

HW 6 sol

1. Jump Table.

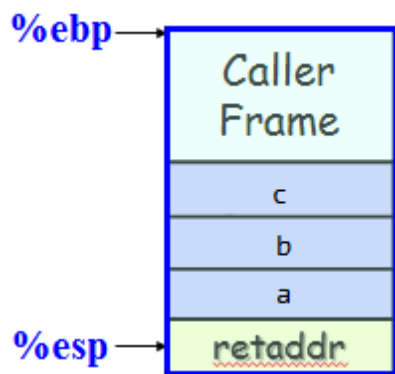
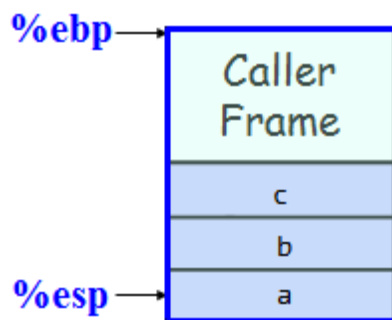
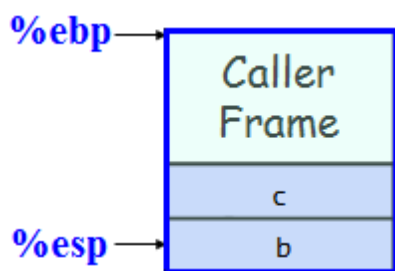
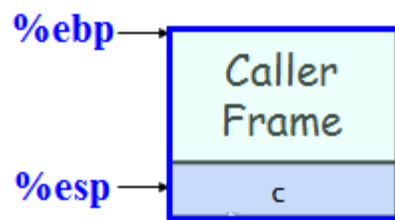
```
void scramble(unsigned a, int * b, int * c)
{
    switch(a) {
        _____case 3:_____
        c[5] = *b;
        _____break;_____
        _____
        _____case 6:_____
        *b += *c;
        _____break;_____
        _____
        _____case 2:_____
        *b = *c;
        _____
        _____case 0:_____
        _____case 7:_____
        *b *= 3;
        _____break;_____
        _____
        _____default:_____
        *b = 15213;
        _____break; (optional)_____
    }
}
```

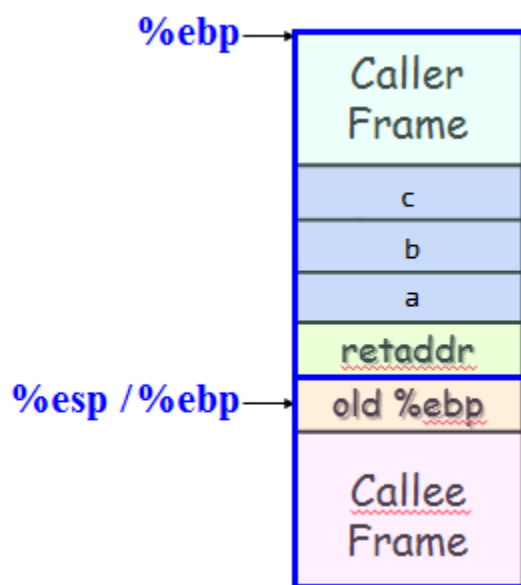
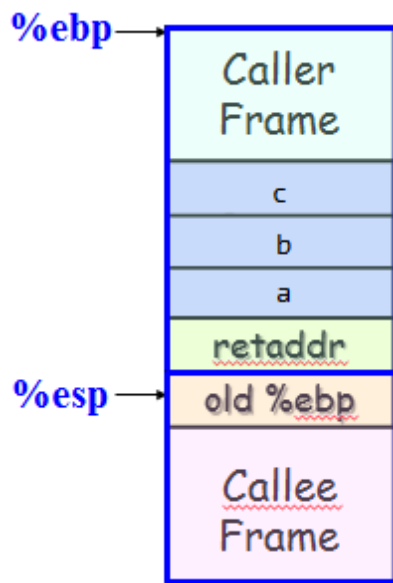
2. Translation

计算第 10 个斐波那契数。

```
int a = 1;
int b = 1;
int n = 10;
int i;
for (i = 3; i <= 10; ++i) {
    int temp = a;
    a = b;
    b += temp;
}
```

3. Function Call





4. Switch

Jump Table 部分：标签名称不唯一，但必须与后面的代码一一对应。

```

        .section .rdata,"dr"
        .align 4
L9:
        .long    L3
        .long    L2
        .long    L4
        .long    L2
        .long    L5
        .long    L6

```

代码部分：[x]与[result]可以被替换成 x(%esp)形式或者某些可用的寄存器，只要能够代表这两个变量即可，形式不重要。

```

        .text
L3:
        movl    [x], %eax
        addl    %eax, %eax
        movl    %eax, [result]
        jmp     L11
L4:
        movl    [x], %eax
        addl    $10, %eax
        movl    %eax, [result]
        jmp     L11
L5:
        movl    [x], %eax
        sall    %eax
        movl    %eax, [result]
L6:
        incl    [result]
        jmp     L11
L2:
        movl    $3, [result]
        nop
        jmp     L11
L11:
        <the following codes omitted...>

```