Computer Organization And Assembly Language

Lab Manual 04

Objectives:
1. Writing Assembly Programs
2. Revision of previous lab
3. Taking character input and Giving character and string output.

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LAB TASKS

You are required to prepare the ASM file of each task and run the executable file in the debugger. For each Trace call, you must note the changes in registers.

Task 1:
    Write an assembly code which can copy the content of 8-byte array1 to another array2.

Task 2:
    Write an assembly code which can copy the content of 8-byte array1 to another array2 **in reverse order**.

Task 3:
    Write an assembly code which can **SWAP** 8-byte array1 content with another array2.

Task 4:
    Write an assembly code which can **SWAP in Reverse order** 8-byte array1 content with another array2.

Task 5:
    Write an assembly code which Take a single digit number input from the user, and add it to each Byte of an 8-byte array declared in data segment.

Task 6:
    Take a character input from user and display it.

Task 7:
    Write an assembly code which Take a character input and tell whether it is capital or small.
    → Display "Capital" for capital letters and "Small" for small letter.

Sample Runs
I)
Enter a character: g
Small
ii)
Enter a character: H
Capital

Task 8:
    Write an assembly code which Take two single digit numbers input and add them. Display correct output if the sum is less than 10, otherwise print "Overflow".
Sample Runs
I)
Enter two digits: 56
Error! Sum is greater than 9.
ii)
Enter two digits: 34
Sum is 7

Note: You are required to the the above tasks for valid inputs and not required to handle invalid inputs.