

(1)

000000 e205	LDI R16, 0x25
000001 e314	LDI R17, 0x34
000002 e321	LDI R18, 0x31
000003 0f01	ADD R16, R17
000004 0f02	ADD R16, R18
000005 e714	LDI R17, 0x74
000006 0f01	ADD R16, R17
000007 e040	LDI R20, 0
000008 0f04	ADD R16, R20
000009 ef5f	LDI R21, 0xFF
00000a b95a	OUT DDRD, R21
00000b 9543	L2: INC R20
00000c b94b	OUT PORTD, R20
00000d 9340 0300	STS SUM, R20

(2)

ADD 0000 11XX XXXX XXXX
OUT 1011 1XXX XXXX XXXX
INC 1001 010X XXXX 0011
STS 1001 001X XXXX 0000
XXXX XXXX XXXX XXXX
IN 1011 0XXX XXXX XXXX
SUBI 0101 XXXX XXXX XXXX
SBI 0001 10XX XXXX XXXX

(3)

	Instruction	PC	SREG	R16	R17	R18	R20	R21	DDRD	PDRD
1	LDI R16, 0x25	0x00000001		0x25	0	0	0	0	0	0
2	LDI R17, 0x34	0x00000002		0x25	0x34	0	0	0	0	0
3	LDI R18, 0x31	0x00000003		0x25	0x34	0x31	0	0	0	0
4	ADD R16, R17	0x00000004		0x59	0x34	0x31	0	0	0	0
5	ADD R16, R20	0x00000005	V,N	0x8A	0x34	0x31	0	0	0	0

	R18									
6	LDI R17, 0x74	0x00000006	V,N	0x8A	0x74	0x31	0	0	0	0
7	ADD R16, R17	0x00000007	S,N	0xFE	0x74	0x31	0	0	0	0
8	LDI R20, 0	0x00000008	S,N	0xFE	0x74	0x31	0	0	0	0
9	ADD R16, R20	0x00000009	S,N	0xFE	0x74	0x31	0	0	0	0
10	LDI R21, 0xFF	0x0000000A	S,N	0xFE	0x74	0x31	0	0xFF	0	0
11	OUT DDRD, R21	0x0000000B	S,N	0xFE	0x74	0x31	0	0xFF	0xFF	0
12	L2: INC R20	0x0000000C		0xFE	0x74	0x31	0x01	0xFF	0xFF	0
13	OUT PORTD, R20	0x0000000D		0xFE	0x74	0x31	0x01	0xFF	0xFF	0x01
14	STS SUM, R20	0x0000000F		0xFE	0x74	0x31	0x01	0xFF	0xFF	0x01
15	RJMP L2	0x0000000B		0xFE	0x74	0x31	0x01	0xFF	0xFF	0x01

(4)

1.經由 STS 將 R20 的數值存入 SUM 的 adress，而 SUM 的 adress 為 0x300，當進行到 RJMP L2 時，會將 R20 的數值加一並再存入 0x300

2.

.EQU SUM = 0x300

改成

.EQU SUM = 0x150