");

    DDRC = 0xff;
    DDRK = 0x00;

    while(1)
    {
        while(PINK == 0) {
            printf("Waiting for the Button to be pressed");
        }
        PORTC = 0x18;
        _delay_ms(800);
        PORTC = 0x24;
        _delay_ms(400);
        PORTC = 0x42;
        _delay_ms(400);
        PORTC = 0x81;
        _delay_ms(2000);
        while (PINK != 0) {
            printf("Waiting for the Button to be released");
        }
        PORTC = 0;
    }
}
```