

Lab Assignment 1 (CS301 2021FALL)

1. LED lamp control system (80% in total)

Configure the KEY0 and KEY1 as external interrupts and use them to control the status of LED0 and LED1:

When press KEY0, toggle LED0 and output the status of LED0 by UART: "LED0 is On" or "LED0 is Off".(20%)

When press KEY1, toggle LED1 and output the status of LED1 by UART: "LED1 is On" or "LED1 is Off".(20%)

Use UART in non-blocking mode to control the on and off of LED0 and LED1

When receiving the message "Turn on LED0" from PC, turn on LED0.(10%)

When receiving the message "Turn on LED1" from PC, turn on LED1.(10%)

When receiving the message "Turn off LED0" from PC, turn off LED0.(10%)

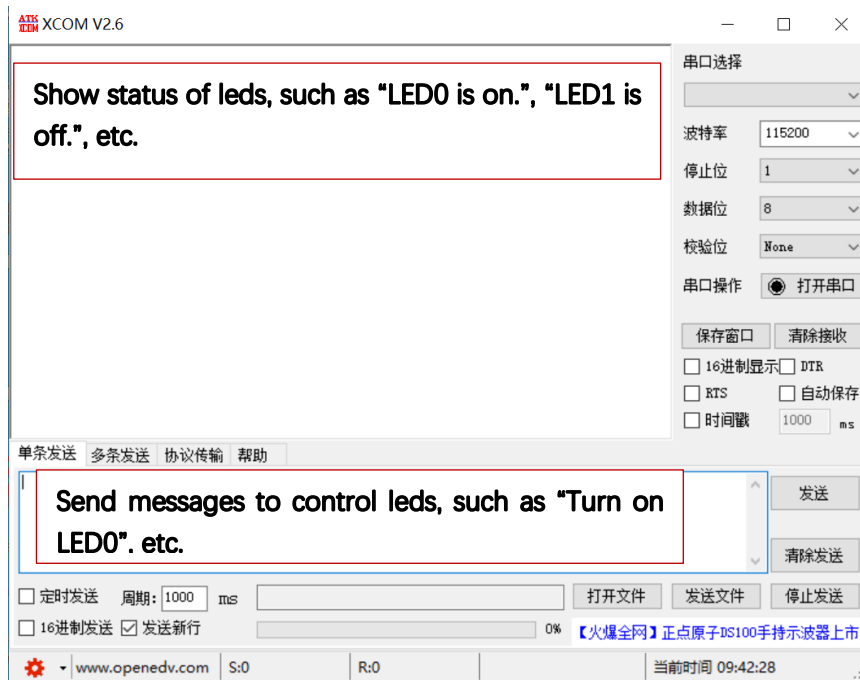
When receiving the message "Turn off LED1" from PC, turn off LED1.(10%)

2. Report (20% in total)

Complete the document "CS301-2021FALL-lab-ass1-report-SID-NAME".

3. Notes

Use XCOM serial assistant to display the led status and send the control messages.



4. Submission demands

- (1) Finish the assignment before DDL.
- (2) Package the whole project into a compressed package and submit on Sakai site.
- (3) Rename your report as "CS301-2021FALL-lab-ass1-report-SID-NAME.pdf" and submit on Sakai site.