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/*
 * USART3_asynch_test.c
 *
 * Created: 3/25/2021 6:23:48 PM
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 */

#define BAUD_RATE 9600UL
#define F_CPU 4000000UL

#include <avr/io.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
                                                                bit, 1 stop bit, 8 bits data.
    USART3.CTRLB = USART_TXEN_bm;                               ↗
                                                                // enable transmission.

    c = 'U';

    while ((USART3.STATUS & USART_DREIF_bm) != USART_DREIF_bm){} ↗
                                                                // wait for buffer to be empty.
    USART3.TXDATAL = c;

    while (1)
    {
        // do nothing
    }
}
```