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/*
 * A_to_Z_async_Tx.c
 *
 * Created: 3/25/2021 7:26:26 PM
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 */

#define BAUD_RATE 9600UL
#define F_CPU 4000000UL

#include <avr/io.h>
#include <util/delay.h>

char c;

int main(void)
{
    PORTB.DIRSET = PIN0_bm;

    // enable output on PB0.

    USART3.BAUD = BAUD_RATE;

    // set baud rate.
    USART3.CTRLA = USART_CMODE_ASYNCHRONOUS_gc | USART_PMODE_DISABLED_gc |
        USART_SBMODE_1BIT_gc | USART_CHSIZE_8BIT_gc; // Asynchronous mode, no parity
        bits, single stop bit, 8 bits data.
    USART3.CTRLB = USART_TXEN_bm;

    // enable transmission.

    while (1)
    {
        c = 'A';
        for (; c <= 'Z'; ++c) {
            while ((USART3.STATUS & USART_DREIF_bm) != USART_DREIF_bm){}
            // wait till buffer is empty.

            USART3.TXDATAL = c;

            // transmit c
        }
    }
}

```