

CMPEN 472, The Pennsylvania State University

Exercise 12: Programming Flash Memory

Due: Dec. ?, 2023 11:30pm

Objective

Read Chapter 21 of the HCS12 Microcontroller data sheet MC9S12C Family. And program 40 bytes of data to the flash memory starting at \$4800.

Instruction

1. Finish reading Chapter 18 of the HCS12 Microcontroller data sheet.
2. Study the sample Flash Memory program to store a short program in flash memory:
[sample Flash Memory program for HCS12C128 board](#)
3. Write your Flash Memory program to write 40 bytes to flash memory starting at \$4800.
4. First 4 bytes of the 40 byte data must be your student ID number (last 4 digits) in ASCII code. For example, my ID will be \$33, \$34, \$35, \$36 (that is '3456'). The remaining data must be an exact copy of the data block given in the sample Flash Memory program.
5. The sample Flash Memory program shows flash memory writing subroutine. You must write flash memory sector erase subroutine.
6. Flash memory must be erased before the data can be written. Because you will be writing only 40 bytes, erase only one sector (1024 bytes) starting at \$4800.
7. Design the program to start at \$3100 and data to start at \$3000 as usual.
8. Be sure to put much comments so that you and others can clearly and quickly understand your program later. Comments are very important in assembly language programs.
9. Do NOT Turn-in your project source code file for this homework. This homework will not be counted as a homework, it an exercise.

Congratulations on your CMPEN 472 Course completion!
