Algorithm1.cpp

```cpp
#include <cstdlib>            // provides EXIT_SUCCESS
  #include <iostream>         // I/O definitions
  #include <vector>           // provides vector
  #include <algorithm>        // for sort, random_shuffle
 using namespace std;         // make std:: accessible
  int main () {
    int a[] = {17, 12, 33, 15, 62, 45};
    vector<int> v(a, a + 6);        // v: 17 12 33 15 62 45
    cout << v.size() << endl;       // outputs: 6
    v.pop_back();                   // v: 17 12 33 15 62
    cout << v.size() << endl; // outputs: 5
    v.push_back(19);                // v: 17 12 33 15 62 19
    cout << v.front() << " " << v.back() << endl;// outputs: 17 19
    sort(v.begin(), v.begin() + 4);             // v: (12 15 17 33) 62 19
    v.erase(v.end() - 4, v.end() - 2);          // v: 12 15 62 19
    cout << v.size() << endl;       // outputs: 4

    char b[] = {'b', 'r', 'a', 'v', 'o'};
        vector<char> w(b, b + 5);         // w: b r a v o
        random_shuffle(w.begin(), w.end());     // w: o v r a b
        w.insert(w.begin(), 's');               // w: s o v r a b
    for (vector<char>::iterator p = w.begin(); p != w.end(); ++p)
          cout << *p << " ";        // outputs: s o v r a b
        cout << endl;
        return EXIT_SUCCESS;
      }
```

Output

6
5
17 19
4
s o r v a b