

EECS 2032

Lab 10 Fall 2021

In this lab, you will learn how to use The systick counter in LPC802

PreLab

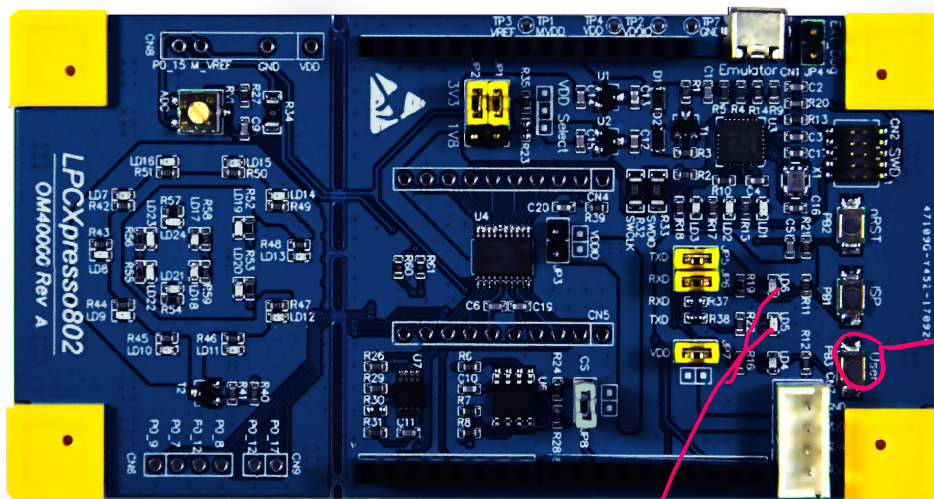
Before the start of the lab you have to

- The user manual, the data sheet and the schematic diagram are posted on the lab site for your convenience.
- Review the systick lecture
- Read the Systick slides on how to initialize and use the systick counter

LAB

Write, test, and debug a program that does the following

Use the systick counter to toggle the green LED every half a second if the user switch is not pressed, and every 1.5 seconds if the user switch is pressed



LEDs

User switch

Note that changing the value of the systick counter during the program execution is not recommended in many microcontrollers. In this lab, DO NOT change the systick counter value during execution. Think of another way of doing the lab.

Submission

The code and the report are submitted to LAB10 as usual

The code is lab10_SysTick.c

The report is lab10_report **in PDF format, no word file will be opened for marking**

About 1 min video showing you demo the problem, note there is a limit on the file size you can upload on eclass, be very brief. If you want, you can upload it to youtube and submit the link

Report Format

The report should contain the following sections

1. Name and lab number on the front page
2. Problem statement in your own words
3. The code as submitted in lab10_LED.c
4. Design approach, this is basically how did you solve the problem, it could be pseudo code, FSM, or flow chart.
5. You have to explain any constants you used in your code.
6. Any comments/difficulties/surprises if you had any