

**In Class Assignment 2**

```
1  #include <stdio.h>
2  int x = 10;
3  void one(void){
4      int x;
5      x = 1;
6  }
7
8  void two(int x){
9      x = 2;
10 }
11
12 void three(void){
13     x = 2;
14 }
15
16 void four(int *p){
17     *p = 3;
18 }
19
20 int main(void){
21     printf("%d\n", x);
22     x = 4;
23     one();
24     printf("%d\n", x);
25     x = 5;
26     two(x);
27     printf("%d\n", x);
28     x = 6;
29     {
30         int x = 7;
31         three();
32         printf("%d\n", x);
33     }
34     printf("%d\n", x);
35     x = 8;
36     four(&x);
37     printf("%d\n", x);
38     return 0;
39 }
```

- (1) What will all of the print statements print when this code is run?
- (2) Identify the scope of each variable. Are there any scope holes in this code? If so, where and for what variables?
- (3) Draw the symbol table at line 18
- (4) Draw the symbol table at line 31
- (5) Compile and run the program. Compare the output with your answers in (1).