

HW8
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EECS 665

Q1: Static allocation means: compiler has to decide size for function calls. In recursion, compiler cannot decide as depth of recursion depends on recursion parameter which may be an input from us also!

Q2: main function is beginning function, At line 8, enter addAll function, after line 8, line 2-4 is ~~the~~ in the deepest!

Q3: It is possible not to ~~use~~ fp!
Stack pointer (SP) points to the next available stack address, which will be used for either pushing data or store a return address. The SP change while the called function is executing.
The FP is ~~not~~ guaranteed to have same value throughout the execute of the function. The FP is set to a fixed value with the stack frame. If don't use FP, SP will cost too much time to push or pop stacks!

Q4 ① Indirect recursion

② more than 100 local variables!

```
int fun1() { ② - int fun1() {  
    return fun2();  
}  
int fun2() {  
    return fun3();  
}  
int fun3() {  
    return fun1();  
}
```

int a, b, c, ..., z;
int aa, bb, cc, ..., zz;
.....
} > 100