

Gregory N. Schmit

1. Endianness:

a. r1 values:

- i. Little: r1 = 0deb2c1a
- ii. Big: r1 = 1a2ceb0d

b. r0, r1 values:

- i. Ldr r1, [r0, #4]:
 - 1. R0 = 20008000
 - 2. R1 = 0deb2c1a
- ii. Ldr r1, [r0], #4:
 - 1. R0 = 20008004
 - 2. R1 = 79cda3fd
- iii. Ldr r1, [r0, #4]:
 - 1. R0 = 20008004
 - 2. R1 = 0deb2c1a

2. Memory map:

a.

Memory Addr	Content
0x20000013	
0x20000012	
0x20000011	
0x20000010	
0x2000000F	12
0x2000000E	34
0x2000000D	56
0x2000000C	78
0x2000000B	
0x2000000A	
0x20000009	
0x20000008	
0x20000007	12
0x20000006	34
0x20000005	56
0x20000004	78
0x20000003	12
0x20000002	34
0x20000001	56
0x20000000	78

3. Load instructions with extensions:

- a. FFFFFFFC3
- b. FFFFB2C3
- c. 000000C3
- d. 0000B2C3

4. STMxx instructions:

- a. 20008014
- b. 20008014
- c. 20007FEC
- d. 20007FEC

5. LDMxx instructions (r0 = 20008000)

a. Ldmdb r0, {r3, r7, r9, r5}

- i. r0 = 20008000
- ii. r3 = -4
- iii. r5 = -8
- iv. r7 = -12
- v. r9 = -16

b. Ldmia r0, {r3, r7, r9, r5}

- i. r0 = 20008000
- ii. r3 = 0
- iii. r5 = 4
- iv. r7 = 8
- v. r9 = 12

c. Ldmib r0, {r3, r7, r9, r5}

- i. r0 = 20008000
- ii. r3 = 4
- iii. r5 = 8
- iv. r7 = 12
- v. r9 = 16

d. Lmdma r0, {r3, r7, r9, r5}

- i. r0 = 20008000
- ii. r3 = 0
- iii. r5 = -4
- iv. r7 = -8
- v. r9 = -12