```c
/*****************************************************************************
ECET 17900 - Introduction to Digital Systems - Lab #3

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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.
*****************************************************************************/
#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;
    DDRA = 0x00;

    while(1)
    {
        printf("top of while(1)");
        if (PINA == 1)
        {
            PORTC = 0x01;
            _delay_ms(500);
            PORTC = 0;
            _delay_ms(500);
        }
        else if (PINA == 2)
        {

            PORTC = 0x80;
            _delay_ms(500);
            PORTC = 0;
            _delay_ms(500);

        }
    }
}
```