EECS 2032

Lab 12
Fall 2020

In this lab, you will learn how to Write, debug, and run a program that uses the interrupt coming from one of the GPIO pins in order to blink a LED.

PreLab

Before the start of the lab you have to

- Install MCUXpresso tool on your laptop
- Watch the two videos on the Eclass course site
- The user manual, the data sheet and the schematic diagram are posted on the lab site for your convenience.
- Read the interrupt part of the slides

LAB

Write, test and debug a program that does the following

The user button that is connected to pin 8 is the source of the interrupt.
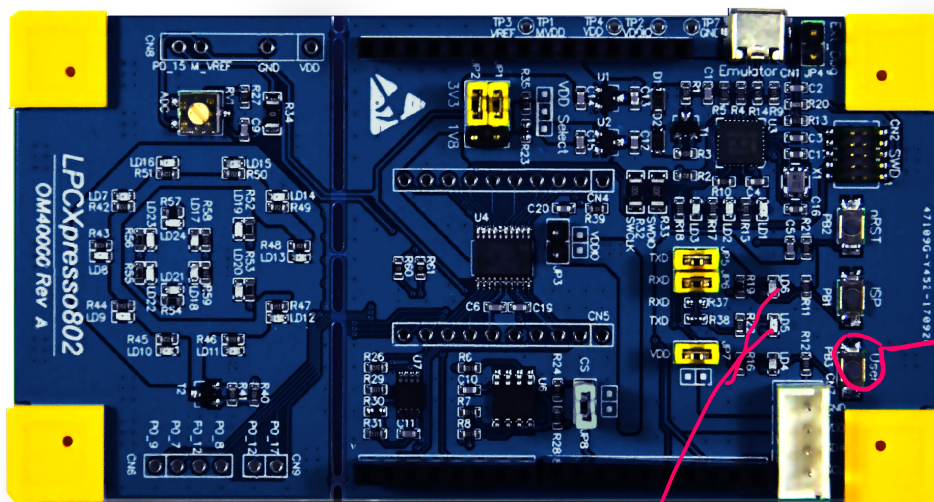
- The program starts with the GREEN LED ON and the RED LED OFF.
- Every time you push the buttons, the LEDs reverse states (the ON becomes off, and the off becomes ON).
- Never mind the blue LED, since it is physically connected to the button, and is turned ON when you push the button

Submission

The code and the report are submitted to LAB9 as usual

The code is lab12_SysTick.c

The report is lab12_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 lab12_LED.c
4. Design approach, this is basically how did you solve the problem, it could be pseudo code, FSM, or flow chart.
5. Any comments/difficulties/surprises if you had any