**WALKTHROUGH EXERCISE**

1 #include <stdio.h>

2 #define CSTRING 15

3 #define ROOMS 2

4 struct Surface

5 {

6 char label[CSTRING + 1];

7 int x;

8 int y;

9 };

10struct Room

11 {

12 char name[CSTRING + 1];

13 struct Surface paintable;

14 struct Surface nonpaintable;

15 };

16 int area(const struct Surface\* surf)

17 {

18 int area = surf->x \* surf->y;

19 printf("%-10s:%4d\n", surf->label, area);

20 return area;

21 }

22 int main(void)

23 {

24 int i, paintable, totalPaintable = 0; // program starting point

25 struct Room job[ROOMS] = { { "Kitchen", {"Wall-1", 14, 10},{"Window", 10, 2 } } };

26 for (i = 0; i < ROOMS; i++)

27 {

28 if (job [i].name[0] != '\0')

{

29 printf("Room: %s\n", job [i].name);

30 paintable = area(&job[i].paintable) - area(&job [i].nonpaintable);

31 printf("Paintable Area: %d\n", paintable);

32 totalPaintable += paintable;

33 }

34 }

35 printf("Total Paintable Area: %d\n", totalPaintable);

36 return 0;

37 }