```c
/*
 * asynch_sw_read.c
 *
 * Created: 2/15/2022 8:55:44 AM
 * Author : jason
 */

#include <avr/io.h>
#define F_CPU 4000000
#include <util/delay.h>

#define BAUD_RATE 9600

//header functions that will be in use
void USART_sw_write(char);

int main(void)
{
    PORTB.DIR = PIN0_bm;                                            // set PB0⏎
        as output.

    while (1)
    {
        UART_sw_write('A');     //function to write the character.
        _delay_ms(1);        //send with a 1 ms delay
    }
    return 0;
}


void UART_sw_write(char c){
    uint8_t tempData = (uint8_t) c;    // pass in to the tempData variable
    PORTB_OUT &= ~PIN0_bm; // Send the start bit for PB0


    //Set the bit times for sending the data
    if(BAUD_RATE == 4800){
        _delay_us(208.3);
    }
    else if(BAUD_RATE == 9600){
        _delay_us(104.2);
    }
    else if(BAUD_RATE == 19200){
        _delay_us(52.1);
    }


    //Do some kind of a loop to shift right to PB0 to put into that pin output
    for(uint8_t i = 0; i < 8; i++){
        PORTB_OUT = tempData & 0x01;    //Mask to get the LSB to pass to PB0
        tempData >>= 1;            //shift right by 1
```

```c
        //Set the bit times for sending the data
        if(BAUD_RATE == 4800){
            _delay_us(208.3);
        }
        else if(BAUD_RATE == 9600){
            _delay_us(104.2);
        }
        else if(BAUD_RATE == 19200){
            _delay_us(52.1);
        }

    }

    PORTB_OUT = PIN0_bm;    //Send the stop bit

    //Set the bit times for sending the data
    if(BAUD_RATE == 4800){
        _delay_us(208.3);
    }
    else if(BAUD_RATE == 9600){
        _delay_us(104.2);
    }
    else if(BAUD_RATE == 19200){
        _delay_us(52.1);
    }
}
```