

```

1:  /*-----Selection Sort(  $O(n^2)$  for all cases )-----*/
2:
3:  #include<iostream>
4:  using namespace std;
5:
6:  void inputArray(int arr[], int n)
7:  {
8:      cout << "Enter the elements of your array: \n";
9:      for(int i = 0; i < n; i++)
10:     {
11:         cin >> arr[i];
12:     }
13: }
14:
15: void printArray(int arr[], int n)
16: {
17:     for(int i = 0; i < n; i++)
18:     {
19:         cout << arr[i] << " ";
20:     }
21: }
22:
23: void swap(int arr[], int i, int j)
24: {
25:     int temp = arr[i];
26:     arr[i] = arr[j];
27:     arr[j] = temp;
28: }
29:
30: void selectionSort(int arr[], int n)
31: {
32:     for(int i = 0; i < n - 1; i++)
33:     {
34:         int min = i;
35:         for(int j = i + 1; j < n; j++)
36:         {
37:             if(arr[j] < arr[min])
38:             {
39:                 min = j;
40:             }
41:         }
42:         if(min != i)
43:         {
44:             swap(arr, i, min);
45:         }
46:     }

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47: }
48:
49: int main()
50: {
51:     int n;
52:     cout << "Enter the length: \n";
53:     cin >> n;
54:
55:     int arr[n];
56:     inputArray(arr, n);
57:
58:     selectionSort(arr, n);
59:
60:     cout << "Sorted array is: \n";
61:     printArray(arr, n);
62:
63:     return 0;
64: }
```