Tests & Quizzes

Assignment 4

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Part 1 of 7 / 1.0 Points

Question 1 of 7 [   ] 1.0 Points

The address 0xFEDC08 is

- ✔ ⭕ A. Half-word aligned but not word aligned

- ✔ ⭕ B. Word aligned but not half-word aligned

- ✔ ⭕ C. Neither half-word aligned, nor word aligned

- ✔ ⭕ D. Half-word aligned, and word aligned

Answer Key: D

Part 2 of 7 / 1.0 Points

Question 2 of 7 [   ] 1.0 Points

Write only ONE ARM instruction to copy into r0 the value 0xFFFFFFEE
✔ LDR r0, =0xFFFFFFEE

Answer Key: MOV r0,#-0x12| LDR r0,=-0x12| LDR r0,=0xFFFFFFEE| MVN r0,#0x11

Part 3 of 7 / 3.0 Points

Question 3 of 7 [   ] 3.0 Points

Write only THREE ARM instructions to copy 0xFF into r1, copy 0xFEDCBA98 into r2, add the values in r1 and r2, and finally store the result in r0 while updating the condition flags after the addition operation. ✔
LDR r1,=0xFF ✔ LDR r2, =0xFEDCBA98 ✖ ADD r0, r1, r2

Answer Key: LDR r1,=0xFF|MOV r1,#0xFF|MVN r1,#-0x100, LDR r2,=0xFEDCBA98, ADDS r0,r2,r1|ADDS r0,r1,r2

Part 4 of 7 / 2.0 Points

Question 4 of 7 [   ] 2.0 Points

Write only TWO ARM instructions to copy 0xFF into r1, "and" 0xEE with the value in r1, and finally store the result in r0 without updating the condition flags. ✔ LDR r1, =0xFF ✘ ANDS r0,r1,#0xEE

Answer Key: LDR r1,=0xFF|MOV r1,#0xFF|MVN r1,#-0x100, AND r0,r1,#0xEE

Part 5 of 7 / 5.0 Points

Question 5 of 7 [   ] 5.0 Points

After executing the following ARM instructions
    LDR **r0**,=0xFEDCBA98
    MVN **r1**,r0
What will be the values of the NZC flags, as well as the values of r0 and r1?
N = ✔ 0 , Z = ✔ 0 , C = ✔ 0 , r0 = 0x ✔ FEDCBA98 , r1 = 0x ✔ 01234567

Answer Key: 0, 0, 0, FEDCBA98, 1234567|01234567

Part 6 of 7 / 2.0 Points

Question 6 of 7 [   ] 2.0 Points

Click to see additional instructions
In ARM assembly language, what is the range of the LSR steps, i.e., the allowable LSR constant values?
It is from ✔ 1 to ✔ 32

Answer Key: 1, 32

Part 7 of 7 / 6.0 Points

Question 7 of 7 [   ] 6.0 Points

After executing the following ARM instructions

    LDR r0,=0xC9
    ORRS r1,r0,r0, ROR#28

What will be the values of the NZC flags, as well as the values of r0 and r1?

N = ✔ 0 , Z = ✔ 0 , C = ✔ 0 , V = ✔ 0 , r0 = 0x ✔ 000000C9 , r1 = 0x ✖ 00000080

Answer Key: 0, 0, 0, 0, C9|000000C9, CD9|00000CD9