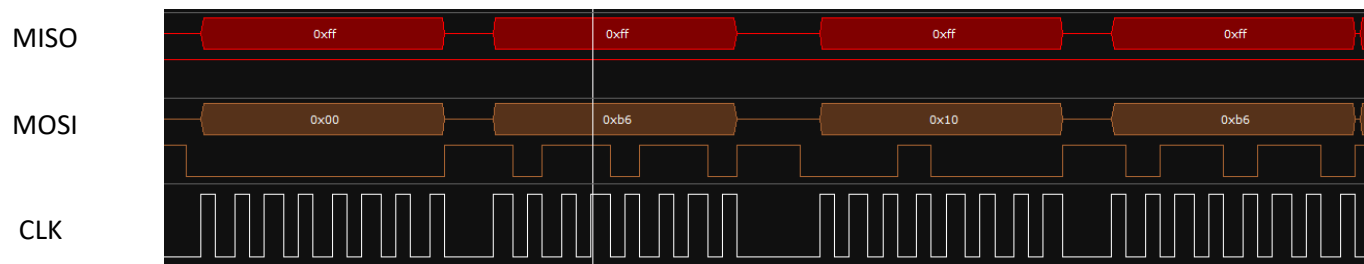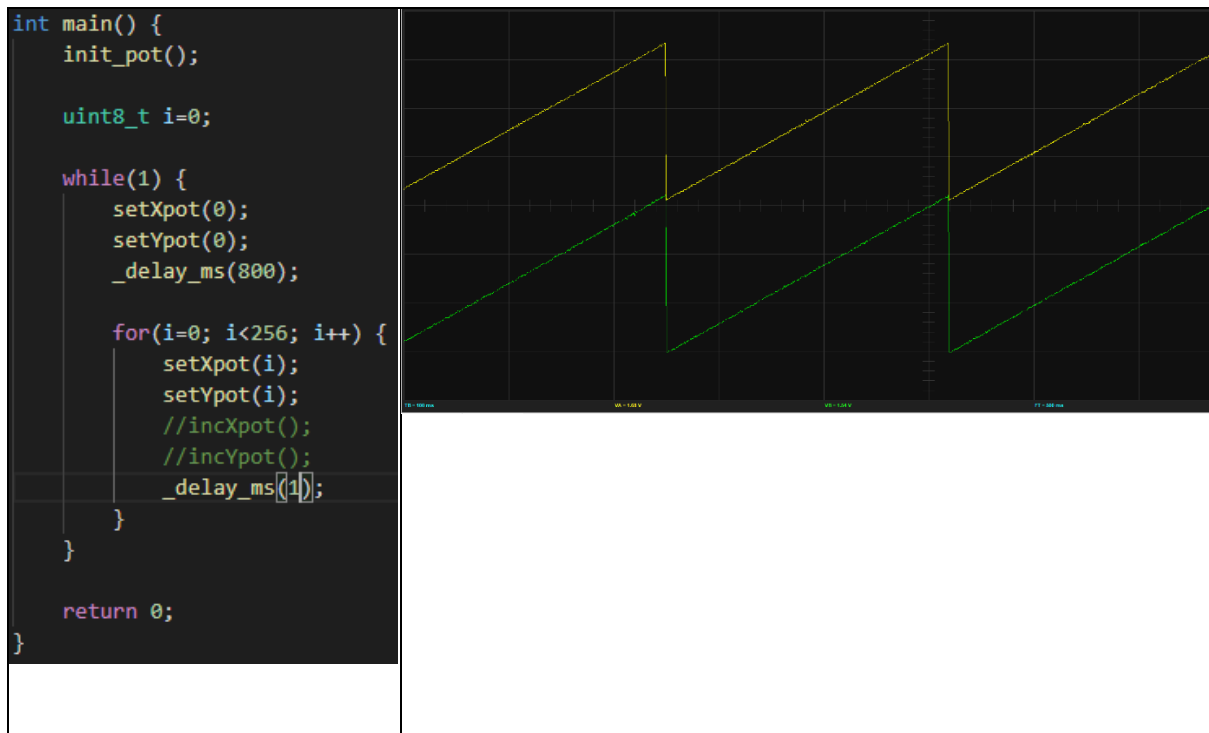# C7 – Serial Communication

3.1 UART Debugging

```
int main() {

    int i = 0;
    DDRA =  0xFF;

    init_debug_uart0();

    while(1 == 1) {

        for(i=0; i<10; i++) {
            PORTA = (uint8_t)segments[i];

            printf("%d\n", i);

            _delay_ms(800);
        }
    }
    return 0;
}
```

3.2 SPI Digital Potentiometer

```c
int main() {
    init_pot();

    uint8_t i=0;

    while(1) {
        setXpot(0);
        setYpot(0);
        _delay_ms(800);

        for(i=0; i<256; i++) {
            setXpot(i);
            setYpot(i);
            //incXpot();
            //incYpot();
            _delay_ms(1);
        }
    }

    return 0;
}
```


MISO	0xff	0xff	0xff	0xff
MOSI	0x00	0xb6	0x10	0xb6
CLK				

The first byte selects pot 0 to write, the next byte writes the value 0xb6 to pot 0, the next byte selects pot 1 to write, then the last byte writes the value 0xb6 to pot 1.