컴퓨터구조 HW2.

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1. For the following C statement, what is the corresponding MIPS assembly code?

<F = g + (h-5);>

<정답>

```
addi  i, h, -5
add   f, g, i
```

2. Write a single C statement that corresponds to two MIPS assembly instructions.

< Add f, g, h
  Add, f, 1 f >

<정답>

f = 1 + (g+h);

3. For the following C statement, write the corresponding MIPS assembly code.

<B[8] = A[i-j]>

<정답>

```
Sub  $t0, $s3, $s4
sll  $t0, $t0, 2.
lw   $t1, 0($s6)
add  $t1, $t1, $t0
lw   $t1, 0($t1)
sw   $t1, 32($s7)
```

4. Show how the value 0xabcdef12 would be arranged in memory of a little-endian and a big-endian machine.

〈정답〉

big-endian은 순서대로 0xab, 0xcd, 0xef, 0x12 순으로 메모리에 저장

little-endian은 반대로 0x12, 0xef, 0xcd, 0xab 순이다.

5. Translate 0xabcdef12 into decimal.

〈정답〉

$10\times16^7 + 11\times16^6 + 12\times16^5 + 13\times16^4 + 14\times16^3 + 15\times16^2 + 1\times16^1 + 2\times16^0$

$= 2,882,400,018$