

```
1  #include <cs50.h>
2  #include <stdio.h>
3
4  int f(int n);
5
6  int main(void)
7  {
8      // Get user's input
9      int number;
10     do
11     {
12         number = get_int("Number: ");
13     }
14     while (number < 0);
15
16     // Call the factorial function
17     int result = f(number);
18     printf("Factorial of %i is %i.\n", number, result);
19 }
20
21 int f(int n)
22 {
23     // Base case
24     if (n == 0)
25     {
26         return 1;
27     }
28     else
29     {
30         // Recursive case
31         return n * f(n - 1);
32     }
33 }
```

```
1  #include <cs50.h>
2  #include <stdio.h>
3
4  // Define candidate struct
5  typedef struct
6  {
7      string name;
8      int votes;
9  } candidate;
10
11 int main(void)
12 {
13     // Define number of candidates
14     const int num = 3;
15     candidate candidates[num];
16
17     // Populate the array with user's input
18     for (int i = 0; i < num; i++)
19     {
20         candidates[i].name = get_string("Name: ");
21         candidates[i].votes = get_int("Votes: ");
22     }
23
24     int highest_vote = 0;
25     for (int i = 0; i < num; i++)
26     {
27         if (candidates[i].votes > highest_vote)
28         {
29             highest_vote = candidates[i].votes;
30         }
31     }
32
33     for (int i = 0; i < num; i++)
34     {
35         if (candidates[i].votes == highest_vote)
36         {
37             printf("%s\n", candidates[i].name);
38         }
39     }
40 }
```