**EE390 Lab 1**

**Subject:**

Review of USART I/O on terminal input and output.

**Description:**

The UART1 module is connected to the USB port for debugging and also used as a virtual COM port. The pins PB6 and PB7 are used as the Tx and Rx pins. Use the default system clock as the clock source for UART1 (4-MHz MSI) to generate the baud rate.

On the PC side, run the **Tera Term** program and set the baud rate to 115200. Connect the STM32L475 demo kit to the PC using a USB cable (normal-A to micro-B). Enter, compile your program and then download it onto the STM32L475 demo kit.

Write a program to initialize the UART1 with baud rate set to 115200 and perform the following operations:

**Step 1**

Initialize system clock and the UART1.

**Step 2**

Call the putsUART1() function to output a message to remind the user to enter the current time of day in the format of **hh:mm:ss** (the colon characters are included).

**Step 3**

Call the getsUART1() function to read in the time (entered from the PC keyboard) and save the time in a buffer.

**Step 4**

Output the message **Current time is hh:mm:ss**, where, hh, mm, and ss are the time components that your program read in from the keyboard.

**Step 5**

Stay in an infinite loop and perform the following operations:

* Call a delay function to wait for one second.
* Update the current time of day.
* Re-display the current time of day.

When updating the current time of day, backspace the screen by 8 places, and redisplay the

new time.

**Report:**

Include the following:

1. A title page that include the lab title, your name, date of lab completion,
2. Description of the program algorithm
3. Program list
4. Screen capture of the program output on the computer monitor screen
5. Save your lab report using the name “**EE390\_Lab1\_LastName\_FirstName\_22S.docx**”

**Due: 01/27/2023**