

```

1  #include <iostream>
2  using namespace std;
3
4  const int n = 3;
5
6  int* all(int v[n][n]) // takes a square matrix of ints, returns a pointer to an int.
7  { // Assumption: v contains non-negative integers
8      int m = 0;
9      int *ret = NULL; // creates a null pointer .
10     // if nothing is done with the pointer, NULL is returned, which breaks the loop in
        line 23
11     for (int i=0; i < n; i++) //iterates through every element
12         for (int j=0; j < n; j++)
13             if (v[i][j] > m) // if current element is greater than m, m is set to the
                current element
14                 {
15                     m = v[i][j];
16                     ret = &(v[i][j]); // the ret pointer is set to address of current
                        element
17                 }
18     return ret; // returns ret pointer, which is the location of the greatest value in
        the array
19 }
20
21 int main() {
22     int t[n][n] = {{1, 23, 1}, {4, 0, 6}, {0, 12, 3}}; // Every element >= 0
23     int *p = all(t); // initializes pointer to greatest element.
24     while (p != NULL)
25     {
26         cout << *p << endl;
27         *p = 0;
28         p = all(t); // will print the elemets in decreasing order.
29     }
30     return 0;
31 }

```