

06/14/17 03:21:15 /Users/darkcloud/Desktop/Lab10/[Lab10] Adnar Lozano_quick.cpp

```
1  /*input
2  7
3  5 8 1 3 7 9 2
4  */
5  #include <iostream>
6  #include <vector>
7  using namespace std;
8
9  void quickSort(vector <int> &ar) {
10     int size = ar.size();
11     if (size < 2) return;
12     vector <int> left;
13     vector <int> right;
14     int pivot = ar[0];
15
16     for (int i = 1; i < ar.size(); i++) {
17         if (ar[i] <= pivot)
18             left.push_back(ar[i]);
19         else right.push_back(ar[i]);
20     }
21     quickSort(left);
22     quickSort(right);
23     for (int i=0;i<left.size();i++)
24         cout << left[i] << " ";
25     cout << pivot << " ";
26     for (int i=0;i<right.size();i++)
27         cout << right[i] << " ";
28 }
29 int main(void) {
30     int n;
31     scanf("%d", &n);
32     vector <int> ar(n);
33     printf("Quick Sort:\n");
34     printf("Sample Input:\n");
35     printf("7\n");
36     printf("5 8 1 3 7 9 2\n");
37     printf("Output:\n");
38     for(int i = 0; i < ar.size(); i++)
39         scanf("%d", &ar[i]);
40     quickSort(ar);
41     cout << endl;
42     return 0;
43 }
```