DigiPen Institute of Technology Singapore

Embedded Systems

CS 397

Trimester 3, AY 2021/22

Assignment 5

LwIP HTTP Server Socket RTOS LED

Q1. Create a STM32 project with STM32CubeIDE to implement a STM32F767ZI microcontroller-based application.

In this assignment, you are required to develop a software/project with similar functions described by Hands-On 5-3, LwIP HTTP Server Netconn RTOS LED. The important points are:

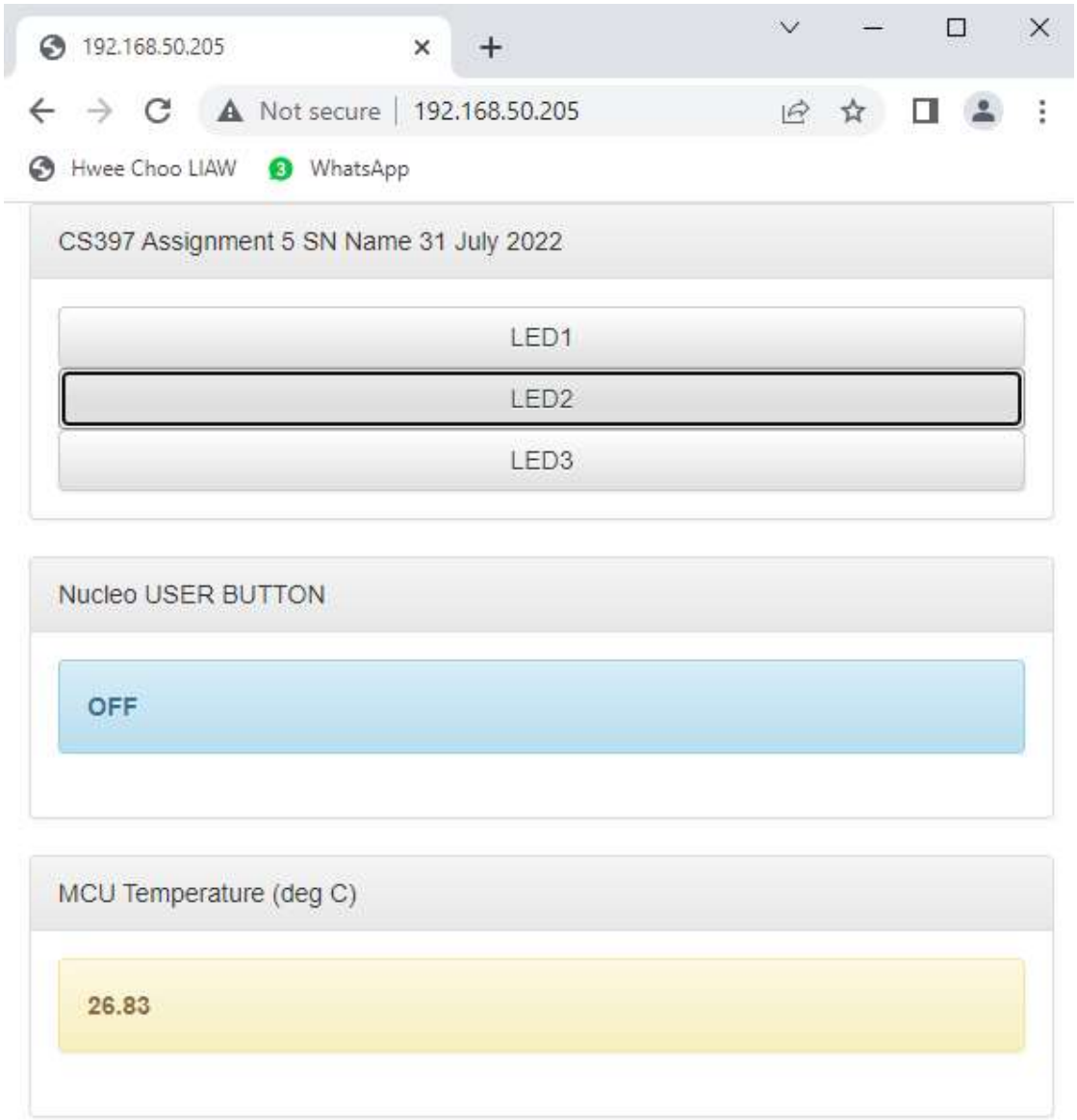
1. Start a new STM32 project using the Nucleo-F767ZI Board.
2. Disable USB_OTG_FS Mode and reset all USB related pins.
3. Based on Hands-On 5-3, build all the similar functions.
4. Use Socket API instead of Netconn API for the LwIP implementation.
5. On the web-page, indicate your SN and Name.

Note: 1. Enable the EXTI line [15:10] interrupts.
2. Generate peripheral initialization as a pair of '.c/.h' files per peripheral.
3. Use the Ethernet MAC address mentioned in the hands-on lecture notes.

Notes on Submission:

1. A new STM32 project must be created with project name:
   A5_SN_name_31Jul2022
   where SN is your serial number (A01 – A19).
2. Submit the implemented project in a zip file with filename:
   A5_SN_name_31Jul2022.zip
3. The above zip file should include all STM32 project folders and files (except with debug folder deleted), and generated report files (.pdf &.txt).
4. Submission deadline is on **31 July 2022, 2359 hrs.**

The web-page of the implemented LwIP HTTP Server using Socket API



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