CSS422 Homework 2 Grade Rubric

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| --- | --- | --- | --- |
| Q1 | 2pts | Points | Your Grade |
|  | LDR R2, [R1]  MAR 🡨 PC ; 0.4pts  PC 🡨 PC + 2 ; 0.4pts  IR 🡨 Mem[MAR] ; 0.4pts  MAR 🡨 R1 ; 0.4ps  R2 🡨 Mem[MAR] ; \_0.4pts | 2 | 1.2 |
| Q2 | 2pts |  |  |
| N: 1 | 0.5 | 0.5 |
| Z: 0 | 0.5 | 0.5 |
| C: 0 | 0.5 | 0.5 |
| V: 1 | 0.5 | 0 |
| Q3 | 4pts |  |  |
|  | 3-1: Big endian  49 ; 0.5pts  96 ; 0.5pts  02 ; 0.5pts  D2 ; 0.5pts | 1 | 1 |
| 3-1: Little endian  D2 ; 0.5pts  02 ; 0.5pts  96 ; 0.5pts  49 ; 0.5pts | 1 | 1 |
| 3-2:  a takes 1 byte; b takes 8 bytes; c takes 8 bytes; d takes 2 bytes; e takes 4 bytes; f takes 4 bytes ….. 0.8pts  A correct order of a, b, c, d, e, and f ….. 0.2pts  7 bytes unused between a and b ..... 0.5pts  2 bytes unused between d and e …. 0.5pts | 2 | 2 |
| Q4 | 4pts (It was Q3 in the original HW2) |  |  |
|  | ADDS R7, R5, #7  This corresponds to ADDS Rd, Rs, #imm3 where Rd and Rs should be R0-R7  2\_000 11 10 imm3 Rs Rd  Rs = R5 = 101 ….. 0.5pts  Rd = R7 = 111 ….. 0.5pts  imm3 = 111 ….. 0.5pts  2\_000 11 10 111 101 111 = 2\_0001 1101 1110 1111  =0x1DEF ….. 0.5pts | 2 | 1.5 |
| MOVW R10, #0x1234  This corresponds to MOVW Rd, #imm16 (where imm16 = imm4:i:imm3:imm8)  2\_11110 i 10010 0 imm4 0 imm3 Rd imm8  imm4:i:imm3:imm8 = 0x1234 = 2\_0001 0010 0011 0100 = 2\_0001 0 010 00110100 ….. 1pt  Rd = R10 = 1010 ….. 0.5pts  2\_11110 0 10010 0 0001 0 010 1010 00110100 = 2\_1111 0010 0100 0001 0010 1010 0011 0100  =0xF2412A34 ….. 0.5pts | 2 | 2 |
| Q5 | 8pts (It was Q4 in the original HW2) |  |  |
|  | Source code  **begin**  **LDR R0, =src ; 1pt**  **LDR R1, =dst ; 1pt**  **MOV R2, #'A'**  **SUB R2, R2, #'a'**  **loop**  **LDRB R3, [R0], #1 ; 1pt**  **CMP R3, #0 ; 1pt**  **BEQ stop ; 1pt**  **ADD R3, R3, R2 ; 1pt**  **STRB R3, [R1], #1 ; 1pt**  **B loop**  **stop END** | 7 | 7 |
| Results  Correct: 1pt  Wrong: 0.5pts  Nothing: 0pts | 1 | 1 |
| Total: | | 20 | 18.2 |

Comments:1) missing steps, 2) incorrect value, 4) incorrect answer