

Comparison of CISC and RISC code

Visual Studio

```
int i;
int result = 1;
0125136E mov     dword ptr [result],1
for(i = 0; i < 20; i++)
01251375 mov     dword ptr [i],0
0125137C jmp     wmain+37h (1251387h)
0125137E mov     eax,dword ptr [i]
01251381 add     eax,1
01251384 mov     dword ptr [i],eax
01251387 cmp     dword ptr [i],14h
0125138B jge     wmain+49h (1251399h)
result *= i;
0125138D mov     eax,dword ptr [result]
01251390 imul    eax,dword ptr [i]
01251394 mov     dword ptr [result],eax
01251397 jmp     wmain+2Eh (125137Eh)
01251399
```

36 memory locations

MPLAB

```
3: int i;
4: int result = 1;
9D00001C 24020001 addiu    v0,zero,1
9D000020 AFC20004 sw      v0,4(s8)
5: for(i = 0; i < 20; i++)
9D000024 AFC00000 sw      zero,0(s8)
9D000028 8FC20000 lw      v0,0(s8)
9D00002C 28420014 slti    v0,v0,20
9D000030 1040000A beq      v0,zero,0x9d00005c
9D000034 00000000 nop
9D000048 8FC20000 lw      v0,0(s8)
9D00004C 24420001 addiu    v0,v0,1
9D000050 AFC20000 sw      v0,0(s8)
9D000054 1000FFF4 beq      zero,zero,0x9d000028
9D000058 00000000 nop
6: result *= i;
9D000038 8FC30004 lw      v1,4(s8)
9D00003C 8FC20000 lw      v0,0(s8)
9D000040 70621002 mul     v0,v1,v0
9D000044 AFC20004 sw      v0,4(s8)
9D00005C
```

64 memory locations