

ECE/CSE 412
Intro Embedded Systems
Demo 2 Check List

Date: _____ Name: _____

On demo day, have the tasks listed for each of the following parts ready to demonstrate. Have your demonstration code open and ready to execute. Your demonstration code should be your own code where applicable. Practice your demonstration and knowledge of these tasks before the actual demo. I suggest that you create your demonstration code as a single project, 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 software heading.

Part 1) Positive 8-bit Integer Division

- Can re-write the given division program using nested subroutines. (4 pts)
- Can evaluate the content of the stack (correctly) during program execution. (3 pts)

Part 2) Celsius to Fahrenheit Look Up Table

- Can re-write the Table program to sort a 20-byte table of random values stored in FLASH memory and send the sorted values to data IRAM as the output. (4 pts)

Part 3) Relationship Between C and Assembly

- Can generate, in Atmel Studio, and describe the equivalent Assembly code for the following C code. Add comments to the Assembly listing to help describe the purpose of each line with respect to the entire program. (4 pts)

```
unsigned char Global_A;  
unsigned char Global_B = 1;  
unsigned char Global_C = 2;  
void main(void)  
{  
    Global_A = (Global_C^2) – Global_B;  
}
```