

15213 Recitation Section C

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Outline

- Last week's exercise
- Function and stack
- Array
- Struct and linked-list

Last Week's Final Example

```
int func5(int x){ ??? }
```

```
0x80483c0    push %ebp  
0x80483c1    mov   %esp,%ebp  
0x80483c3    mov   0x8(%ebp),%ecx  
0x80483c6    xor   %eax,%eax  
0x80483c8    xor   %edx,%edx  
0x80483ca    cmp   %ecx,%edx  
0x80483cc    jge   0x80483d7  
0x80483ce    mov   %esi,%esi  
0x80483d0    add   %edx,%eax  
0x80483d2    inc   %edx  
0x80483d3    cmp   %ecx,%edx  
0x80483d5    jl    0x80483d0  
0x80483d7    mov   %ebp,%esp  
0x80483d9    pop   %ebp  
0x80483da    ret
```



Body

Write Comments

```
int func5(int x){ ??? }
```

```
0x80483c3  mov  0x8(%ebp),%ecx
0x80483c6  xor  %eax,%eax
0x80483c8  xor  %edx,%edx
0x80483ca  cmp  %ecx,%edx
0x80483cc  jge  0x80483d7
0x80483ce  mov  %esi,%esi
0x80483d0  add  %edx,%eax
0x80483d2  inc  %edx
0x80483d3  cmp  %ecx,%edx
0x80483d5  jl   0x80483d0
0x80483d7  .....
```

```
ecx = x
eax = 0
edx = 0
if (edx >= x)
    goto L1
nop
L2: eax += edx
edx ++
if (edx < x)
    goto L2
L1:
```