

Registers Disassembly

Register	Value
R0	0x00000000
R1	0x00001048
R2	0x00000000
R3	0x00000000
R4	0x00000000
R5	0x00002048
R6	0x00000000
R7	0x00001047
R8	0x00000000
R9	0x00000000
R10	0x00000000
R11	0x00000000
R12	0x00000000
R13 (SP)	0x00000000
R14 (LR)	0x00000000
R15 (PC)	0x0000000C
CPSR	0x200000D3
SPSR	0x00000000
User/System	
Fast Interrupt	
Interrupt	
Supervisor	
Abort	
Undefined	
Internal	
PC \$	0x0000000C
Mode	Supervisor
States	169
Sec	0.00000000

Disassembly

```

10: SUBS R7, R1, #1
0x00000014 E2517001 SUBS R7,R1,#0x00000001
11: BNE LOOP
0x00000018 1AFFFFFB BNE 0x0000000C
0x0000001C 00001000 ANDEQ R1,R0,R0
0x00000020 00002000 ANDEQ R2,R0,R0
0x00000024 00000000 ANDEQ R0,R0,R0

```

Irasm

```

1 AREA PROGRAM, CODE, READONLY
2 ENTRY
3 MAIN
4 MOV R7, #0x8
5 LDR R1, VALUE1
6 LDR R5, VALUE2
7 LOOP
8 LDR R2, [R1], #4
9 STR R2, [R5], #4
10 SUBS R7, R1, #1
11 BNE LOOP
12 AREA PROGRAM, CODE, READONLY
13 VALUE1 DCD &00001000
14 VALUE2 DCD &00002000
15 END

```

Memory 1

Address: 0x00001000

0x00001000:	01 00 00 00
0x00001004:	12 12 13 14
0x00001008:	15 71 71 16
0x0000100C:	12 11 17 43
0x00001010:	45 67 43 24
0x00001014:	12 03 08 21
0x00001018:	11 34 14 17
0x0000101C:	11 44 30 22
0x00001020:	00 00 00 00
0x00001024:	00 00 00 00

Call Stack + Locals Memory 1

Registers Disassembly

Register	Value
R0	0x00000000
R1	0x00010000
R2	0x00010002
R3	0x00040000
R4	0x00050002
R5	0x00000004
R6	0x00050002
R7	0x00000000
R8	0x00000000
R9	0x00000000
R10	0x00000000
R11	0x00000000
R12	0x00000000
R13 (SP)	0x00000000
R14 (LR)	0x00000000
R15 (PC)	0x00000020
CPSR	0x000000D3
SPSR	0x00000000
User/System	
Fast Interrupt	
Interrupt	
Supervisor	
Abort	
Undefined	
Internal	
PC \$	0x00000020
Mode	Supervisor
States	14
Sec	0.00000000

Disassembly

```

7: ADD R4,R3,R2
0x0000000C E0834002 ADD R4,R3,R2
8: MOV R5, #4
0x00000010 E3A05004 MOV R5,#0x00000004
9: MLA R6, R1, R5, R2
0x00000014 E0262591 MLA R6,R1,R5,R2
0x00000018 00010000 ANDEQ R0,R1,R0

```

Irasm

```

1 AREA PROGRAM, CODE, READONLY
2 ENTRY
3 MAIN
4 LDR R1, VALUE
5 LDR R2, VALUE1
6 MOV R3, R1, LSL#2
7 ADD R4,R3,R2
8 MOV R5, #4
9 MLA R6, R1, R5, R2
10 AREA PROGRAM, CODE, READONLY
11 VALUE DCD &00001000
12 VALUE1 DCD &000010002
13 END

```

Registers

Register	Value
R0	0x00000000
R1	0x00001000
R2	0x00000005
R3	0x00000000
R4	0x00000000
R5	0x00020000
R6	0x00000000
R7	0x00000000
R8	0x00000000
R9	0x00000000
R10	0x00000000
R11	0x00000000
R12	0x00000000
R13 (SP)	0x00000000
R14 (LR)	0x00000000
R15 (PC)	0x00000010
CPSR	0x400000D3
SPSR	0x00000000

Disassembly

```

0x00000008 E3A02005 MOV R2,#0x00000005
7: MOVEQ R5, R1, LSL R2
0x0000000C 01A05211 MOVEQ R5,R1,LSL R2
0x00000010 00000000 ANDEQ R0,R0,R0
0x00000014 00000000 ANDEQ R0,R0,R0
0x00000018 00000000 ANDEQ R0,R0,R0
0x0000001C 00000000 ANDEQ R0,R0,R0

```

SDS.ASM

```

1 AREA PROGRAM, CODE, READONLY
2 ENTRY
3 MAIN
4 MOV R1, #0x00001000
5 MOVS R5, #0
6 MOV R2, #5
7 MOVEQ R5, R1, LSL R2
8
9
10 END
11

```

Registers

Register	Value
R0	0x00001000
R1	0x11121340
R2	0x10784656
R3	0x65695456
R4	0x13161356
R5	0x15239696
R6	0x78962312
R7	0x12121424
R8	0x20141680
R9	0x00002000
R10	0x00000000
R11	0x00000000
R12	0x00000000
R13 (SP)	0x00000000
R14 (LR)	0x00000000
R15 (PC)	0x00000018
CPSR	0x000000D3
SPSR	0x00000000

Disassembly

```

0x00000008 E59F9004 LDR R9,[PC,#0x0004]
7: STMIA R9, {R1-R8}
0x0000000C E88901FE STMIA R9,{R1-R8}
0x00000010 00001000 ANDEQ R1,R0,R0
0x00000014 00002000 ANDEQ R2,R0,R0
0x00000018 00000000 ANDEQ R0,R0,R0
0x0000001C 00000000 ANDEQ R0,R0,R0

```

lr.asm

```

1 AREA PROGRAM, CODE, READONLY
2 ENTRY
3 MAIN
4 LDR R0, VALUE
5 LDMIA R0, {R1-R8}
6 LDR R9, VALUE1
7 STMIA R9, {R1-R8}
8 AREA PROGRAM, CODE, READONLY
9 VALUE DCD &00001000
10 VALUE1 DCD &00002000
11 END

```

Memory 1

Address: 0x00001000

0x00001000:	11 12 13 40
0x00001004:	10 78 46 56
0x00001008:	65 69 54 56
0x0000100C:	13 16 13 56
0x00001010:	15 23 96 96
0x00001014:	78 96 23 12
0x00001018:	12 12 14 24
0x0000101C:	20 14 16 80
0x00001020:	00 00 00 00
0x00001024:	00 00 00 00

Call Stack + Locals Memory 1

64 BIT ADDITION

LDR R1,VAL1

LDR R2, [R1], #4

LDR R3, [R1], #4

LDR R5, [R1], #4

LDR R6, [R1], #4

ADDS R4, R6, R3

ADC R7, R5, R6

STR R7, [R1], #4

STR R4, [R1]

VAL1 DCD &00001000