```
 1   /****
 2    *
 3    * A simple C program that defines a rectangle data structure and two functions
 4    * that operate on rectangles.
 5    *
 6    */
 7
 8   #include <stdio.h>
 9
10   struct Rectangle {
11       int x;
12       int y;
13       int width;
14       int height;
15   };
16
17       struct Rectangle move(struct Rectangle r, int x_increment, int y_increment) {
18           r.x = r.x + x_increment;
19           r.y = r.y + y_increment;
20           return r;
21       }
22
23       unsigned char equals(struct Rectangle r1, struct Rectangle r2) {
24           return r1.x == r2.x &&
25                   r1.y == r2.y &&
26                   r1.width == r2.width &&
27                   r1.height == r2.height;
28       }
29
30       int main() {
31           struct Rectangle r1 = {10, 20, 100, 200};
32           struct Rectangle r2 = {20, 30, 100, 200};
33           unsigned char eq;
34
35           eq = equals(r1, r2);
36           if (eq == 0) {
37               printf("r1 not = r2\n");
38           }
39           else {
40               printf("r1 = r2\n");
41           }
42
43           r1 = move(r1, 10, 10);
44           eq = equals(r1, r2);
45           if (eq == 0) {
46               printf("r1 not = r2\n");
47           }
48           else {
49               printf("r1 = r2\n");
50           }
51
52       }
```