

```

1  #include <iostream>
2  #include <stdlib.h>
3  #include <time.h>
4
5  using namespace std;
6
7  void selectionSort(int *array, int arraySize){
8
9      for (int iterationNum = 0; iterationNum < arraySize-1; iterationNum++){
10
11         int minIndex = iterationNum;
12
13         for (int j = iterationNum+1; j < arraySize; j++){
14
15             if (array[j] < array[minIndex])
16                 minIndex = j;
17
18         }
19
20         // swap array[minIndex] with array[iterationNum]
21         int temp = array[minIndex];
22         array[minIndex] = array[iterationNum];
23         array[iterationNum] = temp;
24
25     }
26
27 }
28
29 int main(){
30
31     int numElements;
32     cout << "Enter the number of elements in the array: ";
33     cin >> numElements;
34
35     int maxValue;
36     cout << "Enter the maximum value for an element in the array: ";
37     cin >> maxValue;
38
39     srand(time(NULL));
40
41     int array[numElements];
42
43     cout << "Generated array: ";
44     for (int index = 0; index < numElements; index++){
45         array[index] = rand() % maxValue;
46         cout << array[index] << " ";
47     }
48     cout << endl;
49
50     selectionSort(array, numElements);
51
52     cout << "Sorted array: ";
53     for (int index = 0; index < numElements; index++){
54         cout << array[index] << " ";
55     }
56     cout << endl;
57
58     Enter the number of elements in the array: 10
59     return 0; Enter the maximum value for an element in the array: 25
60     Generated array: 11 2 12 8 11 23 14 8 13 15
61     Sorted array: 2 8 8 11 11 12 13 14 15 23

```