

EEE204 - Introduction to Embedded Systems

Experiment 3

Objectives:

- Become familiar with the MSP430 instruction set data transfer instructions, arithmetic instructions, logic instructions, and the program control instructions.

Materials

- Code Composer Studio IDE
- MSP430F5529 USB LaunchPad development kit

Experimental Work

1) Do the following operations in assembly language and observe the content of R5 register.

- Copy 5500H to R5 register.
- Increase the content of R5 by 1.
- Increase the content of R5 by 1.
- Increase the content of R5 by 1.
- Increase LSB of R5 by 1.

2) Do the following operations in assembly language and observe the content of memory locations.

- Copy 2222H, 2224H and 2226H to the memory locations 3000H, 3002H, 3004H respectively.
- Increase the content of memory location 3000H by 1.
- Increase the content of memory location 3000H by 1.
- Increase the content of memory location 3002H by 1.
- Increase the content of memory location 3002H by 1.
- Increase the content of memory location 3004H by 2.

3) Do the following operations in assembly language and observe the content of R5 register.

- Copy 5508H to R5 register.
- Decrease the content of R5 by 1.
- Decrease the content of R5 by 1.
- Decrease the content of R5 by 1.
- Decrease LSB of R5 by 1.

4) Do the following operations in assembly language and observe the content of R5 register.

- Copy 2222H,2224H and 2226H to the memory locations 3000H,3002H,3004H respectively.
- Decrease the content of memory location 3000H by 1.
- Decrease the content of memory location 3000H by 1.
- Decrease the content of memory location 3002H by 1.
- Decrease the content of memory location 3002H by 1.
- Decrease the content of memory location 3004H by 2.