CSE 232

Systems Programming

2017 Spring

Assignment 1
Last Submission Time: 19.2.2017, 23:45

Purpose of This Assignment

This Assignment is designed to introduce you with the Motorala 6800 assembly language and its programming environment. You will do basic arithmetic operations using the SDK6800 as your integrated development environment (IDE).

Write a Motorola 6800 assembly language program which performs the following operations:

- You will compute the hexadecimal equivalent of a binary number and display the result in memory address 200H. The binary number representation is given in Table 1. Since a binary digit can only correspond to one or zero, you will assume that the most significant hex digit of the values in memory addresses is always zero, i.e. a memory address cannot contain 11 or 10 in our representation. If any of the binary digits is represented with a 1 in the most significant hex digit, this leads to an invalid number. An invalid case is as exemplified in Table 1 where most significant hex digit is 1 for binary digit 1. The result which should be obtained as the hex equivalent of the valid number (1011_2) in Table 1 is B.
- You should compute the result using basic arithmetic operations.
- You should place the number starting from address 100H, where there will be only 4 binary digits to represent.

Binary digit no	1	2	3	4
Memory address	100H	101H	102H	103H
Value (valid)	01	00	01	01
Value (invalid)	**1**0	00	00	00

Table 1. A binary number representation spanning several contiguous memory addresses

SUBMISSION

Enroll the CSE 232 COADSYS page if you haven't done yet. Submit your assignment with the name "**nameLastNameID_assignment1.asm**" using COADSYS.