

# Homework7

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- 题目1
  - Assume we have following address binding table and value of registers :

Address	Value	Register	Value
0x100	0x10	%eax	0x10
0x110	0x11	%ebx	0x100
0x120	0x12		
.....	.....		
0x190	0x19		
0x200	0x20		

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- 题目1
  - Please fill in the table below

Operand	Value
%ebx	
\$0x150	
0x170	
(%ebx)	
(%ebx,%eax)	
0x30(%ebx)	
80(%ebx,%eax,2)	

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- 题目1
  - Suppose registers and bound values will be reset as above after each instruction. Please fill in the table below: (Write all if there are more than one destinations and None if there is no destination)

Instruction	Destination	Value
addl %eax,%ebx		
subl %eax,(%ebx)		
leal 0x50(%eax), %edx		
movzbl %al, %ebx		
movsbl %bh, %ecx		

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- 题目1
  - Assume the initial value of the flags is 0. Fill the table below

Instruction	OF	SF	ZF	CF
leal(%eax),%ebx				
subl %ebx, %eax				
xorl %eax, %eax				
test %eax, %ebx				

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- 题目2

- Translate the following assembly into C codes.
- You can name local variables represented by -12(%ebp), -8(%ebp)...or a,b,c... freely as you like.
- The beginning of C codes is given.

```
push %ebp  
movl %esp,%ebp  
subl $0x10, %esp  
movl $0x3,-0xc(%ebp)  
movl $0x2,-0x8(%ebp)  
movl $0x1,-0x4(%ebp)  
jmp .L1  
.L2  
    movl -0x4(%ebp),%eax  
    movl %eax,-0x10(%ebp)  
    movl -0x8(%ebp),%eax  
    movl %eax,-0x4(%ebp)  
    movl -0x10(%ebp),%eax  
    addl %eax,-0x8(%ebp)  
    addl $0x1,-0xc(%ebp)  
.L1  
    cmpl $0x5,-0xc(%ebp)  
    jle .L2  
    movl -0x8(%ebp), %eax  
    leave  
    ret
```

```
int -0xc(%ebp) = 3;           int i = 3;  
int -0x8(%ebp) = 2;           or   int b = 2;  
.....
```