Tests & Quizzes

Lab 6

Return to Assessment List

Part 1 of 2 / 14.0 Points

Question 1 of 2 14.0 Points

Assembly_Lab_6_1d.s 0 KB

Manually execute the following program

```
            AREA StackTest1, CODE, READONLY
            ENTRY
            ADR   sp,  STACK
            LDR   r1,  =0x11111111
            LDR   r2,  =0x22222222
            LDR   r3,  =0x33333333
            LDR   r4,  =0x44444444
            STMED sp!, {r2,r4}
            MOV   r1,  #0xAA
            MOV   r2,  #0xBB
            MOV   r3,  #0xCC
            MOV   r4,  #0xDD
            LDMFD sp!, {r3, r1,r2}
LOOP        B     LOOP

            DCD   0, 0, 0, 0
STACK       DCD   0xFFFFFFFF
            DCD   0, 0, 0, 0
            END
```

The value of the sp in hexadecimal **before** executing the STM**ED** ARM instruction is 0x ✔ 40
The value of the sp in hexadecimal **after** executing the STM**ED** ARM instruction is 0x ✔ 38
The value of the sp in hexadecimal **after** executing the LDM**FD** ARM instruction is 0x ✔ 44
The values in hexadecimal of r1 at the end of the program is 0x ✔ 0
The values in hexadecimal of r2 at the end of the program is 0x ✖ 0
The values in hexadecimal of r3 at the end of the program is 0x ✖ FFFFFFFF
The values in hexadecimal of r4 at the end of the program is 0x ✖ 0

Answer Key: 40|00000040, 38|00000038, 44|00000044, 0|00000000, 22222222, 44444444, DD|000000DD

Part 2 of 2 / 6.0 Points

Question 2 of 2 6.0 Points

Assembly_Lab_6_2c.s 0 KB

What are the values of r0, r1, r2, and r3 *(in hexadecimal)* after executing the following program?

```
        AREA prog, CODE, READWRITE
        ENTRY
        ADR   r3,AAA
        MOV   r0,PC
        STMEA r3,{PC}
        STR   PC,[r3]
        LDMFA r3!,{r1,r2}
Loop    B     Loop
        DCD   1,2
AAA     DCD   3
        DCD   4,5
        END
```

The values in hexadecimal of r0 at the end of the program is 0x ✔ C
The values in hexadecimal of r1 at the end of the program is 0x ✔ 2
The values in hexadecimal of r2 at the end of the program is 0x ✖ 3
The values in hexadecimal of r3 at the end of the program is 0x ✔ 18

Answer Key: C|0000000C, 2|00000002, 18|00000018, 18|00000018