CECS-412-01

Intro Embedded Systems Demo 1 Check List

Date_____ Name:_____

On demo day, have the tasks listed for each of the following parts ready to demonstrate. Have your demonstration code ready to open and execute. Your demonstration code should be your own code. Practice your demonstration and knowledge of these tasks before the actual demo. I suggest that you create your demonstration code as one complete project in Atmel Studio, demonstrating each task in your own original order and manner. Comment every line of your demonstration code and list your code in your report under the software heading. Print out a hardcopy of this two-page document and bring to the demo with you.

Part 1) Using Atmel Studio and Simulator and Debug Tools

- Can start, name, and build a new assembler project. (1 pt.)

- Can step through the code in Debug mode. (1 pt.)

- Part 2) Using AVR Assembly Language and mEDGB. Reference the AVR instruction set and Assembler manuals.

- Can add and subtract two numbers showing result in a register. (1 pt.)

- Can multiply two numbers showing result in a register. (1 pt.)

- Can negate a register and set bits in a register. (1 pt.)

- Can clear a register. (1 pt.)

- Can transfer a number from a register to an SRAM location. (1 pt.)

- Can transfer a number from an SRAM location to a register. (1 pt.)

- Copy one register to another. (1 pt.)

- Can conditionally branch to another part of the code. (1 pt.)

- Can unconditionally branch or jump to another part of the code. (1 pt.)

- Set and Clear the carry bit in the status register. (1 pt.)

- Swap the two nibbles of an 8-bit register. (1 pt.)

- Can create a DO-UNTIL loop. (1 pt.)

- Can create a FOR-NEXT loop. (1 pt.)