EED308 **Embedded System Hardware** **Spring 2021**

Experiment 3 Familiarization with 8051 Microcontroller

The objective of this experiment is to familiarize yourself with the 8051 microcontroller, its simulator software EdSim51DI, and test simple programs on this simulator.

Steps to be followed in this experiment:

1. Download and install the EdSim51DI simulator software on your laptop, you can download the software from the Blackboard.
2. **Binary pattern on the Port 1 LEDs:** Write a C program to display the binary patterns from 0 to 255 (and back to 0) on the LEDs interfaced with port 1.
3. **Multiplexing the 7-segment displays:** Write a C program to multiplexes the number 1234 on the four 7-segment displays.
4. **LCD module:** Write a C program to interface the LCD module and display some messages on that.

Note:

1. The details about this software can be found on https://www.edsim51.com/.
2. The EdSim51 simulator can **only parse assembly programs**. It cannot compile C programs; therefore, you should compile the program in **Keil uVision5** and use the Intel HEX output file. This type of file can be loaded into EdSim51DI simulator.
3. You can download the **Keil uVision5** software from Blackboard.